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FACULTY OF SOCIAL SCIENCES AND HUMANITIES

THE CONTRIBUTION OF ARTISANAL AND SMALL SCALE MINING TO SOCIO-ECONOMIC DEVELOPMENT. CASE OF GOROMONZI WARD 17 FROM PERIOD 2017-2024

BY

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A DISSERTATION SUBMITTED TO THE DEPARTMENT OF PEACE AND GOVERNANCE IN PARTIAL FULFILMENT FOR THE REQUIREMENTS FOR THE BACHELOR OF SCIENCE HONORS IN PEACE AND GOVERNANCE DEGREE

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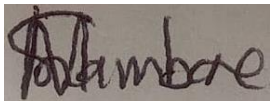
ABSTRACT

The study investigates the contribution artisanal and small scale mining to socio-economic development in Goromonzi Ward 17. The main purpose of the study is to explore and understand the dynamics related to artisanal mining. The themes under research were the socio-economic impacts of artisanal mining, livelihood strategies employed by artisanal miners to sustain their well-being, the link between poverty, artisanal mining and environmental degradation and interventions by the government in artisanal mining operations. Mixed methodology was employed combining both qualitative which consisted the use of interviews and questionnaires and quantitative methods to provide comprehensive data. Face to face interviews with artisanal miners, the DDCs office, community leaders and family members of miners were conducted. Data was presented in graphs, tables and charts as well as thematic analysis. The findings revealed the socio-economic impacts of artisanal mining are reduced quality of life due to environmental degradation, increased health risks, increased income earning opportunities, social conflicts over land use and food insecurity. Artisanal mining poses many challenges to the environment, communities and the government, hence there is need for a comprehensive approach involving proper legislation of mines, effective environmental laws, educational and awareness campaigns involving all stakeholders, improved access to healthcare services and employment creation reforms. By recognizing and addressing the negative impacts of artisanal mining it is possible to enhance the mining sector in Zimbabwe with the increment in Gross Domestic Product (GDP) through formalized artisanal mining operations.

DECLARATION

I Mitchele Shambare, B210712B declare that the work contained in this dissertation is entirely a product of my own original work with the exception of such quotations or references which have been properly cited and acknowledged to their sources.

Signature 

Date: 31 March 2025

The undersigned certify that they have supervised the student Mitchele Shambare's dissertation entitled **The Contribution of Artisanal and Small Scale Mining to Socio-Economic Development. Case of Goromonzi Ward 17 from period 2017-2024.** Submitted in fulfillment of Bachelor of Science Honors in Peace and Governance Degree.

31March 2025

Supervisor: Dr. R. Chipaike Date

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Chairperson: Dr. J. Kurebwatira Date

DEDICATION

This work is dedicated to my parents, Mr & Mrs Shambare. You stood up for me during my period at the University. I am expressing my heartfelt gratitude in thanking you for your prayers and financial support. The support you rendered me during this course is exceptional. It was not an easy journey, as it was full of thorns and life threatening circumstances, but through your support and the Lord's grace I have passed through. The dedication extends to my sister Chiedza Shambare and my uncle Isaac Gopito and my friend Nokutenda Chimusoro for encouraging and inspiring me to keep pursuing with my studies. Your motivation, prayers and endless support have pushed me to reach this far. During the downturns of life at university and all the pressure you never stopped supporting me and you are greatly honored and appreciated.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASM - Artisanal and Small-scale Mining

DDC -District Development Coordinator

EIA -Environmental Impact Assessment

EMA - Environmental Management Agency

ISO -International Organization for Standardization

SAP -Structural Adjustment Plan

PLZ -Prospect Lithium Zimbabwe

PPE -Personal Protective Equipment

ZRP -Zimbabwe Republic Police

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CHAPTER ONE:

1.0 INTRODUCTION

1.1 Background to the study

In Zimbabwe artisanal mining can be traced back further during the period of colonization where people used to trade with the Portuguese and Arabs. The adoption of the Structural Adjustment Plan (SAPs) in the beginning of 1990s increased artisanal gold mining in Zimbabwe. Expenditure controls and privatization of parastatals resulted in job losses and increased rate in urban to rural migration which has resulted in the migrants engaging livelihoods activities such as farming and artisanal mining. Faresu, (2019) notes that the mining activities increased in Zimbabwe as a result of the liberalization of the state from colonization. During this time artisanal mining activities were largely focused on gold panning along riverbeds and streams by local communities as a means of livelihood. Mabhena, (2014), poses that the Land Reform Programme spearheaded mining activities in Zimbabwe and also the government policies initiated have a negative impact on the welfare of the citizens.

Artisanal mining was initially concentrated along the Great Dyke, but it later spread to most of the regions in Zimbabwe due to economic crisis which was rapidly increasing. However, the sector still faced numerous challenges including poor working conditions, environmental degradation, smuggling of minerals and tensions with large scale miners. Mandizadza, (2017) noted that recent years have seen some attempts by the government to bring order to the sector and promote formalization, however artisanal mining has remained largely informal in nature contributing significantly to rural livelihoods and the national economy. Climate changes such as

drought and floods in Zimbabwe have also driven most citizens into alluvial gold mining to sustain their families in most rural areas.

According to Lagan (2014), artisanal and small scale mining has shown significant growth from 1990s to date from 20000 registered miners to 500000 miners and artisanal miners contribute 60% of the country's gold output. However apart from the positive impacts of artisanal mining there are some challenges brought about in the long run. In Zimbabwe artisanal mining activities have widely spread as a means of survival and earning a living in areas such as Bindura, Shamva, Chimanimani, Chegutu, Gwanda, Kadoma, Zvishavane and in Goromonzi.

Various policies such as the EIA, EMA Act, Miners and Mineral Policy, Indigenization and Economic Empowerment among others were introduced to establish licensing, environmental trade and safety standards that artisanal miners must comply with in their activities. The policies to ensure formal artisanal mining have been criticized as they somehow limit the way artisanal miners operate (Mupawaenda, 2020). Most artisanal miners are not registered and they work without adhering to safety measures such as the ISO standards. The legislation of artisanal mining activities in Zimbabwe have brought about the ideas of sustainable mining and taxation which in turn benefit the country's economy, however few of the artisanal miners are registered (Mbangwana, 2020). Lack of registration of artisanal miners in Zimbabwe is due to cost and bureaucracy of registration, insecurity of tenure, evasion of taxes and fees, lack of trust in authorities, mobility of operations and the legacy of past resource nationalism as noted by Gambe, (2013)

In Goromonzi ward 17 artisanal small scale mining has become a common activity due to legalization of artisanal mines in Zimbabwe and the need to sustain livelihoods. The research seeks to identify the social and economic impacts of these mining activities to community and national development from 2017-2019.

1.2 Purpose of the study

Understanding the social and economic effects of small-scale artisanal mining in Goromonzi Ward 17.

1.3 Statement of the problem

Artisanal small scale mining has led to social, environmental and economic problems such as removal of earth material, depletion of non-renewable resources, pollution, land disputes, market instability, dependence on mining and fueling social conflicts. Problems caused by artisanal mining have a great impact because it is not sustainable kind of mining meaning that once the resources are depleted they cannot be regenerated therefore degrading the environment. Artisanal mining therefore brings problems to the community at large, the environmental management agencies such as EMA, order enforcement stakeholders such as the police officers, community officers, and the artisanal miners. The problems brought about through artisanal mining have some negative impacts which include land degradation, health problems, high rate of prostitution, school drop outs and drugs, security problems and loss of bio diversity. The African Institute of International Affairs (2014) quoted that artisanal miners have cleared over 24000 hectares of land, 50000 children below and over 18 years work in mines with unsafe working conditions and 40000 people depend on artisanal mining for a living but 95% live below the poverty line.

1.4 Objectives of the study

- To identify the socio-economic impacts of artisanal mining in Goromonzi ward 17.
- To examine ways employed by artisanal miners in Goromonzi ward 17 to sustain their livelihoods.
- To explore the roles of Government organizations in artisanal mining operations in Goromonzi ward 17
- To identify the link between poverty, artisanal mining and environmental degradation.
- To identify activities that are done to minimize the adverse impacts of artisanal mining in Goromonzi ward 17.

1.5 Research Questions

- ✓ What are the socio-economic impacts of artisanal mining in Goromonzi ward 17?
- ✓ Are there ways employed by the artisanal miners in Goromonzi ward 17 area to sustain their livelihoods?
- ✓ What are the interventions and roles of the government organizations towards artisanal mining operations in Goromonzi ward 17?
- ✓ What is the link between poverty, artisanal mining and environmental degradation in Goromonzi ward 17?
- ✓ What are the activities done in order to minimize the adverse impacts of artisanal mining in Goromonzi ward 17?

1.6 Assumptions of the study

For the purpose of this study:

- The study assumes that artisanal miners are contributing positively and negatively to socio-economic development in Goromonzi.
- The study assumes that the activities of artisanal miners are destroying the environment in Goromonzi.
- The study is study assumes that artisanal mining provides important livelihoods opportunities and income generation for the citizens in Goromonzi.

1.7 Significance of the study

The study is important in educating and providing recommendations to the following stakeholders:

1.7.1 The Researcher

The researcher gained more insight in the area of artisanal mining and its contribution to socio-economic development and also recommend on ways to address the impacts of artisanal mining in Goromonzi ward 17. Most importantly the researcher fulfilled the requirements of the university that all students in their final year they have to come up with a study.

1.7.2 The Academia

This study will educate the academics in the world by adding to the existing theories and literature on the role played by artisanal miners to socio-economic development. The study is also

going to provide tangible evidence on the case of artisanal small scale mining which is essential for referrals in the future by other academics.

1.7.3 The Mining Community

Artisanal miners will also gain more knowledge on how to improve their participation in contributing to the socio-economic development from the results of the research. Artisanal miners are also going to be accepted and sponsored as people who are capable of improving the economy of the nation at large. The living standards of community and their perspectives on mining will be improved greatly through the recommendations and lessons learnt from the research study.

1.8 Delimitations of the study

This research explores the socio-economic implications of artisanal and small-scale mining in Goromonzi Ward 17, specifically focusing on the period between 2019 and 2024. By examining the impact of this industry within this timeframe, the study aims to gain a deeper understanding of its effects on local development. The researcher is also delimited to ward 17 of Goromonzi particularly to directly focus on the examination of artisanal activities in a specific area. The targeted population which the researcher is going to be delimited to are the affected stakeholders which are impacted or which have an impact on the activities of artisanal mining. However, there are issues closely related to the study which the researcher is going to include in the study. These issues include drug and substance abuse, prostitution, migration, conflict resolution and transformation, market trends and health issues.

1.9 Limitations of the study

This research did not focus much on the political contribution of artisanal mining rather the social and economic contributions. The researcher experienced some limitations such as limited access to the participants involved in artisanal mining activities which therefore delayed the progress in data collection and capturing. To deal with this problem the researcher arranged for meetings with dates which were both convenient to her and the stakeholders involved. This was aided by the Ward Councilor who had connections with some mine owners. Resistance from the respondents to cooperate and take part in the study is also a limitation which the researcher faced. In order to curb this the researcher, went to the field with the authorization letter from the University. Ignorance and unwillingness to participate during the interviews from the participants is also a limitation which the researcher faced. This was later found out that it was due to the misconception of ZRP or EMA agencies who impose taxes. The researcher sought for permission from the responsible authorities such as the District Development Coordinator's office and community heads such as masabhuku and chiefs to assure the participants that the data needed is for academic purposes. Language differences is also another limitation which the researcher faced because most of the miners have their own way of communicating for example slang language. The researcher tried to be neutral in the way she communicated so as to accommodate the participants. For instance, the researcher did not speak too much English in interviewing miners and family members of the miners. Mobilization of other participants such as family members of artisanal miners was also a limitation the researcher faced. Some family members were not always available at their homesteads for interviewing as they were busy with other activities such as farming. To deal with this the researcher had to move search for more homesteads in order to add value to the study.

1.10 Definition of key terms

1. Artisanal and small-scale mining (ASM) involves manual labor or minimal mechanization, often with limited financial resources and geological knowledge. This type of mining can be formal or informal and encompasses various techniques, including surface and subsurface mining. ASM provides a vital source of income for millions of people worldwide, particularly in rural areas where job opportunities may be scarce. It can contribute significantly to local economies, but it also poses environmental and health risks if not properly regulated and managed (UN Environment Programme, 2019). Sullivan (2021) also defines artisanal mining as small scale operations that are typically informal and characterized by low technology, a high degree of manual labor and a focus on local subsistence. 2. United Nations Development Programme (2021) defines development as the process of enhancing human well-being, encompassing economic growth, social inclusion and environmental sustainability. As noted by Sachs (2020), development encompasses more than just economic growth - it also involves social, political, and environmental aspects that aim to improve the overall quality of life for individuals and communities. For those engaged in small-scale mining, this work is often a vital source of income and livelihood. Research is a methodical investigation that gathers, examines, and understands data to shed light on particular issues or questions, as noted by Creswell (2020) . Meanwhile, the World Bank (2022) warns that environmental degradation poses substantial risks to the planet and its inhabitants, manifesting through resource depletion, ecosystem disruption, and pollution.

1.11 Dissertation Outline

Chapter 1

It focuses on the identification of a research problem and explaining about if from the global perspective to the area of study. This chapter provides an overview of the research, encapsulating the foundational elements that guide the study. It covers the contextual background, research purpose, problem statement, objectives, scope, limitations, research questions, underlying assumptions, significance, and key term definitions.

Chapter 2

The chapter focuses on the literature review and the theoretical framework. This is where there is the identification of the major literature that supports the topic and the theories on which the research topic is grounded on.

Chapter 3

Chapter 3 focuses on the research methodology and design. These are the philosophies, methodologies, research designs and sampling methods to be used by the researcher during data collection.

Chapter 4

This chapter presents the data, analyzes it, and discusses the findings, bringing the study's results to life. There is presentation of data through tables, graphs, figures and pie charts.

Chapter 5

The chapter focuses on summarization, conclusions, recommendations and areas of further research by the researcher. The conclusions are drawn from analyzed data. The researcher must account for the outcome of the results.

CHAPTER TWO:

2.0 LITERATURE REVIEW AND THEORATICAL FRAMEWORK

2.1 Introduction

This chapter explores the existing body of research on the role of artisanal mining in development, highlighting the findings of various scholars who have investigated its environmental and socio-economic impacts. Numerous studies have examined the effects of mining on communities rich in mineral resources, providing valuable insights into the social and economic implications of artisanal mining worldwide. This chapter also delves into the theoretical frameworks that underpin this study, focusing on theories that help conceptualize the impact of artisanal mining on development. Key themes explored include the livelihood strategies of artisanal miners, the negative consequences of their activities, the complex relationship between poverty and artisanal mining, and government interventions aimed at mitigating the adverse effects of this industry.

2.2 Theoretical Framework

2.2.1 The Tragedy of the Commons (Garret Hardin, 1968)

The Tragedy of the Commons theory suggests that when individuals prioritize their own interests over the collective good, shared resources can become depleted, even if it's clear that this will have long-term negative consequences. This happens when people act independently,

exploiting the resource for personal gain without considering the impact on others. Since no one owns the resource, it's often overused and depleted due to lack of regulation, ultimately harming everyone. This theory is relevant to natural resources like gold or diamonds, which are shared by the community but accessed individually for economic benefit, raising concerns about their sustainability.

The researcher therefore explores the relationship between The Tragedy of the Commons theory and artisanal mining in Goromonzi ward 17 where the community members are extracting the mineral resources for individual benefits. The theory is brought up during the discussions on environmental sustainability issues whereby the members in Goromonzi ward 17 are extracting as much minerals as they can as a means of sustaining their livelihoods. Ultimately, the collective overuse of the mineral resource leads to its exhaustion, resulting in adverse outcomes for the entire community. Furthermore, the theory is applicable when there is exploitation of land as in Goromonzi ward 17 whereby there are notable cases of pollution when the miner use and burn chemicals such as mercury causing water and air pollution. Such that the water is the common and shared by everyone, the overall public has to deal with the pollution each miner causes. Hardin, (1968) further states that deforestation due to the cutting down of trees during land clearance only benefits the miners, but the community as a whole has to deal with land issues arising. Overally, the theory therefore links to the study which demands the impacts of artisanal and small scale mining to socio-economic development.

2.2.2 The Driver Pressure State Impact Response (DPSIR) framework (European Environment Agency, EEA, 1999)

This theory provides valuable insights into the dynamic relationship between human activity and the environment, offering a framework for understanding the lifecycle of a project like mining from planning to implementation. It examines how socio-economic and human activities exert pressure on the environment, leading to changes in environmental conditions. These drivers, including population growth and economic development, can have significant environmental implications. By analyzing these interactions, the theory sheds light on the complex relationships between human activities and the environment. Pressures are the direct human influences that exert stress on the environment for example pollution emissions and extraction of resources. The state therefore refers to the environmental conditions and quality for example water quality and resource abundance. Impacts are the ecosystems, human health, safety and materials that result from the changes in environment. The responses are therefore the societal responses to be perceived or measured impacts aimed at preventing, compensating or adapting to the impacts on the environment for example policies and regulations.

The researcher therefore applies the DPSIR theory to the study on the contribution of artisanal mining to socio economic development. In this case of Goromonzi ward 17 the drivers are poverty, lack of alternative livelihoods, demands for minerals; pressures being resource extraction via primitive methods, deforestation for processing areas; state being the depletion of minerals, water pollution; impacts being degraded agricultural land/water resources, collapsed ecosystems and the response being the support alternative livelihood programs, rehabilitation of mined out areas and formalization and regularization of artisanal mining activities. The DPSIR theory thus helps analyze how socio-economic drivers fuel artisanal mining pressures that degrade

the environment and impact communities and governments therefore requiring policy response to break this cycle.

2.3 Research Overview

Research on artisanal mining has been conducted globally and regionally, offering insights into its impact. According to the World Bank (2019), Peru stands out in South America as a country where artisanal and small-scale mining has been a long-standing, hereditary practice. In most Western countries artisanal and small scale mining is a significant economic driver but it also comes with a number of social, environmental and financial difficulties. Hilson, (2002) discovered that although ASM employs tens of millions of people and makes a substantial contribution to foreign exchange, it is also linked to environmental degradation, child labor and poverty. According to Maconachie & Binns, (2007) the relationship between farming lifestyle and diamond mining for instance in Sierra Leone. They discovered that although ASM can help rural development by offering alternative sources of income, when miners farm in the off season it can also have an adverse effect on the agricultural output. Furthermore, Spiegel (2009) examined gender dimensions noting that women often face particular marginalization in ASM activities and challenges more profitable roles.

Hilson & Pottie (2004) conducted a research in West Africa and they noted that artisanal mining in Ghana and Mali boost rural incomes but it is also associated with deforestation, water pollution and child labor issues. They further posit that formalization efforts are needed to curb the negative effects. Gendered analysis also emerges from Africa-focused work whereby there is the marginalization of women in South African gold mines which therefore resembles gender

inequalities in societies and also the identification of sexual harassment of women miners in gold mines Allen et al. (2019).

In Southern Africa region scholars indicated that environmental damage is also a common effect of ASM. McCusker et al. (2015) surveyed Mozambique and noted that mercury contamination in rivers linked to small scale gold mining. Ali et al. (2020) further noted that Zambia and South Africa have been greatly affected by ASM on the aquatic pollution from sediments and chemicals affecting biodiversity and human. Most scholars argued on the negative effects of artisanal mining in the Southern African region as the have noted that there is depletion of non-renewable resources.

Artisanal small-scale mining (ASM) in Zimbabwe has sparked intense debates among scholars. According to Faresu (2019), the sector saw significant growth following the country's transition from colonial rule, driven by economic liberalization. However, this growth has been accompanied by challenges such as informality, inadequate regulation, limited access to finance, and outdated technology, which often lead to illicit activities. Moreover, Shava (2020) highlights the alarming prevalence of commercial sex work in mining areas, contributing to the spread of sexually transmitted infections like HIV. The environmental and social impacts of ASM have also been devastating, with communities surrounding mines facing degradation and disruption to traditional livelihoods like agriculture, as noted by Musemwa (2020). Despite these concerns, some researchers argue that ASM provides vital income opportunities, employment, and a means of development for local communities.

This study aims to uncover the truth about artisanal mining's impact on social and economic development in Goromonzi Ward 17, exploring whether it brings benefits or drawbacks to the

local community. After looking at the contribution and research overview by other scholars in line with the impacts of artisanal mining, the researcher is going to identify the research gap and add some contributions to the study of ASM.

2.4 Conceptual Framework

The study seeks to contribute on the impact of artisanal and small scale mining to socio-economic development through the identification of the research gap which encompasses what has been missed or has not been written by other scholars in line with ASM.

2.4.1 Socio-economic impacts of artisanal mining

Artisanal and small scale mining is a major aspect in the mining sector of the developing countries. It has been noted that artisanal mining impact the communities and the nation at large for instance Banchirigah, (2023) noted that ASM creates employment and income generation, leads to local economic development, promotes cultural heritage and skills development and it allows for social cohesion. According to Makel, (2022) ASM however has negative impacts on the socio-economic side which include environmental damage, child labor, high chances of contacting diseases and undermines white collar jobs. The researcher is therefore to combine both effects from the scholars and come up with solutions to the effects.

2.4.2 Examination of the ways employed by artisanal miners to sustain their livelihoods

World Bank (2015) stipulated that, agriculture is the backbone of Africa's economy, serving as the main income source for many Africans and employing approximately 60% of the continent's workforce. However due to varying climate change issues and inputs price hikes some

farmers are failing to effectively produce great yields. Mauger, (2020), noted that other means of survival for live hood such has hunting and gathering have evolved over time so ASM early stages brought about a new means of sustaining livelihood as a substitute. As a result, ASM has attracted a lot of people as a livelihood opportunity for millions of people. Therefore, the study seeks to unpack the reasons why there are still artisanal mining activities even if there are new jobs being created and new projects emerging.

2.4.3 Roles of the government organizations in ASM operations

There are government organizations which play pivotal roles in ASM operations such as EMA. The board governs and regulates the activities which concern the environment at large. However due to corruption, the board has largely faced challenges in totally dealing with environmental exploitation cases Chitumbo & Pesonayi, (2020). The study therefore seeks to dig deeper into the reasons for poor management of the environment by EMA and other government organizations. The study also seeks to explore more organizations which have an impact on the ASM activities.

2.4.4 Link between poverty and artisanal mining

Most ASM miners are involved in the trade because they have no jobs or any other means as a way of survival. In circumstances where the previous formal economy was distorted due to poor governance, ASM can rise as a survival tactic for those staying in areas which are rich in minerals Mukome (2020). Chagonda & Mangwende (2020) also noted that in Zimbabwe ASM was used to driven by poverty which resulted from poor climate change in areas such as Chiyadzwa which therefore led to the people exploring in Chiyadzwa diamonds mining. The study therefore

seeks to understand the link between poverty and artisanal mining as ASM is used to alleviate poverty and also perpetuating violence.

2.4.5 Activities done to minimize the adverse impacts of artisanal mining

There was the development of some initiatives in order to address or reduce the adverse negative impact of artisanal mining. Mbangwana, (2020), noted that there has been the use of some government alternatives for job creation initiated in order to stop the miners to stop artisanal mining, however due to the rising in population, few opportunities for employment and the availability of the minerals ASM has increased in numbers. The study will therefore explore more activities done to deal with the impacts of artisanal mining such as the legislation, regulation and environmental certificates in artisanal mining.

2.5 Artisanal mining in Zimbabwe

Zimbabwe's artisanal mining industry has deep roots, dating back to pre-colonial times when local communities mined gold, copper and iron on a small scale. However, it wasn't until the 19th century, with the arrival of the British South African Company in 1890, that artisanal mining began to take on a more commercial tone, as noted by Wild et al. (1971) . Today, artisanal mining plays a vital role in Zimbabwe's economy, providing a lifeline for thousands of families and contributing significantly to national gold production. The mining activities continued to spread as way of survival and gender roles for men. Shoko (2004) noted that poverty was a major drive into artisanal mining activities. ASM is regarded as informal but regulated, also characterized by low technology, subsistence income, community orientation and it poses high risks. Communities surrounding the mines in Zimbabwe often face challenges such as environmental degradation, pollution, rapid spread of STIs and chronic illnesses. However, artisanal mining is one of the major

sources of income for Zimbabweans in times of economic hardships and a way of "quick money". This is evidenced by the rapid spread of Mashurugwi and Magweja in Shurugwi and other mine towns who parade in those towns in search of greener pastures. Examples of places where artisanal mining is common include Chegutu, Shamva, Marange, Mutoko and Bindura.

2.5.1 Artisanal mining and Legislation in Zimbabwe

According to Dhliwayo (2016), the Mines and Minerals Act (Chapter 21:05) is the cornerstone legislation regulating mining activities even though it does not explicitly define "artisanal mining". Its key provisions as stated are Section 5 (which grants the president authority to issue mining rights including mining and prospecting licenses), Section 27 (which permits transfer of mining rights which can be leveraged by artisanal miners through tributes or options) and Section 35 (which mandates that artisanal miners should comply with environmental regulations under Environmental Act Management). There have been efforts by the government to formalize artisanal mining activities, however there have been legislation challenges according to Spiegel (2016). These challenges include licensing costs and lack of resources to meet the EMA requirements which therefore leads to informal and illegal operations (ZELA, 2021).

The recent reforms in the 2020s by the Second republic to the Indigenization and Economic Empowerment Act removed mandatory local ownership requirements potentially easing foreign investment in small scale mining. Murungu et.al (2022) & Kanyenze et.al (2021) however critique the tailored policies for artisanal miners.

2.6 Summary

The chapter focused on the theories used to support the study which are The Tragedy of the Commons theory and the DPSIR model. It also reviewed the research overview of what other scholars have written on the impacts of artisanal mining from the global level to the local level. The researcher also noted on the research gap which the study is going to cover by answering the objectives of the study. The researcher also focused on the artisanal mining activities in Zimbabwe by looking at the legislation.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY AND DESIGN

3.1 Introduction

The chapter focuses on giving details on the research philosophy, research methodology, research designs and data collection and analysis of the study. It is a discussion of how the outcomes to the study were gathered via different sampling methods and data collection methods. The chapter also looks at the ethical considerations which the researcher adhered to during the research.

3.2 Research philosophy

A research philosophy is a set of beliefs regarding the nature of knowledge and the methods through which knowledge can be acquired, (Chaser, 2015). The research philosophy suitable for the study on the contribution of ASM to socio-economic development was the pragmatism approach. According to Dewey, (2003) pragmatism advocates for the practical application of ideas and suggests that the truth is determined by the success of the application. Pragmatism is a philosophy which emphasizes the practical application of research findings and allows for the use of quantitative and qualitative methods depending on the research questions, focusing on practical consequences and the role of social interactions in shaping understanding, (Brandom, 2013). It was justifiable to use the pragmatism approach in this study of the contribution of ASM to socio-economic in Goromonzi ward 17 towards development because it approached problems practically as opposed to relying on theories or impersonal rules. Pragmatism approach was suitable to use for the study because it was flexible in methodology as it allows for both qualitative and quantitative methods, it also enabled contextual understanding and stakeholder perspectives which helped to explore artisanal mining dynamics and provided incorporate insights from stakeholders within the mining community such as miners, women, children, the government and other stakeholders.

3.3 Research methodology

Research methodology is the thoughtful and structured approach used to investigate a field of study, outlining the underlying principles, procedures, and best practices that guide the research process from start to finish. (Creswell & Flick 2017) further defines a research methodology as a framework of theories and principles guiding the selection of research method, including how data

is collected, analyzed and interpreted. The researcher used the mixed methods approach as a methodology to the research. A mixed methods approach is a research method which involves the combination of qualitative and quantitative research approaches in a single research to provide a richer understanding of the research problem (Bryman, 2022). Mixed method approach was applicable to the study of the contribution of ASM to socio economic development in Goromonzi ward 17 since the mixed method gives both numeric and non-numeric data which enabled the researcher and readers to properly understand the dynamics of artisanal mining. Tashakkori &Teddlie, (2022) further asserts that mixed methodology provides adaptability to researchers on their focus based on the emerging factors leading to more relevant and actionable findings. It was therefore essential to used mixed methods approach as a methodology tool since it provided validity of findings by answering to why and how questions through qualitative and quantitative methods respectively.

3.4 Research design

A research design serves as a roadmap for researchers, outlining the steps to collect, analyze, and interpret data to answer specific research questions. According to Robson & McCartan (2021), it's about planning a research with practical considerations like time, ethics, and resources in mind. For this research, a case study approach was chosen to explore the contribution of artisanal mining to socio-economic development, focusing on Goromonzi Ward 17 as a specific case. As Stake (2020) and Yin (2020) suggest, case studies allow for an in-depth examination of a particular context, enabling researchers to understand the complexities and nuances of a real-life situation. By adopting this approach, the study aimed to gain a richer understanding of the impact of artisanal mining in the specified context.

3.5 Population and sample

The targeted population is a precisely defined group of people who are known to share compatible behaviors and from which an investigator wants to draw conclusions. In this case the researcher used data from the Goromonzi district. The primary targeted population is the people from Ward 17 particularly the artisanal miners, the community, policy makers, the government, school authorities, academics and other relevant stakeholders to the study.

The sample was taken from a population consisting of both males and females aged between 16-45 years. Chikutsa, (2013) asserted that the group of people who genuinely take part in a research they are a sample. The researcher approached 5 households, 10 artisanal miners and 3 government and non-governmental stakeholders.

3.6 Sampling methods to be used

When studying a large group of people, researchers often select a smaller sample to represent the whole, as noted by Patel & Singh (2019). In this study, we used a combination of purposive and simple random sampling to gather data. According to Gopal & Gaur (2019), simple random sampling ensures that every individual in the population has an equal opportunity to be selected, promoting fairness and unbiased results through random selection and independence. Simple random also allowed the utilization of interviews which were necessary in the research of the contribution of ASM to socio-economic development. Simple random sampling was to use for the research because it defined a population i.e miners and their families, it allowed for selection of subsets of individuals from the population, it allowed for data collection from individuals to obtain information such as income levels, community development initiatives and access to education and health care. Simple random sampling was also applicable for the study because it

gives room for data analysis through the trends and correlations between artisanal mining activities and socio- economic development indicators.

The researcher also utilized the purposive sampling method in the study. Palinkas et.al (2015) defines purposive sampling as a way of selecting participants who are deemed to have specific qualities or characteristics that are of interest to the researcher ensuring that a sample is relevant to the research objectives. In purposive sampling in the case of the research on the contribution of ASM the researcher targeted specific groups or individuals that are particularly knowledgeable or experienced with the phenomena of interest such as artisanal miners, the community, community leaders and environmental managers, therefore enhancing the depth and richness of the data collected.

3.7 Data collection methods

Collecting data is a vital part of the research process, requiring a thoughtful and methodical approach to gathering information. Researchers can draw from two key sources: primary data, which they collect directly, and secondary data, which is sourced from existing materials.

3.7.1 Primary data collection methods

To gather firsthand insights, researchers can collect primary data directly from the source, tailored to their specific research needs, such as understanding artisanal and small-scale mining (ASM) in Goromonzi Ward 17. This can be achieved through various methods, including in-depth interviews, surveys, focus groups, observations, and experiments. Etikan & Musa (2015) notes that surveys and questionnaires are suitable to use for studies and researches on mining. Therefore, the researcher used questionnaires to obtain data on the contribution of ASM. The types of

participants which the researcher interviewed include artisanal miners, family members of miners, community leaders, residents of mining areas, environmental groups, healthcare workers and government officials. The participants were relevant to be involved in the study because they provided real information because they are affected directly with the mining activities for instance family members of miners shared perspectives on economic and social changes resulting from mining. The type of information which the researcher gathered from the primary data collection methods include demographic information, economic impact, social impacts, information on access to resources, regulatory and institutional framework, challenges faced, future aspirations of miners, health and safety practices and challenges faced.

3.7.2 Secondary data collection methods

Secondary data collection methods include the use of existing data that has been collected by others rather than gathering new data directly, Kumar (2016). Secondary data is the data that have been previously collected for other purposes but can be reanalyzed for a new research question, Creswell (2016). The researcher therefore used journal articles, books, newspapers and the constitution for data collection. The secondary data sources were essential because they provided a guide on the same or similar topic on ASM for example books and journals. The constitution also provided legal information on ASM activities. The researcher also made use of records from villages around ward 17, reports and booklets from the Goromonzi DDC's office.

3.8 Validity and reliability

The data collection methods used by the researcher on the research of the contribution of ASM to socioeconomic development were valid and reliable. The data collection methods which include questionnaires, key informant interviews and secondary data sources such as books and

journals were valid in the sense that secondary sources can provide quantitative data that is necessary for tracking trends and patterns. On the other hand, questionnaires provided structured data which measured attitudes and behaviors related to ASM and socio economic outcomes in Goromonzi ward 17. The journals and books were valid to the research because they gave an insight on what other scholars have written about ASM which provided evidence that ASM activities have an impact to socioeconomic development through referencing.

The data collection methods stated were reliable because interviews for instance provided consistent and replicable results (Brandom, 2013). Journals were reliable as a secondary data collection method because the researcher can always refer back to them since the data is documented. Key-informant interviews were reliable because there was direct contact with the stakeholders involved in ASM which indicates high probability of true information coming from the participants.

3.9 Data Presentation and analysis

Effective data presentation is crucial in research, as it enables the clear communication of findings. According to Bryman (2014), presenting data in formats like tables, charts, and graphs helps to summarize and make sense of the collected data. According to Bohringer & Jochem (2014), data analysis is a methodical process that helps uncover valuable insights from data, informing decisions and conclusions. This process involves several crucial steps, from gathering and refining data to interpreting and presenting findings. In our research, we used visual tools like tables, charts, and graphs to make the data more accessible and easier to understand, allowing for clearer insights and more informed decision-making

To analyze the data, the researcher employed thematic analysis, a qualitative approach that uncovers patterns and themes within the data. As Braun & Clarke (2018) note, thematic analysis is a valuable tool for identifying and describing these patterns in rich detail. This method was particularly well-suited for exploring the contribution of artisanal and small-scale mining (ASM) to socio-economic development, as it offered flexibility and helped to distill complex situations into actionable insights with policy implications.

3.10 Ethical considerations

The researcher was granted a clearance from the university to conduct the research in Goromonzi ward 17. In order to guarantee the study's academic integrity, the researcher adhered to certain ethics which include informed consent, secrecy, confidentiality and anonymity, protection from harm and autonomy.

3.10.1 Informed consent

In order to obtain data from the respondents, the researcher asked for permission from them to participate in the interviews. The researcher outlined the purpose of the research to the respondents and requested their voluntary participation and willingness to cooperate. The participants' informed consent is crucial to the study because it allows them to give true and reliable data which was necessary for the study and it also avoids cases of harassment of researchers.

3.10.2 Confidentiality and anonymity

Confidentiality is the practice of keeping participants' personal information and data secure ensuring that it is not disclosed to unauthorized parties. According to Beskow et al (2014)

confidentiality involves ensuring that information provided by participants is kept private and only shared with individuals or organizations authorized access to it under predefined conditions. Anonymity refers to the practice of ensuring that respondents' identities are not linked to the data they provide in any way. Anonymity is the protection of participants' identity such than no personal identifiers are collected or if they are, they are separated from the data and cannot be traced back to the individual (Tuckett & Parker, 2014). The researcher is therefore adhered to confidentiality and anonymity in Goromonzi ward 17 because it saves the respondents' dignity and privacy which will not affect their reputation in the community.

3.10.3 Autonomy

According to Chirenje et.al (2019), autonomy refers to the capacity of individuals to make decisions regarding their participation in research based on full understanding and voluntary consent without external pressure or manipulation. The researcher allowed the participants to respond at any time they wanted to with their consent as well. In addition, the participants were allowed to withdraw from the interview without incurring penalties from the researcher. Participants who were emotional or uncomfortable with the interviews were given the chance to take a break.

3.10.4 Protection from harm

The researcher aimed on making sure that the participants are safe from harm during the research. For instance, the researcher made sure that the respondents had enough ventilation, they were seated comfortably, the gathering place was safe and conducive and they are in a good health condition that is the researcher did not interview the seriously ill persons. In addition, the

researcher made sure that the participants did not suffer any psychosocial harm as a result of the questions posed.

3.11 Summary

This chapter laid the groundwork for our study, outlining the underlying philosophy, methodology, and design. It also detailed the population and sampling methods, data collection approaches, and measures to ensure validity and reliability. Furthermore, it addressed the ethical considerations involved in the research. By focusing on artisanal miners in Goromonzi Ward 17, aimed to gain insights that could be representative of the broader artisanal mining community in Goromonzi district, assuming that the experiences and characteristics of these miners are largely shared. The chapter was giving details on how the physical research was conducted on the ground to understand better the contribution of ASM to socioeconomic development.

CHAPTER FOUR

4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

The research findings are here presented in this chapter following an analysis. The interpretation of the findings is supported by interviews and key informant community members. Participants, the DDC's Office and community aided to understand the local socio-economic situations to appreciate the views of research respondents. The findings are in line with the study's research questions or objectives, which focused on the socio economic impacts associated with artisanal mining for respondents who were either directly or indirectly involved in the industry. Tables, pie charts and bar graphs are used to display the data.

4.2 Demographic and Background Information of Respondents

The respondents' ages, gender, marital statuses, education level and employment status are among the several demographic traits.

4.2.1 Age distribution of artisanal miners

As illustrated in Fig 4.1, a significant proportion (70%) of artisanal miners are young adults aged 16-25, a demographic that typically requires employment immediately after completing their education. Additionally, 20% of the miners fall within the 26-35 age range, with many having previously worked at large-scale mining operations, such as Acturus mine

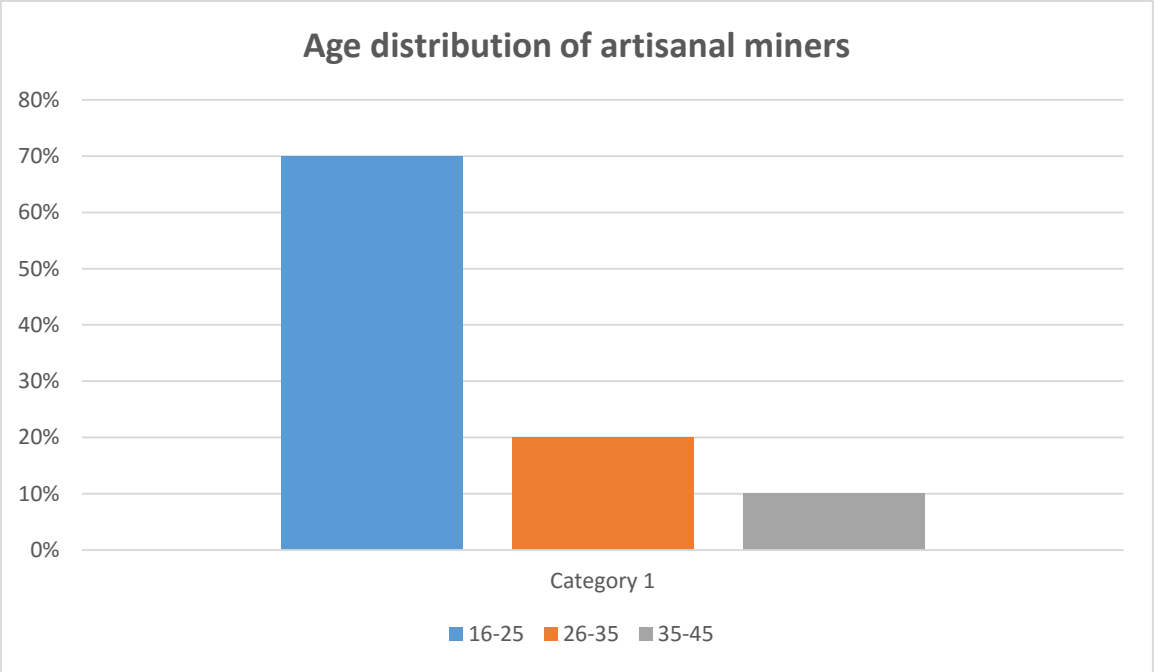

Figure 4.1: Age of the respondents in years. (Source: Primary data 2025) n=10

The remaining 10% were aged between 36 and 45 very experienced in mining. The statistics clearly shows artisanal mining requires more manual work which the elderly find difficult to undertake. Coupled with this, the economic downturn which resulted from ESAP, increased number of people aged between 16 and 25 in artisanal mining activities continues to rise.

4.2.2 Distribution of Artisanal Miners by Gender

The research findings indicated that men dominate the artisanal mining sector, making up 95% of the sample, while women account for only 5%. This disparity may be attributed to traditional gender roles, where men are often expected to be the primary breadwinners. However, the women who do participate in mining play crucial roles, such as selling food and drinks, providing catering services, and assisting with ore processing. Unfortunately, the presence of

commercial sex work in these mining communities also increases the risk of STIs and HIV/AIDS. This issue is not unique to artisanal mining and is often seen in other mining settings.

4.2.3 Marital Status of the Respondents

Understanding an individual's marital status can provide valuable insights into how their family responsibilities influence their decision to engage in mining as a means of livelihood. The economic pressure compels parents to take risk in mining to survive and be able to feed their families.

The information gathered by the researcher shows that 82% of the people involved in artisanal mining were married and only 7% were single. This indicated the need to provide welfare support to the family to satisfy livelihoods as the driver to ASM. The 5% of the sample were widows and widowers, this could imply that vulnerability drives people into artisanal mining. A small but significant portion (6%) of our sample consisted of divorced or separated individuals, including women, highlighting artisanal mining's role as a vital source of income for vulnerable groups. This finding underscores the inclusive nature of artisanal mining, where people from diverse backgrounds and marital statuses can participate.

4.2.4 Education Level of the Respondents

The research findings revealed that 60% of artisanal miners had completed secondary education, while 20% had tertiary education and another 20% had primary education. This data challenges the common assumption that artisanal mining is only for the uneducated and impoverished. Instead, it suggests that people from various educational backgrounds are drawn to artisanal mining as a viable livelihood option, likely due to the availability of natural resources.

The presence of educated individuals in this sector underscores the complexity of the issue, highlighting that artisanal mining can be an attractive choice regardless of educational attainment.

4.2.5 Employment Status of the Respondents

Table 4.2 shows none of the target population is formally employed meaning 100% of the population is not formally employed but could be farmers which in general sense is not employment.

Table 4.1: Employment status of the respondents

Status	Frequency	Percentage
Formally employed	0	0%
Not formally employed	10	100%
Total	10	100%

(Source: Primary data, 2025). n=10

As highlighted in the Baseline Report on small-scale mining (2010) , the harsh realities of unemployment and the urgent need for income have pushed many individuals into artisanal mining as a temporary means of survival. This was because the young have had slim chances of being employed in their life to hence they do not have skills. However, for those who have experience in some occupations like mining were left jobless after some mines were shut down for various reasons. The findings suggest that the scarcity of formal job opportunities has driven people to

artisanal mining as a vital source of income. In essence, artisanal mining has become a lifeline for rural residents in Goromonzi District Ward 17, as well as those from neighboring areas, providing them with much-needed employment and financial stability.

4.3 Socio-Economic Impacts of Artisanal Mining

This section presents findings from analysed data on the impacts of small-scale mining on the well-being of people living in and around the study are which is Goromonzi ward and to Zimbabwe's socio-economic development.

4.3.1 Reduced quality of life due to environmental degradation

Research findings indicated that small scale mining activities reduce the overall quality of life for people living in Goromonzi Ward 17. The small-scale mining activities have significantly degraded our environment, leading to a reduced quality of life. The constant noise, dust and pollution from mining operations have made it difficult to enjoy our homes' peace and surroundings as reported by the citizens. One farmer consulted bemoaned;

> *The air we breathe is filled with dust and harmful particles, affecting our respiratory health and overall comfort. It is disheartening to witness the degradation of our surroundings and the negative impact it has on our daily lives.*

The above quotation is supported by (Ncube-Phiri et.al 2015) who noted that artisanal mining is the main "killer" of the natural ecosystem and the natural beauty. Most of the participants consistently reported that small-scale mining activities have led to environmental degradation. There is destruction of ecosystems and the contamination of rivers and streams therefore damaging the landscape resulting in an unsightly and polluted environment. They highlighted the constant

noise, dust and pollution from mining operations that have affected their ability to enjoy their homes and surroundings. Participants from the community voiced feelings of disconnection and a diminished sense of well-being as a result of the environmental degradation caused by mining activities. Participants from the community mentioned that the presence of dust and harmful particles in the air have detrimental effects on respiratory health.

4.3.2 Increased health risks

Research findings indicated that small scale mining activities pose serious health risks to people living in Goromonzi and the artisanal miners as well. There are risks of cardiac related diseases like TB (Tuberculosis), injuries resulting from mine collapse if they survive otherwise death. One miner lost sight from mine blast. The related participant respondent said;

> *I did not have the correct protective personal equipment (PPE). We used explosives when we found a rich gold belt and was hit in the eyes by stone particles as a result am now partially sighted. I took the risk because my children had nothing to survive on because the soils are poor to give us a decent yield yet am not employed anymore as such had no choice.*

Mabhena & Moyo (2020), highlighted that the prevalence of accidents in artisanal mines was reported at 35% with injuries occurring in 25.7% of the surveyed population. This has shown how artisanal mining pose risks to the miners in Goromonzi ward 17 as supported by other literatures. The Ward Councillor also highlighted that the exposure to these uncontrolled mining activities has left many workers suffer from unknown diseases passively as most dust circulating has chemical fumes. He grieved that most of the young people are dying young from reproductive diseases, excessive drinking and drug abuse so as to be “fit for the ground”. The councillor said;

Young people are abusing drugs, surviving on commercial sex, besides diseases arising as a result of environmental exposure. Too much Gender Based Violence resulting in high influx of divorces from infidelity among most couples. Our cultural values are eroding every passing minute.

The respondents also mentioned about coughing, difficulty breathing, and allergies as common symptoms. The exposure to dust and pollutants released during mining operations was identified as a primary contributor to these respiratory issues. Additionally, participants expressed concerns about the long-term health impacts of heavy metal contamination resulting from mining operations. They highlighted worries regarding the potential effects on their overall well-being, given the presence of toxic substances in the environment.

Some people have died from beef poisoned by mining chemicals according to the local clinic reports. **Councillo**r.

The Institute of Mining Research (2020), noted that artisanal mining activities pollute water due to waste extraction which poses risks to sea life. Participants also expressed concerns about waterborne illnesses, skin irritations and gastrointestinal problems resulting from the presence of toxic substances in their water supply. These health risks were attributed to the constant exposure to mining-related pollutants, lack of proper waste management and the release of toxic chemicals into the environment.

4.3.3. Increased income and earning opportunities

Research findings indicated that small scale mining activities also have positive impacts on the wellbeing of people living in the Goromonzi due to increased income earning opportunities.

For local mining members who are wise in using the earnings the researcher noted that they had good homesteads they have put up, good livestock and general family look. Participant responses highlighting this sentiment are shared below.

> *The presence of mining operations has created a demand for goods and services, leading to a thriving market for vendors. These vendors, ranging from food sellers to equipment suppliers, have found new opportunities to generate income by catering to the needs of miners and other workers in the mining industry. This has not only improved their own financial situation but also contributed to the local economy.* **One community member**.

In addition to support mining one miner was excited to point that;

> *The value of gold as a precious metal has provided a reliable source of income, allowing miners to support their families, invest in education for their kids and create a better future for themselves and their communities.*

According to the Zimbabwe National Statistics Agency (2021), artisanal mining has become the dominant highest income generating activity comparing to other activities such as farming, vending, poultry among others. This therefore supports the feedback from the fieldwork that mining provides income. Miners were happy to give an estimate of their monthly earnings although the figures taken are not accurate but clearly indicate the potential earnings. However, during the interviews with the family members of artisanal miners, participants indicated the inflow is very irregular so much that some miners at times starve because they use the earnings recklessly. Using the figures from these miners the following pie charts shows the potential

earnings.

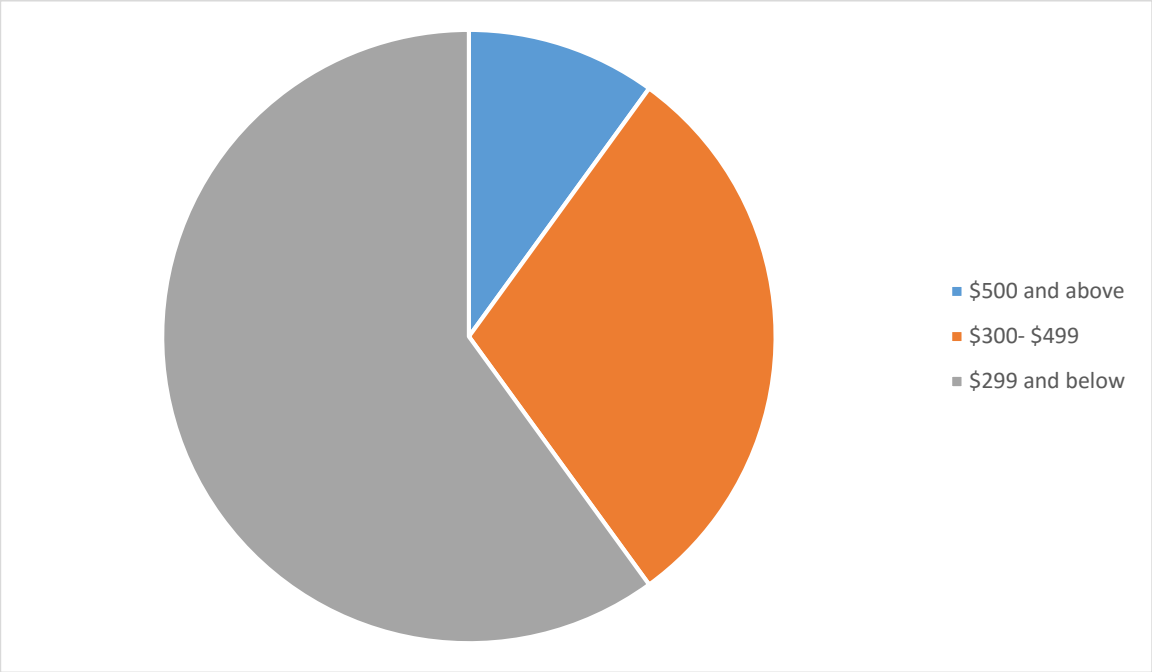

Figure 4.2: Miner's Estimated Monthly Earnings n = 10.

The estimates indicate artisanal mining is lucrative to contribute to development at household level feeding into community level which therefore illustrates that ASM contributes positively to socio-economic development.

Some miners agreed with some communities in that they are an important industry although infiltrated by various elements. These responses highlight two key factors that contribute to the improved financial situation within the community: the selling of gold by local miners and the increased vending activities around mining areas. Firstly, the selling of gold by local miners is a significant source of improved income. Some miners mentioned how the accessibility of gold deposits in the region has allowed miners to capitalize on this valuable resource, resulting in financial stability and economic empowerment. The sale of gold provides a reliable source of

income for miners, enabling them to support their families, invest in education, and enhance their overall living standards. This finding aligns with the broader understanding that the extraction and sale of valuable minerals, such as gold, can create economic opportunities and contribute to individual prosperity as noted by the Zimbabwe National Statistics Agency (ZimStat 2021). A business owner in ward 17 summed it all when he said;

> *The selling of gold by local miners is a catalyst for improved incomes or earnings opportunities. Many individuals who engage in small-scale mining have experienced a significant boost in their financial status through the sale of gold. The value of gold as a precious metal has provided a reliable source of income, empowering miners to support their families, invest in education, and create a better future for themselves and their families.*

4.3.4. Social conflicts over land use

Research findings indicated that small scale mining activities lead to social conflicts over land use which negatively impacts the wellbeing of people living in the study area. The miners have no other priority on land use above mining and they can go at any length to attack any resisting inhabitants. The miners were described as violent people once they find easily accessible gold ore. Participant responses highlighting this sentiment are presented below.

> *Some community members advocate for using the land for crop production to sustain livelihoods and ensure food security. However, others argue for grazing land for livestock, while another group sees mining as the most lucrative option. These conflicting interests have led to tensions and disputes within our community, making it challenging to reach a consensus on how to best utilize the land.*

Mawere (2018), strongly emphasized that artisanal mining destroys the environment and poses permanent land depletions when studying on the artisanal mining in Chiyadzwa. These findings therefore align with the fact that artisanal mining leads to conflicts over land use. There is lack of orderliness that create chaos under which all these issues can derive. Most participants were surprised that government through the respected departments come to buy gold from these people under such environments.

> *"Vanhu ava vaputsa misha mizhinji vachishandisa mari kutora vakadzi vevanhu. Vanoshandisa mapanga, mabhemba, kana pfuti pakurwa. Dzimwe imbavha dzinouya kuvanda vachi 'korokoza'".*

This translated to English means;

> *"Most women have been lured by these miners leading to divorces. We suspect some are armed criminals who have found a haven to hide from law enforcement agencies"*.

According to Mabhena (2014), the evolution of artisanal mining has led to the rise in crime rates and promiscuous activities occurring in mine towns. The responses provided by participants shed light on the social conflicts over resulting from artisanal mining activities. The convergence of these responses indicates a clear complicated pattern of social conflicts arising as participants argue for crop production as a means of sustaining livelihoods because they are aware that processed soils are difficult for crop production to ensure food security.

4.3.5. Food insecurity

There were incidences of cropping fields affected by mining activities irresponsibly. It is because of mining activities that soil erosion is increasing greatly. In that respect and in particular small scale mining activities lead to food insecurity due to land degradation. Traditional leadership and councillors have failed to stop such activities.

> *"Our once fertile soils have been stripped of nutrients, making it challenging to grow crops and sustain our food production"*, said **one community member.**

The EMA reports also mentioned that artisanal mining destroys land for agricultural activities. Participants highlighted the link between small-scale mining activities and land degradation. Participants mentioned the degradation of agricultural land caused by mining operations, therefore resulting in reduced agricultural productivity and the inability to grow sufficient crops due to loss of topsoil.

4.4 Ways Employed by Artisanal Miners to Sustain Their Livelihoods

The majority of artisanal miners survive in many ways from vendors' wares although at times they carry food to the camping sites. This is because in most cases there are no permanent housing structures, no safe drinking water and ablution facilities. When food supplies run short they also go to buy in bulk from any nearest shops to survive. In some worst scenario they engage in relationships with vending women so have someone cooking for them and going out to procuring supplies.

One artisanal miner indicated;

"One time you will go back to your family to refill supplies and also leave some earnings with my wife. My wife does not come here at any time because most activities are not good exposure".

This confirmed the fear in the surrounding communities who see the miners a driver of most divorces in this community. Hilson & Garforth (2013), noted that artisanal mining can lead to changes in traditional gender roles causing tensions in marriages.

4.5 The Environmental Impacts of Artisanal Mining

The responses highlight the need for responsible techniques to protect the local ecosystems and preserve natural resources. Participants consistently emphasized the urgent need for small-scale miners and artisanal miners to embrace sustainable mining practices. Participants recognized that the environmental damages resulting from mining activities require immediate actions through adopting responsible mining techniques, such as proper dump management and minimizing the release of harmful pollutants. Miners themselves can contribute to mitigating the adverse effects on the environment. Participants mentioned techniques such as reclamation of mined areas, minimizing soil erosion, water pollution prevention and promoting biodiversity as methods of conservation. The issue of chemical pollution was not mentioned by many indicating some level of ignorance. The focus on specific mitigation measures suggests a growing awareness among stakeholders about the importance of sustainable mining practices in safeguarding the environment. From EMA it was indicated arresting is the last resort as they want to use participatory approaches since government is promoting responsible mining practices. The District Development Coordinator indicated;

> *There has been too much pressure on all miners using coercive approaches but yielding little progress. It is important to use participatory approaches that are more inclusive and that way the management of this industry is sustainable. Environmental management awareness is critical in the process and success will depend on these miners' ability to monitor each other as we are all aware gold is exhaustive but our farming land is an everlasting gift of nature and must be protected.*

From some of the miners, they all were bemoaning the unavailability of affordable mining equipment and victimisation from law enforcement departments of EMA and Zimbabwe Republic Police (ZRP) creating a hide and seek scenario.

> *Most people mining here are from the local community although there are also others from very far away and yet others are unknown, they don't tell anyone where they come from. The Chinese (PLZ Mine) are also taking some of our rich holes claiming they have been given claim rights so this also creates a battle field damaging the environment*.

This issue of continued environment damage and the need for sustainable restoration and management was best summarised by EMA Annual report (2018) in suggesting a participatory approach to manage all stakeholders in the interest of the environment and all factors. However, at times some of the equipment used by miners is turned into weapons when miners start fighting each other. Several reasons were cited among them being women and mining territories. One acting manager at a mine bemoaned,

Most miners who drink fight over women when they are drunk. Besides fighting over a rich belts if one speaks about it so conflict arises. There are reported cases of bewitching each other and some have died in mysterious circumstances.

So the environment is very important to remain compliant to a middle income nation in the next ten years in Zimbabwe. This is assuming the findings here are indicative of all mining areas exploited by artisanal miners across the country's Great Dyke.

4.6 The Interaction between Poverty, Artisanal Mining and Environmental Degradation

Poverty is the most feared social economic condition in a community. To understand the interaction of poverty, the mining and environmental degradation the following was considered starting with how gold is extracted.

Artisanal miners in the area predominantly use two methods to extract gold. According to Table 5, the majority (6 out of 10) engage in surface mining, while 3 out of 10 opt for underground operations, and a smaller proportion (1 out of 10) practice dredging. If not well managed they all contribute to environmental damage. Such damage subsequently affects animal grazing areas and cropping fields. These interactions result in pollution therefore damaging the environment resources and food insecurity.

Table 4.2: Methods of mineral extraction

Extraction Method	Frequency	Percentage

Surface	6	60%
Underground	3	30%
Dredging	1	10%
Other specify	0	0%
Total	20	100%

(Source: Primary data, (2025) n=10.

As shown in Table 4.4, a significant majority of artisanal miners engage in surface mining, which can lead to environmental degradation, particularly land degradation. The open pits created by mining activities often remain unfilled, posing a hazard to both humans and animals, as observed by the researcher. Some animals are suspected to have died from consuming poisoned water.

However, the researcher gathered that some of the miners have become rich by using positively earnings from these mining practices. One man has come up with a mobile shop selling most wanted consumables to these miners in his creative way. These people and their buyers have contributed towards liquidity in Goromonzi community. The availability of cash, particularly has made access to foreign currency access such that some people are preferring children to boarding schools for better passing results because most day scholars are not passing with high grades. This is supported by Basu et.al (2015), on the notion that artisanal mining gives room for trade and currency exchanges therefore benefiting the community at large and contributing positively in spheres of development.

In line with the above, most homesteads are improving with solar lighting system and safe water supplies. This indicates mining influence on the socioeconomic issues mainly at household levels. A situation that is likely to attract other community investments by the local authority such as better managed road network and communication network including internet services is expected in the future. The researcher observed changes in culture particularly the dressing now copying city styles or fashion. There are also influences on the horticulture industry as homesteads are operating some commercial gardens that are selling supplies in Harare's Mbare Market. This has reduced the prevalence of poverty yet some households especially the elderly are suffering without adequate support particularly in drought years like 2024 that has been hit hard by Elnino climate phenomenon.

4.7 Measures to Mitigate the Impacts of Artisanal Mining

The Zimbabwean government has taken steps to mitigate the impacts of artisanal mining, including passing the Mines and Minerals Amendment Bill (Chapter 21:05). Unregulated small-scale mining has been linked to severe environmental problems, such as river siltation, land degradation, and loss of biodiversity. In response, policies like the Environmental Management Authority (EMA) Act of 2002 and the Mines and Minerals Act of 2006 have been implemented. The EMA Act requires artisanal miners to obtain an Environmental Impact Assessment (EIA) certificate, which outlines measures to prevent, mitigate, and offset the adverse effects of mining. Additionally, the government launched Operation *"Chikorokoza Chapera"* (an end to illegal mining) in 2006, aiming to curb illegal mining activities. However, this initiative has had limited success, as miners often operate at night, increasing safety risks. According to Spiegel (2009), this has also led to the emergence of "gold barons" government officials who employ artisanal miners to operate illegally. Miners in the area reported that they cannot implement mitigation measures

due to financial constraints and fear of law enforcement. Furthermore, the lack of monitoring by EMA has resulted in abandoned claims posing a threat to humans and livestock.

4.8 Summary

This chapter presented the findings from field research, offering a snapshot of the environmental, social, and economic realities faced by the Goromonzi mining community. By sharing firsthand insights, the research aim to provide a nuanced understanding of the community's current situation. From the research the researcher found out that artisanal mining has more negative contributions to socio-economic development rather than positive ones. For instance, the researcher found out that artisanal mining is not centred on the miners alone but a lot of stakeholders are involved, for example the community at large, the family members of artisanal miners, the government officials, community leaders among others.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND AREAS FOR FURTHER RESEARCH

5.1 Introduction

In this chapter, the findings on the contribution of artisanal and small scale mining to socio-economic development in Goromonzi Ward 17 from period 2017-2024 are summarized and conclusions are drawn based on the research objectives. This chapter also provides the recommendations which can be implemented in line with the impacts of artisanal mining and also some areas of further research in which some scholars may study and research on.

5.2 Summary

This study explored the socio-economic impact of artisanal and small-scale mining on communities in Goromonzi Ward 17. It investigated the livelihood strategies of artisanal miners, government interventions, and efforts to mitigate environmental damage. Notably, existing research has largely focused on large-scale mining, overlooking the contributions of small-scale mining. This study bridges that gap by providing an in-depth analysis of artisanal mining's effects at the local level, offering a nuanced understanding of its role in community development.

5.2.1 Chapter 1

This introductory chapter sets the stage for the exploration of artisanal and small-scale mining in Goromonzi Ward 17, Zimbabwe. It provides context on the industry's contributions, outlines the study's importance, and clearly defines the research problem, objectives, questions,

and assumptions. Additionally, it acknowledges the study's limitations and scope, laying a solid foundation for the investigation.

5.2.2 Chapter 2

The second chapter comprised of a comprehensive review of literature in line with the impacts of artisanal and small-scale miners. The literature review explored the existing studies, theories and frameworks that align to the topic. Chapter 2 provided the socio-economic impacts of artisanal mining, the ways employed by miners to sustain their livelihoods, the roles of the government organizations in small scale mining, the link between poverty and artisanal mining and also the activities done to minimize the impacts of artisanal mining. The researcher also identifies the research gap in this chapter which some researchers did not look on.

5.2.3 Chapter 3

Chapter 3 described the research philosophy, research methodology and research design which the researcher was going to use for data collection. The chapter also outlined the population and sample, sampling methods to be used, and the data collection methods. The validity and reliability of the data collection methods was also discussed. Ethical consideration in which the researcher was going to implement during the data collection process were discussed to ensure the research's integrity. Data presentation and analysis techniques were also presented.

5.2.4 Chapter 4

This chapter comprised of the findings of the research based on the data collected from the miners, family members of artisanal miners and the DDC's office in Goromonzi ward 17. The chapter provided a detailed explanation of the demographic information of miners i.e. their marital

status, the level of education, age, employment status and average income. The chapter highlighted the challenges faced by artisanal miners which include increased health risks, reduced quality of life due to environmental degradation, and social conflicts over land use. It also detailed the positive impacts of artisanal mining which include the increased income an earning opportunities and the measures to mitigate the impacts of artisanal mining. The findings were presented in a mixed method approach were quotes, graphs and tables were used to enhance understanding.

5.2.5 Chapter 5

The final chapter of the dissertation summarized the major findings of the research and drew conclusions based on the research objectives. The chapter is a discussion of the findings relation them to theories and literature and the researcher's opinion based on the findings. Recommendations to specified groups of people such as the DDC's office, EMA, Ministry of mines, artisanal mine owners and community leaders. The chapter emphasized the importance of ensuring that artisanal and small-scale mining activities must contribute positively to the socio-economic development of communities. It also gave greenlight for areas of further research.

5.3 Conclusions

This research explored the impact of artisanal and small-scale mining on the socio-economic well-being of communities in Goromonzi Ward 17. It examined government initiatives aimed at regulating artisanal mining to improve local livelihoods. By linking findings to existing research and drawing on expert insights, this study provides a nuanced understanding of the complex relationships between mining activities, community development, and government oversight.

5.3.1 Socio-economic impacts of artisanal mining

While artisanal mining brings economic gains to miners and local residents in Ward 17, it comes at an environmental cost. The informal nature of these mining activities means the government misses out on significant revenue from taxes. Although the country doesn't directly benefit from taxes on artisanal mining, the income generated for locals contributes to the economy through indirect taxes like VAT, providing some economic relief. Socially, artisanal mining comes with incidences of pollution and land degradation which results in conflicts over land use. From the findings it is also noted that some artisans neglect land boundaries whilst in the process of following a gold belt which leads to conflicts.

According to Faresu, (2019) artisanal mining have been noted as an activity resulting from liberalization of the state from colonization. Hence through this some artisanal miners have developed a syndrome that it is “making use of the motherland” to carry out mining activities because the country way liberalized from external control. The researcher however does not agree to this because regimes have changed and boundaries have been made hence mining activities should follow delimitation marks despite the occurrence of a gold belt to avoid social impacts.

5.3.2 Ways employed by artisanal miners to sustain their livelihoods

It was pointed out that people engage into artisanal mining when they are unemployed and when the prices of agricultural inputs are too high. In addition, subsistence farming offers food at times which is not enough to cater for the family, whilst artisanal mining provides cash, this has led to both activities complimenting each other. However, artisanal miners endure the risks of illegal mining as a way of survival. Some have invested in livestock as a store of cash whilst some

have wasted the earnings through unproductive means like excessive drinking and prostitution activities.

Hilson & Pottie (2004), asserted that artisanal mining boost rural incomes despites its negative impacts. They however argued that artisanal mining marginalizes women which therefore creates unequal income earning opportunities. The researcher can attest to that as there were no women involved in mining activities rather there were a few involved in selling goods at mining areas.

5.3.3 The roles of governmental organizations in artisanal mining operations

The government takes on a crucial role in mitigating the impact of artisanal mining. Through agencies like the Environmental Management Authority (EMA) and the Ministry of Mines, the government works to ensure that mining activities don't harm the environment or local communities, promoting a more sustainable and responsible approach. However, these government agencies lack funding to effectively monitor the mining activities which becomes a challenge. On the other hand, some government officials have become Gold Barons which hinder effective mitigation attempts due to corruption. From the findings, the researcher noted that there are reports of rich government officials seen at artisanal mines buying gold from them. This makes the role of the government organizations in curbing effects of mining to be underestimated.

The Tragedy of the Commons theory resonates with this research findings, suggesting that individuals prioritizing their own interests can lead to the depletion of a shared resource, despite the long-term consequences. This is reflected in the research findings, where workers revealed that some government officials have personal stakes in the mines, highlighting the complex dynamics at play.

5.3.4 The link between poverty, artisanal mining and environmental degradation

Based on the findings most miners are involved in this trade due to poverty. They use artisanal mining as a means of survival as there are no or less employment opportunities. Some of the artisanal miners are not educated enough to acquire legal jobs hence they engage in artisanal mining as a way of employment. However artisanal mining activities comes with environmental degradation in the form of deforestation and pollution. Trees and the land are depleted when the miners are following a gold belt. From the findings the researcher noted that there are many gullies and underground trenches due to consecutive digging and extractions. Mining also leads to water pollution when the ore is being washed and air pollution when the grinding mills are operating. This has posed risks to both the community and the miners themselves.

These findings are supported by the Drivers Pressure State Impact Response framework (European Environment Agency, 1999) which states that poverty drives pressure on the available resources and the impact being the environmental hazards posed by mining activities. The researcher however is of the opinion that mining activities despite poverty issues have been a hereditary activity and despite the level of education some people engage in artisanal mining as a way to obtain “quick money” rather than being employed in a company.

5.3.5 Mitigation measures to reduce the impacts of artisanal mining operations

Policies are being implemented in order to reduce the impacts of artisanal mining activities. Mbangwana (2020) asserted that there has been use of some government alternatives for job creation initiated in order to stop the miners from mining, however due to the rising population there has been few opportunities for employment hence the continued artisanal mining activities

as a way of survival. Some measures put in place to mitigate the effects of mining include legislation, regulation and environmental certificates in artisanal mining.

According to the Ministry of Mines and Mining Development (2022), the artisanal mining activities poses economic benefits hence there is need to balance the economic benefits with the need for responsible and sustainable practices. In addition, the Ministry imposed measures that artisanal miners must comply to the ISO Standards in their operations such as ISO 45001 (Occupational Health and Safety Management Systems) and ISO 14001 (Environmental Management Systems).

5.4 Recommendations

Based on the findings and conclusions of this study, the following recommendations are proposed to different sectors which affect directly or indirectly artisanal mining activities so as to address the impact of artisanal and small scale mining in Goromonzi ward 17.

5.4.1 The District Development Coordinator's Office

The government through the DDC's Office need to partner with Non-governmental organizations to train the youths on other safe sustainable means of survival apart from artisanal mining. Based on fieldwork data, youths are highly involved in mining hence they need to educated and trained.

5.4.2 The Ministry of Mines and Mining Development

The ministry needs to involve the community when crafting and implementing policies related of that affect their livelihoods for instance the Mines and Mineral Act and the EMA Act.

This is essential because it educates the people and allows for creation of by-laws which governs local mining activities.

5.4.3 The Environmental Management Agency (EMA)

There is need to educate the communities on the negative impacts of artisanal mining on the environment apart from just collecting fines whereas the miners are not educated. There is also the need for EMA to sue the mines with miners that operate without certificates and proper PPE so as to avoid health risks. Anti-corruption measures need to be taken by EMA so that the agency will not collect bribe from mines who do not adhere to safety standards.

5.4.4 The artisanal miners

Those who intend to remain in artisanal mining need to practice safe measures that do not pose risks to their health. Artisanal miners need to wear correct PPE to avoid permanent injuries and chronic illnesses. Also the artisanal miners need to follow demarcation boundaries to avoid social conflicts on land use. There is also the need to prevent pollution if water by digging trenches and curbing air pollution by operating the mills at night.

5.4.5 The community leaders

Community leaders need to partner together in ensuring that artisanal mining does not affect negatively to the community. This can be done through capacity building and education in various departments of the community such as in churches, schools, political affiliations among others. The community leaders may also implement laws in their community which aid on the activities of artisanal miners.

5.5 Areas for further research

This study focused on the contribution of artisanal and small scale mining to socio-economic development in the case of Goromonzi ward 17, however there are areas which need further research. One area of further research could focus on the relationship between drug and substance abuse, and artisanal mining. This is essential as there have been reported cases of violence resulting from drugs consumption in mining areas. Additionally, one might also research on the drivers of artisanal mining despite the government's efforts in making some interventions to legalize it.

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LIST OF APPENDICES

Appendix A: A questionnaire for artisanal miners

I am a student at Bindura University of Science Education registered as B210712B currently studying for a Bachelor of Science Honors Degree in Peace and Governance. I am carrying out my research study titled, "THE CONTRIBUTION OF ARTISANAL AND SMALL SCALE MINING TO SOCIO-ECONOMIC DEVELOPMENT. A CASE OF GOROMONZI WARD 17 FROM PERIOD 2017-2024." I am kindly asking for your contribution to my dissertation in answering the questions below. I would appreciate if you take your time to respond to these questions. I undertake not to disclose any information regarded as confidential and the identity of each participant shall remain anonymous and they will be sorely used for the purpose of this study.

1. SEX [ ] Male [ ] Female

2.AGE [ ]

3. How has artisanal mining affected your household income compared to other sources of income? Please provide specific examples.

……

……

…….

4. In what ways has artisanal mining created job opportunities in the community? Can you briefly describe the types of jobs specifically that have emerged as a result?

……

……

…….

5. What improvements or changes have you observed in your community (e.g. , infrastructure, education, health services e.t.c) as a result of ASM activities?

……

……

……

6.What environmental challenges have you encountered due to the artisanal mining activities, if present how do you believe these impact your community's socio-economic development?

……

……

……

7. How has your access to resources (such as water, land and minerals) changed since you began artisanal mining? Do you feel this access has benefited of hindered your community development?

……

……

……

8. How do local laws and regulations affects your artisanal mining activities? What changes would you suggest to improve the socio- economic benefits of artisanal mining in Goromonzi?

……

……

……

THANK YOU FOR YOUR COOPERATION.

Appendix B: A questionnaire for family members of artisanal miners

i. AGE & SEX

[ ] [ ]

ii. Relationship to artisanal miner (s)

[ ]

iii. How has the income generated from artisanal mining impacted your household's overall financial situation? Please provide examples of the changes you have experienced?

……

iv. Has artisanal mining contributed positively to the improvements in your family's living conditions (e.g., housing, access to basic services) If so, how?

……

……

v. How has the income from artisanal mining affected your family's ability to access education and healthcare services? Have you seen any changes in school attendance and health outcomes?

……

……

vi. Are there any changes in your family gender roles and responsibilities due to the artisanal mining activities? If so what are they and are there any ways in which you have put in place to adjust to them?

……

……..

vii. How has artisanal mining influenced your family's involvement in the community activities and decision-making processes? Have you noticed any changes in community cohesion or interactions? (e.g., labeling, judging)

……

……

viii. What are your family's hopes or concerns regarding the future of artisanal mining in Goromonzi since your family member is involved? What do you think should be done to improve the further benefits of artisanal mining to socio-economic development?

……

……

THANK YOU FOR YOUR COOPERATION.

Appendix C: A questionnaire for the District Development Coordinator's (DDC) Office

i. SEX & POSITION AT THE OFFICE

[ ] [ ]

ii. How do you assess the economic impacts of artisanal mining on the local economy of Goromonzi specifically in ward 17 from 2019-2024? What specific benefits have you observed?

……

……

iii. What regulations or policies that are in place currently to govern the activities of artisanal miners in Goromonzi? If any, how are they effective in promoting sustainable practices and the protection of community interests?

……

……

iv. Can you describe any community development projects or initiatives that have been funded by the income from artisanal mining area particularly ward 17? What outcomes have these initiatives achieved to Goromonzi as a whole?

……

…….

v. Are there any measures being taken to address the environmental concerns associated with artisanal in Goromonzi ward 17? How do these measures affect the socio-economic development of the community? Have the artisanal miners adhered to the measures being put in place to address environmental concerns?

……

……

vi. How does your office engage with artisanal miners and their families in Goromonzi? Are there any cases or complaints being reported to the office with regards to artisanal mining by the community or other stakeholders?

……

……

vii. Do you really think that artisanal mining activities are necessary to socio-economic development rather than commercial industrial mining (e.g. Prospect Lithium Zimbabwe mine)? If so, why do you think so?

……

……

viii. What are your future plans or strategies that can enhance the contribution of artisanal mining to socio-economic development in Goromonzi? How do you intend balancing economic benefits with community welfare and environmental sustainability?

……

……

THANK YOU FOR YOUR COOPERATION.

Appendix D: Plagiarism Report

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