CHINESE INVOLVEMENT IN ILLEGAL SMALL-SCALE MINING IN NAMIBIA: AN ASSESSMENT OF ITS IMPACT AND IMPLICATIONS

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DECLARATION

I, **Salmaan Dhameer Jacobs,** hereby declare that this study is a true reflection of my own research, and that this work, or part thereof has not been submitted for a degree in any other institution of higher education.

Signature: **Date: 30 November 2017**

APPROVAL PAGE

The undersigned certify that they have read and recommend to the Department of Management Sciences for accepting this dissertation submitted by **Salmaan Dhameer Jacobs** in partial fulfilment of the degree of Master of Science in Strategic and Security Studies.

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- And above all, the Almighty God, for His grace upon my life and His Mercy to have provided me with the strength and the ability to complete this research project.

DEDICATION

I dedicate this Thesis to my wife, Annarine, and our children, Radia, Rhafick and Lenha, for the unconditional love, understanding and support showed to me during this tenuous period of research, while full-time work demands its fair share.

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ABSTRACT

Small scale mining provided employment to many Namibians and has played an important role through throughout the mining history of Namibia (Namibian Mining Report, 2006). When independence dawned on Namibia in 1990, about 5% made up the total mining industry employment from the small-scale mining sector.

This study main objective of this study was to determine the Chinese involvement in illegal small scale mining its impact and implications in Namibia.

A quantitative case study was employed whereby the data was collected from 200 small-scale miners in Karibib and Usakos communities through a self-administered structured questionnaire.

The findings on Exploration Processing Licenses (EPLs) seems to suggest that majority of the EPLs were owned by foreigners. It therefore supports Tsurukawa et al (2011) recommendations that the government of Democratic Republic of Congo (DRC) should create more EPLs in the small scale mining of cobalt in Katanga District. On effects of Chinese involvement in illegal small scale mining on health the findings seem to support Crawford et al (2015), Bach et al (2014) and Tsurukawa et al (2011) findings that health was identified as the most adverse social impact of gold and cobalt mining in Ghana and DRC.

Besides these findings, there were elements of legal impunity, according to Figure 4.10. About 100 respondents, representing 50%, were indifferent whether there are elements of illegality in foreign involvement in small scale mining activities in Karibib and Usakos communities.

ABBREVIATION AND ACRONYMS

AGM	Annual General Meeting
BEE	Black Economic Empowerment
CASM	Communities and Small-scale Mining
DRC	Democratic Republic of Congo
EPLs	Exploration Processing License
EU	European Union
FDI	Foreign Direct Investment
OECD	Organization for Economic Co-operation and Development
ODA	Official Development Assistance
SME	Small and Medium Enterprises
SSM	Small Scale Mining
USA	United State of America

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CHAPTER ONE: INTRODUCTION

1.1 Orientation of the Proposed Study

This section discussed the background to the study, followed by a statement of the problem and research objectives. The section concludes with a brief discussion on the significance of the study as well as the limitation of the study.

Small scale mining has been a very important employer throughout the history of Namibia (Namibian Mining Report, 2006). At the dawn of the Namibian independence in 1990, small-scale mining employed approximately 5% of the total mining industry employees. By the year 2000, it accounted for 20% of the estimated number of people in the mining sector (Namibian Mining Report, 2006).

According to Ellmies, Hann & Mufenda (2005) most of the mining activities conducted by the small scale miners involve extraction of gemstones, crystal specimen, tantalite and cassiterite. Ellmies, Hann & Mufenda (2005) go on to say that, precious stones that are extracted include fluorite, dioptase, topaz, aquamarine, quartz, amethyst, tourmaline, and garnet.

World Bank (2013) and Hentschel et al (2003) concurred that there is no common definition for the small scale mining sector, with World Bank referring to Artisanal and Small-scale Mining (ASM) as a mining practiced by individuals, groups or communities often informally (illegally) and in developing nations.

Hentschel, Hruschka and Priester (2003) refers to it as mining by individuals, groups, families or cooperatives with minimal or no mechanization, often in the informal (illegal) sector of the market.

Hentschel et al (2003) points out distinction made in some countries between ‘artisanal mining’ that is purely manual and on a very small scale, and ‘small-scale mining’ that has some mechanization and is on a larger scale. However, for the purpose of this research, as was done by Hentschel et al (2003), both the terms artisanal and small-scale mining will be used inter-changeably.

Given the prevalence of small-scale mining around the world, many would agree that small-scale miners are poverty driven, and they often lack business fundamentals. Hence the need for support structures as well as mapping the socio-economic impact for small-scale mining activities in Namibia is crucial ((Nyambe & Amukete, 2009).

Despite the numerous sentimental news reports echoed frequently by media houses, one still finds that the depth of scholarship on small-scale mining entrepreneurship in Namibia and in particular the Erongo region is quite limited.

More especially, the discourse on small-scale mining is quite skewed with prominence on the environmental challenges of small scale mining (Van Straaten, 2000:45; Tesha & Beinhoff, 2005:112).

Research has shown small-scale mining as being the cornerstone of the economy of rural communities. Nonetheless, it is apparent that small-scale mining entrepreneurs confront a number of setbacks that can be aligned to inadequate support and resources as well as socio-economic impact thereof. For instance, Arah (2014:1) argues that most of these negative impacts are a result of deficiencies on the part of the regulatory bodies charged with monitoring the mining industry. Solutions to these problems are required to ensure that the industry contributes positively to the Ghanaian nation.

Similarly, Chinese miners' involvement in Ghana's gold mining sector left many small miners without jobs, and promises of rehabilitating the land after the mining activities never materialized. This has had an adverse impact on the local cocoa growers (Rice: 2013).

Thus, this study was guided by the Arah (2014) and Rice (2013) findings on the socio-economic impact of small scale miners in Ghana. Nyambe and Amunkete (2009) affirms the findings that small-scale mining contributes to poverty alleviation through employment creation, income earning opportunities, and sustaining local businesses by means of purchases done at local and nearby towns.

The study made by Nyambe and Amunkete (2009) seeks to achieve three specific objects. These objectives were activities the small-scale miners were involved in, the role small-scale mining played with regard to poverty alleviation, and to suggest policy recommendations that may help to improve small-scale mining activities.

Nyambe and Amunkete (2009) achieved these objectives through mixed methods approach. It was determined that small-scale mining contributes to poverty alleviation through employment creation.

1.2 Background Information of Karibib and Usakos

Karibib and Usakos are very important towns, which are found on the main road between Windhoek and Swakopmund. The distance between the two towns are 30km, and Karibib is some 100km west from Okahandja. Karibib came about because of the advent of railroad development which reached Karibib on 30 May 1900.

Also, in order to administer and monitor the railroad, when the railway reached Jakkalswater, a military outpost of 4 soldiers was opened in Karibib in 1899. The government thereafter moved the district council from Otjimbingwe to Karibib.

Karibib is also home to the Karibib Marble and Granite Works. This highly specialized industry processes some of the high quality marble deposits that have been found in the country, with a large percentage being exported. Places of interest include the Old Station Building, Halbich House, and the Henckert Tourist Centre.

On the other hand, Usakos offers tourist many opportunities. There are lot of shops, stalls, local products, souvenirs and restaurants. The name Usakos is Damara word which means "!Usa-!Ko", meaning "grab the heel". The town was founded in the early 1900's and is the closest town to the Spitzkoppe Nature Reserve. While in Usakos, the following tourist attractions are available: Hiking and Biking Trails; visit to Philips Cave and Mount Erongo; drive through Spitzkuppe Nature Reserve ("Matterhorn of Namibia"); and visiting Tsaobis Leopard Nature Park. The small-scale miners and their families who are in close proximity to these two towns buy mining equipment, amenities and obtain goods and services from the two towns.

In response to the findings of Nyambe and Amunkete (2009), this study seeks to investigate the Chinese involvement in illegal small scale mining its impact and implications in Namibia.

1.3 Statement of the Problem

Small-scale Mining in either gold or other precious metals is still a central source of income for millions in the developing world and as much as 13 million in Sub-Sahara African alone (Hilson & Pardie, 2006). However, the backside of such a significant amount of people being involved in small-scale gold mining is its major environmental damage and health effects, which contribute to what is allegedly called a poverty trap (Hilson & Pardie, 2006).

An increasing number of young workers can be seen entering artisan mining, apparently with limited knowledge about its effects for them and the environment, which serves to reproduce the tendency (Hilson, 2008). These negative socio-economic effects are potentially further fueled by the influx of Chinese illegal miners without giving Namibia the economic gains it gets from legal mining through its tax regime (Nyambe &Amukete; Niikondo & Coetze 2012).

Nyambe and Amunkete (2009) explored the activities the small-scale miners were involved in, the role small-scale mining played with regard to poverty alleviation, and to suggest policy recommendations that may help to improve small-scale mining activities. Nyambe and Amukete (2009) study did not explore the Chinese involvement in Illegal Small scale mining and its impact and implications in Usakos and Karibib which the current study aimed at filling the gap. The study will, therefore, examined effects at economic and social levels, as well as the legislative framework that provided a protective framework to these small-scale miners.

1.4 Objectives and Research Question of the Study

The main objective of the study is to investigate the Chinese involvement in illegal small scale mining its impact and implications in Namibia.

- To what extent the Chinese small-scale mining activity alters the environment, socio economic situation and social dynamics of the communities.
- To what extent it benefits the local population and how the effects alter the district's
- To assess whether Chinese involvement adheres to Namibian legal framework in small scale mining.
- To determine the demographic characteristics of the respondents involved in illegal mining activities

1.5 Research Questions

The specific research questions are:

- In what ways have the Chinese small-scale mining activity contributed to the social and socio-economic impacts on the local community?
- To what extent are the government and public stakeholders successful in dealing with the issue of Chinese involvement in illegal small-scale mining in the local communities?
- What are the demographic characteristics of the respondents involved in illegal mining activities?

1.6 Significance of the Study

The findings of this study contributed to an increased understanding of China's wider presence in Namibia. More specifically, the effects of Chinese small-scale mining in the Karibib and Usakos communities felt, and why the government struggles with finding sustainable solutions to the illegal mining of precious metals.

Additionally, the benefit of the study is that it can serve as a guiding tool for researchers. Academics may use it as reference material, and the research can help Government in enacting appropriate legislation.

1.7 Limitations of the Study

The study was conducted in the areas where small scale miners are residing, and limited to the Erongo region, especially at Usakos-Henties Bay T-junction and Walvis Bay areas. In these areas small miners display their goods, and in close proximity to their mining activities, which is exploration of semi-precious stones, Furthermore, the study focused on the socio-economic impact of Chinese involvement in small scale mining activity in Erongo region.

This inherently precludes the other provinces and Black Economic Empowerment (BEE) mining entrepreneurs. It also excludes all other areas where small scale mining is taking place in Namibia. It also includes the big mining giants in which the Government of Namibia and other commercial entities have stake in. What is also important is that the time factor of going around for research and interrogation is limited to a time framework where in two weeks most of the work of obtaining relevant information has to be done.

Transportation to and from the research area is also a limiting factor, as the researcher has to travel with own transport to and from the research area, which has become cumbersome given the costs of transportation involved.

1.8 Conclusions

This chapter discussed the research context and problem statement, followed by the research objectives and questions. This chapter concludes with significance and limitation of the study. The next chapter presents the literature review and theoretical and conceptual framework that informed the study.

CHAPTER TWO: LITERATURE REVIEW AND THEORITICAL FRAMEWORK

2.1. Introduction

This chapter reviewed relevant literature on the socio-economic impact of small-scale mining activity as well as government's response to challenges posed by this mining activity.

The review specifically focused on the effects of Chinese small-scale mining in Usakos and Karibib areas, and its impact on the development's sustainability. It also assessed to what extent the government has been able to deal with the issue, and potential challenges present in relation to this.

2.2. An Overview of Small-Scale Mining

Hentschel, Hruschka & Priester (2003), refered to artisanal and small-scale mining as those individuals, groups, families or cooperatives who are mining with minimal or no operational machinery, and they are mostly in the informal sector of the market.

Krappman (2006) is of the view that small-scale miners find it very difficult to have efficient operations because of high input costs, lack of appropriate tools and uncompetitive prices for their products. He therefore maintains that the domestic market is the target market for the small miners, but because there are no formal and organised small-scale mining operations, it has kept this sub-sector on a low level of economic growth.

In Zimbabwe, Tukic & Tapula (2007) argued that the government should craft their own solutions towards regulating the mining activities if mining is to be viewed as a vehicle for sustainable socio-economic development in the long term.

This research made use of academic material and studies done on the subject in the past that are relevant to this research topic.

The findings of (Tukic & Tapula 2007; Buxton 2013) are of importance as it showed the importance of the small-scale mining sector in Namibia. The findings of (Tukic & Tapula 2007 ; Buxton 2013) demonstrated how small scale mining contributes to socio-economic development in Namibia. In addition to that, it also showed how policy issues can be linked to make it more viable and vibrant to enhance the growth of this sector, and for the support of people's lives.

The report "Communities and Small-scale Mining (CASM)" produced at the Second CASM Annual General Meeting (AGM) held in Peru from 23-28 September 2002 provides very valuable information that relates to this research topic. The report stipulates that members of the CASM discussed and agreed on cooperative mechanisms for communities, cooperation between major mining companies and small mining companies, as well as global challenges faced by the small scale miners.

This report highlights the relationship between small scale miners and the large scale miners with whom they sometimes share mining areas. This research also investigated the role of foreign miners versus local small-scale miners.

The paper presented by Crawford, Mba, Agyeyomah & Botchwey (2013) also provided some stark realities and introduces a higher level of mechanization by Chinese miners. Also, there is an increased scale of mining with the consequent degradation of land and water bodies.

This research provided more information on the impact of Chinese involvement on the small-scale miners of Namibia. This is particularly focused on impacts relating to capacity, resources, environmental and land degradation issues.

Dreschler (2001) explored perceptions around sustainability of small scale mining and environmental issues. This study provided success stories and failures that have been encountered in the field of small-scale mining in the different countries. This research strengthened the case of demonstrating the impact Chinese involvement has on the small scale mining in Namibia.

Besliu (2013) provided some valuable background information to this research in terms of how the Zambian Government reacted to the violation of safety and environmental laws by the Chinese miners and their failure to pay mineral royalties. This article could help with the objective of wanting to know the Namibian Government's response to small scale miners' request to be protected against foreign miners' invasion of the small scale mining sector.

In Zambia, the mine workers in Chinese mining companies did not have social benefits, and antagonism grew towards Chinese miners. Election campaigns of the Patriotic Front of Michael Sata used these sentiments to his advantage (Fraser & Lungu, 2007), this resulted in an explosives manufacturing plant being demolished, which killed fifty-four plant workers (BBC News: 2005). Namibia has been seeking foreign direct investment (FDI) from major trading partners including China, and China responded by investing in the mining sector, especially in the uranium mining sector (Epangelo Mining Report: 2015).

The annual report of the Chamber of Mines of Namibia (2006) which highlighted the inefficiency of the small-scale mining sector in Namibia is crucial. It would appear this inefficiency was caused by the absence of mineral development policy, and that it leaves room for large companies to show interest in similar mineral deposits which is mined by the small scale miners.

2.3 Theoretical Framework

In this section the relevant theories that informed the study on the small–scale mining in Namibia are presented and discussed and the likely implication to the Namibian context are proposed. In sum, this study is informed by Hilson & Pardie (2006) cycle of poverty trap and socio-economic impacts on small-scale mining.

When one looks at the prevailing impact and effects which results in illegal small-mining, it is suggested that illegal small-scale mining sector in mostly the developing world is as a result of the prevailing poverty cycle (Tshackert & Singha, 2007; Noestaller, 1996; Hilson & Pardie, 2006).

Since they are poor and do not have the ability to acquire appropriate equipment, they use mercury and other primitive extraction methods, which results in them not fully benefiting from their extractions, and ultimately selling the products cheaply. They are in most cases also semi or non-skilled.

Hilson and Pardie (2006) poverty cycle trap suggests that the poverty cycle is plagued by many factors. It ranges from low levels of technology and poor geo-prospecting, unskilled labour and inability to invest, to low income, low recovery and low productivity.

These detrimental factors are further exacerbated by environmental damage, deteriorating quality of life and health, and ever-present poverty. It is where large number of miners' limited mineral resources are exploited in that given area (Hilson & Pardie, 2006).

Hilson and Pardie (2006) further query why these artisanal and small-scale mining (ASM) are overlooked in most parts of the world when policies and programmes are framed and budgeted for. It further enquires why governments are not investing in this sector as it has all the potential to drastically change economic situation of these miners, if they are provided with all necessary equipment and know-how.

Another extraction method is what is called the mercury, which is a kind of mixture used to extract gold. This mercury causes environmental- and health threats, but the mercury dealers provide it to small miners. After they have extracted gold, the price of gold is reduced because the substance, mercury is not pure gold. These mercury dealers are also the buyers of the gold which is extracted by the miners; therefore, they use this mercury to drastically reduce the prices of gold, and thus the income of small–scale miners.

These small miners also lack the know-how of this mercury equipment and therefore cannot use it again by recapturing it, which further increases the economic impact this imbalance to the small miners (Hilson & Pardie, 2006, p.109). Hilson & Pardie's theory provides a platform where wide-ranging poverty issues can be discussed and findings to be shared, as these small miners are constantly plagued by the poverty cycle.

The basic economic theory of supply and demand and poverty projections by Alfred Marshall is applied in order to explain certain economic effects on the small miners and how poverty levels differ from the rich to the poor. Also, their perception thereof is elaborated in terms of demand and supply of a commodity. The theory simply states that when demand for a commodity rises or the supply decreases, the price will also increase, and opposite if the demand declines or supply increases (Marshall, 1920).

Many countries with large amount of resources demonstrated that managing those resources can be cumbersome. This is so, especially if good governance frameworks are not in place, and there is lack of sound resource management plan in place. Such a situation leads to what is called the resource curse (Ross, 2003).

Ross (2003) pointed out that in many countries the resource curse results in politicians and leaders to deviate from investing in human capital, infrastructure and other aspects that are crucial for development to happen. These governments do not come up with programmes relating to revenue and tax collection, neither do they invest in essential sectors of health, education, research and development (Ross, 2003, p.22).

While plundering the resources, they do not venture into spreading the income to develop other sectors of the economic and keeps on depending on the primary resource, and often the minority elite benefits and the larger population do not benefit from the resource. Many findings have shown that these kinds of resources have resulted in prevailing corruption in most of the developing countries (Busse & Göning, 2011).

This situation of bad policies and governance can further be exacerbated when combined with what a country can experience and what is termed as the “Dutch Disease”. The

Dutch Disease was derived from the oil curse experienced by the Netherlands in the 60's, where an economy that accrues too much wealth from one resource like oil, and not using macro-economic principle, it increases the value of the country's currency.

This tendency of relying heavily on one commodity creates a situation where the country can lose its ability to compete on the world market. It can also drastically reduces its exports, where it could lead to lack of development and industrialization.

Many countries were caught in the web of relying and depending on one resource, which could be oil. This was done by neglecting other sectors, and therefore a downward negative spiral is created in the process (The Levin Institute, 2013).

Resource curse has many sides to it, which are adverse and can lead to conflict situations as has happened in Nigeria. At the beginning of the 21st century, several guerrilla groups made headlines in Nigeria. They have caused conflicts, created environmental damages by cutting oil pipelines, sabotaged oil reserve areas of the Niger Delta and indulged in theft of oil resources (Watts, 2004).

The environmental activists like Maathai warned that due to climate change, human conflicts are likely to increase where resources are scarce, as climate change has engulfed the whole of the African continent (Maathai, 2009, p.249). He further informed the reasons for the increase of the level of conflict, are caused by both the climate change (reducing arable land, increased floods and droughts, and causes migration), but also due to increased demand for metals, food, and other resources important for feeding the potential growth of the Third World (Maathai, 2009, p. 249, 251).

There is therefore a need to sustain societies, create environmentally friendly landscapes, communities that are economically and socially progressive, and to have good policies in place. Policy process needs to be conducted in a way that will involve and address all the mentioned factors, because processes that are interactive and dynamic will always produce best results, when it is combined with implementation and output (Sutton, 1999).

Policy processes are important to conduct public affairs to ensure participatory governance. Such participatory approach includes all citizenry, both the organized and non-organized citizens (Tadesse et al, 2008, p.9).

Any participation is a democratic right (Reed, 2008), as people will generate interests in making decisions for themselves, and there will be collective process where the implementation would have been a collective undertaking, and therefore all will enjoy the successful implementation which was jointly achieved.

Ayee (2011) explained the difficulty faced to implement policies improving the conditions of social welfare of the small miners. They found that institutions directly involved are not included in the mining governance, that there are excessive centralized policy-making processes, system of political patronage, lack of transparency and weak institutional capacity at political and regulatory levels (Ayee et al, 2011, p.19, 20, 29). This theory is applied in the analysis to discuss the level of participation, and to what extent this could serve as an obstacle to the implementation of policies that could have improved the situation.

Ayee and his co-authors argued that the net impact of mining and economic development will be enhanced with appropriate reforms in governance. Some of the suggestions included greater awareness of incentive problems at political level, set of checks and balances, capacity building at different levels, and incentives for institutional performance.

2.4. Chinese Activities in Africa

China's presence in Africa is because it has diplomatic relations with most African countries and also because of the international goodwill it enjoys in the developing world (Lum; 2009). According to the author most of the activities of China in Africa relates to financing of infrastructure, natural resource participation and extraction, and executing state projects in many developing countries.

However, according to Lum (2009), these activities cannot be classified as economic assistance as it does not constitute "official development assistance" (ODA) in accordance with measured in place and provided for by the Organization for Economic Co-operation and Development (OECD).

Lum (2009) further states that most of these activities have aid component to it. This is so, because it is secured through official bilateral agreements to promote development and to provide economic benefits which the recipient country or countries would not otherwise have had.

These activities can also not be strictly commercial or results in foreign ownership of productive assets, as it does not qualify as foreign direct investment (FDI) (Lum, 2009).

Recent reports by the World Bank (2007) suggest that trade between China and African in 2006 reached more than $50 billion dollars. These trade relates to natural resources where Chinese companies import oil from Angola and Sudan, timber from Central Africa, copper from Zambia, uranium from Namibia, and other resources from these and other countries (Zafar: 2007).

This according to Zafar (2007) has contributed to upward swing in prices, and has given a boost to real GDP growth in Sub-Saharan Africa, and bringing desperately needed capital to Africa.

On the downslide, Zafar (2007) argues that importing low-cost textiles to most African countries and many poor consumers benefitting from it, however, it threatens growth of local production of those textiles.

The relationship can provide both the opportunity and challenge, according to World Bank 2007 report, where Africa will reduce its marginalization from world economy, and sufficient control and management of its resources can promote efforts to reduce poverty back home.

However, Chinese traders present in most African countries are mostly ordinary traders, who make up majority of those into retail trade. According to McNamee (2012), it is mentioned that the common characteristics of China's presence in African relates to bad working conditions, low salary and very tough competition for small- scale businesses.

Chinese also believe that money making is easier in Africa than in China, and that regard themselves as competitors among themselves rather being competitors to the local entrepreneurs (McNamee: 2012).

Most of the retail jobs therefore go to Chinese, which creates a tendency that, most Africans to not take part in the growing business activities on the continent.

These findings were confirmed by Bond (2006), who found that in Nigeria more than 350,000 local jobs have been taken over by Chinese competition, and that Chinese in Nigeria, like everywhere else operates outside the state and live as individuals, earning more than they do in China (Xiao, 2015).

Moyo (2012) views China's presence in Africa is more to safeguard its own future growth, as well as to ensure that the demand they have in China to urbanize and industrialize requires huge resources which only Africa can provide. This is evident in Ghana where in the Ashanti region; the prices soared due to increase in demand while supply for resources has diminished (Moyo, 2012).

What China does is to come to the African countries and offer deals, which because of the prevailing conditions of non-development, many African countries cannot easily reject. These deals comprise large loans from the development banks of China, or to help build essential infrastructure such as roads.

In return, these countries should commit themselves to repay in resources found in the country over specified time period (Cardenal & Araujo, 2013). What is different to Chinese deals is that there are no known conditions, like what the Western countries demand of wanting to see more democracy and reduction in corruption, and that around half or more of the goods and services should come from China.

African countries, which are undergoing increased structural adjustments and regime changes do not want conditions and therefore gladly comply as acceptable requirements

(Condon, 2012; Moyo, 2010). African countries may see it as a win-win situation where infrastructure requirements of their governments and people are addressed.

However repayment with resources of the country is like a barter system where one pays one commodity with another. For example, the Democratic Republic of Congo (DRC), are required to make repayments with copper and cobalt, as these are resources found in the country.

Chinese business people also operate individually, therefore they can fix prices below the value of the product, and thus receive more minerals in return than they would otherwise (Cardenal & Araujo, 2013). The long term projects dictate that many countries will be left with scarce resources which they will need when becoming processors themselves of their minerals and resources, and when they stop exporting of raw materials. Pegg (2006) argues that it is high time now for countries in the western hemisphere to remove trade barriers that adversely impact many developing countries for these countries to be free and to develop their potential and become manufacturers in the global market.

Additional to these aspects is that China is also building several large-scale dams on the African continent. It has been proven that Dams are not benefiting majority of people living along the dam but mostly the multi-national companies who are exploiting the resources. The dam projects could therefore not be seen as contributing to the change in lifestyle of the people, and it could lead to regional and continental violent conflicts (Bosshard, 2013).

Brautigham (2011) however postulates that there are also positive aspects found in the Africa China relations. What China is doing is to provide much needed capital quickly, and infrastructures, hospitals and schools are built equally fast, and they generate income and services are provided through those hospitals and schools.

Many of the factories opened are operational and extracting those required resources. They provide employment and income, and opens doors for locals to start addressing the social needs and to send their children to school, cloth and feed them.

While the Chinese government has formal bilateral relations with most African countries, the same state facilitates for the middle class Chinese business people to enter these countries and to established retail shops, Chinese restaurants, and selling of construction and other materials. Locals respond positively and visible cooperation and acceptance of these products are there from the local populations (Brautigham, 2011).

Africans in general are attracted to Chinese goods and services because they come without any strings attached, which were not the case when western countries, did business with African countries.

Although, western countries requirements and conditions did help to ensure African countries do adhere to some kind of checks and balances, and adherence to standards, and also governance devoid of corruption and democratization was promised, the Chinese did not make these conditions. Having said that, although these goods are affordable to the ordinary citizenry of the African countries, and jobs are offered through retails shops, no meaningful poverty reduction was visible from Chinese economic

interventions in these countries, and inequality do persist in most of these countries (Condon, 2012).

2.5. Chinese presence in Namibia

2.5.1. China Economic Influence in Namibia

China helped Namibia during the countries struggle for political independence prior to 1990. These assistances were in the form of military training and training of Namibians. However, formal bilateral relations between the two countries started immediately after independence of Namibia in 1990.

What is happening all over Africa and in other parts of the world is also happening in Namibia, where Chinese people bring in retail goods for sale, they sell it themselves, compete amongst themselves as Chinese, and on top of that, compete with the locals in the construction and mining industries (Duboss, 2010, p. 95). These goods on sale are affordable to the ordinary local people of Namibia. This is contrary to before where the people could not afford goods which were sold in shops like Pep Stores.

These goods can be obtained with the available money and therefore are in demand in most parts of Namibia (Niikondo & Coetzee, 2009). There are mushrooming of Chinese shops with some shops not even registered with the line Ministry which is the Ministry of Industrialization, Trade and SME Development (Jauch & Sakaria, 2009:11).

As alluded to before, the Chinese serve both as importers of goods from the factories in China. They are therefore able to cut out the middlemen, who are the wholesalers, and they therefore determine the price, manipulate it and increase benefits to themselves (Duboss, 2010, p. 717; Jauch & Sakaria; 2009: 16).

Chinese import goods from their own country into these African countries. They themselves clear the goods at the ports. Prices of goods are undercut. They do not pay customs duty for the real value of the goods. Once the goods are in the country, they sell it to the locals.

Therefore, the locals do not feature anywhere in dealing with the sale of goods and only the Chinese are reaping the benefits (Dobler, 2009: 713). The local business people do not compete with them or are benefiting from the sale (Jauch & Sakaria, 2009:16).

Chinese presence in the retail sector is received with mixed feelings by the consumers and local population. What is obviously welcomed is the fact that the goods are affordable, and when compared with the Pep Stores and Foschini of South African retail shops, the prices are affordable to them.

Chinese are not paying tax to the government since no records are kept of what they sell. They mostly deal in cash and no receipts are given of the goods purchased making it difficult for tax claims from them. Neither do they have bank accounts at local banks to avoid any tracing of deposits and to by-pass any foreign exchange regulations from the authorities (Jauch & Sakaria, 2009). Namibians are shop assistants only or are security guards for the Chinese shop owners. There is very little training that can be provided to these local employees, resulting in zero existence of skills transfer (Dobler, 2009). They bring in Chinese to work for them as interns and after few months of internal training and rope showing, they also open their own shops (Jauch and Sakaria; 2009; 15).

2.5.2 China Social Influence in Namibia

Chinese people do not intermingle with local people, or no joint venture business do they have with the local Namibians. Most of the Chinese that are in Namibia came in through other Chinese who came earlier, opened their shop and brought them in as families or relatives, and they in return, also opened shop(Niikondo & Coetze, 2012).

A WikiLeaks reported that NamRights Director, Phil Ya Nangolo, raised concern about 5,000 Chinese to be provided with passports because of an alleged eight (8) billion US dollar loan which Namibia took from China in 2003. These allegations could not be verified, neither did the Ministry of Home Affairs provided any records of how many Chinese are in Namibia. The speculation therefore is ripe that most Chinese are either illegally in Namibia having arrived in the country with a tourist visa and continue staying on as if nothing has happened (Dobler, 2007).

Some of the ways the Chinese enter the country is through their own retail shop owners who act as immigration brokers between them and the Ministry of Home Affairs. They pay a fee for this service, or once they arrive in the country, they work for these retail outlets until the money is repaid, and then they can open their own shop having acquired the required skills and know-how to open a shop (Dobler, 2007.)

2.5.3 China Economic Impact in Namibia

There have been consistent cries for Chinese to adhere to labour laws and labour practices in Namibia. These demands mostly came from the construction companies and labour unions who put the blame on Namibian government for not enforcing adherence by Chinese to labour regulations of the Namibian government. These blames are made

as Chinese do not compensate their workers appropriately, for job done when comparing it to job done by other companies in the same sector (Jauch, 2011).

As mentioned earlier, Chinese Government operates with the Government of the Republic of Namibia under the bilateral agreements signed between the two countries since 1990. Those involved investment in sectors relating to mining, construction, and trade related matters. With all the bilateral relations and good sound relations between the two countries, the situation on the ground is different. This is so, because lot of studies found that Chinese do not pay minimum wages to their workers (Jauch and Sakaria; 2009; 23).

These workers goes through exploitation, their pay is determined by the employer. They get away with it as no mechanism exist to monitor non-adherence to these regulations (Jauch; 2011; 52).

2.6 Socio-Economic Impact on Small-scale Mining in Namibia

Small scale miners all over Africa and elsewhere face similar problems of lack of access to financing. Also, lack of proper equipment and machinery, lack of skills and proper training, lack of market information and environmental health hazards (Ali, 2006).

Namibia is no exception with small-scale mineworkers in Erongo who lack financing, lack of machinery, and lack of access to markets and materials (Nyambe & Amunkete, 2009). China and other countries are maximizing on these weaknesses and buy licenses of these small scale miners, or the products are bought without its market value (Nyambe & Amunkete, 2009).

2.7 Conclusion

This chapter discussed the relevant literature on Chinese involvement in Small-Scaled Mining, the rest of the world as well as Africa. From the literature review it is evident that the findings are mixed. The next chapter presents the research design and methodology of the study.

CHAPTER THREE: RESEARCH METHODOLOGY AND DESIGN

3.1 Introduction

This section discus the research design and study population and sampling techniques for the target sample size. Furthermore, the researcher presented the procedures for data collection and analysis. Finally, the researcher concludes this section with discussions on research ethics.

3.2 Research Design

A quantitative research paradigm anchored the methodology of this study. A structured questionnaire is used that contains both closed-ended items to collect the primary data.

The quantitative research paradigm usually assigns numbers to observations (Brynard & Hanekom, 2006:36; Gravetter & Forzano, 2009:147). The study employed questionnaires for quantitative research design. The research instruments used made the survey easier and flexible to work with the research designs adopted.

3.3 Research Population

The research population is made up of the small scale miners in the Erongo region. There are approximately 2000 small scale miners in the region. Around 1000 small scale miners are prospecting and selling semi-precious stones along the Usakos-Henties Bay T-junction, en-route to Walvis Bay (Nyambe & Amunkete: 2009).

3.4 Sample Size

From the total of 1000 small scale miners in the Usakos-Henties Bay T-junction area, the sample size for this study was 285 (using the method described by Saunders et al. (2009:581-582). A systematic sampling method was used to select the 285 participants

from a sampling frame of 1000. The precise computation of the sample size is determined through the statistical formula as follows at 95% confident interval:

$$n = \frac{N}{1 + N(e)^2}$$

Where: $\boldsymbol{N}$ = population, =1000 and n =Sample size and $\boldsymbol{e}$ = $(0.05)^2$

Thus,

$$n = \frac{1000}{1 + 1000(0.05)^2}$$

$n = \frac{1000}{3.5}$= 285

Out of the 285 target sample size 200 respondents participated in the study representing 70.2% of the targeted sample size.

3.5 Research Instruments

A structured questionnaire was used to collect data from the respondents. The structured questionnaires consisted of closed ended questions in order to capture quantitative data.

The closed questions had some possible responses which were mutually exclusive and exhaustive to ensure that every respondent found a suitable response for his/her situation. Questions were designed in such a way that they were short, clear and precise to ensure common understanding of all the questions.

3.6 Procedures

Both primary data and secondary information was used for the study. The secondary information was obtained from published and unpublished documents such as books, journals, articles, and thesis. A pilot study was conducted in these communities to help the testing of the reliability and validity of the Instruments.

The primary data collected from the respondents was obtained through face-to-face community-level interviewer administered questionnaires, (structured and semi-structured) serving as the main data collection instruments.

The face-to-face community level administered questionnaires allowed the researcher to avoid incompleteness of questionnaires, increase response rate, and obtain first-hand information and knowledge on the small scale miners and their livelihood. Five research enumerators were trained to help in the data collection process.

3.7. Data Analysis

The quantitative data were then entered into an electronic database. These were analyzed statistically through the Predictive Analytics Software (PASW) for Windows application programmes (version 17.0).

Descriptive statistics such as frequency tables, measure of central tendency, and proportionate counts were used to describe the demographic and socio-economic characteristics of the respondents. Additional considerations were the thematic issues of small scale miners and their livelihood. Bivariate methods of analyzing data were employed. The analytical techniques used for the study allowed the researcher to make

proper discussions, interpretations, and conclusions by triangulating the data with secondary information.

3.8. Research Ethics

Social scientists are usually faced with ethical problems and cannot carry out research that involves people without any informed consent (Rene, & Kapstein, 2011). With regard to this, various ethical issues were considered and addressed before the field survey.

An introductory letter was obtained from the School of Military Science of the University of Namibia to enable the researcher to have access to the participants in the small scale mining community. Verbal and informed consent were obtained from the study participants.

The participants in the community were briefly informed about the purpose of the research and guaranteed the anonymity of the information they provided.

3.9. Conclusion

This chapter discussed the research methodology and research design. The next chapter presents the results and interpretation of the results.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

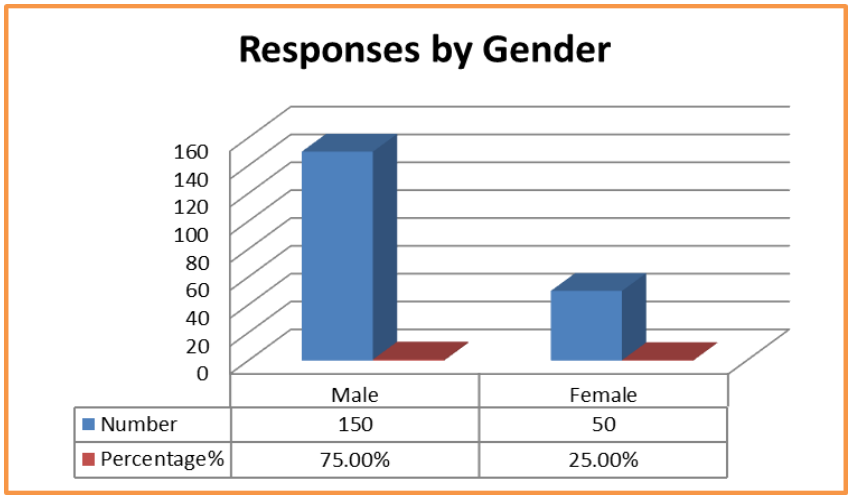
In this chapter the findings are presented. The findings are organized according to the research objectives, questions. This chapter concludes with the discussions of the findings and linking them to literature review in chapter 2.

4.2 Biographical Information

4.2.1. Gender

The aim of the questionnaire was to obtain relevant information on the difference in terms of gender participation in the small-scale mining activities in Usakos and Karibib area. The respondents were therefore required to indicate their gender and the data as presented in Figure 4.1 below.

Figure 4.1: Responses by gender (N=200)



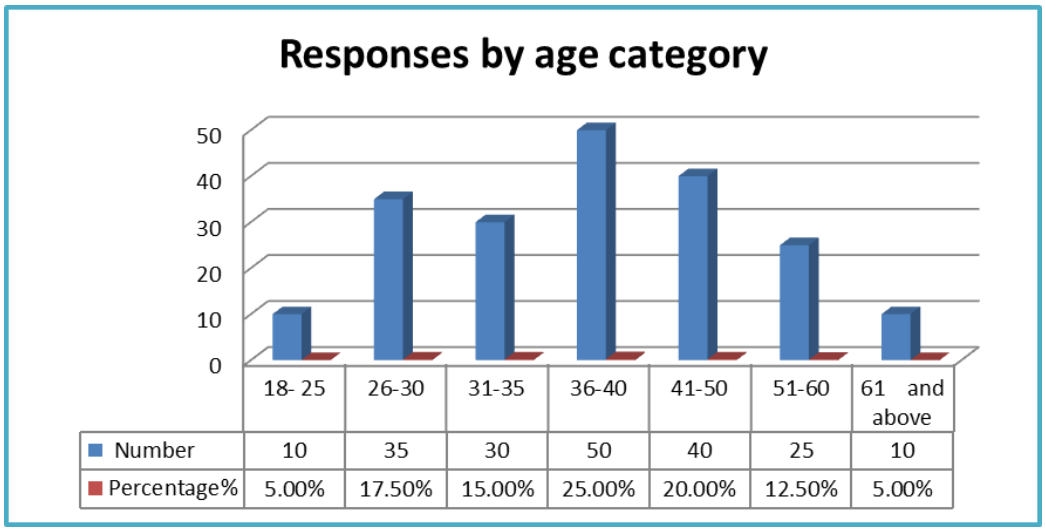
The findings in Figure 4.1 above revealed that more than two-third 150 (75%) of the respondents engaged in small- scale mining activity of precious stones were male compared to 25 % of the female that were engaged in small- scale mining. The

findings seem to suggest that more male were involved in illegal small scale mining than women.

4.2.2 Age

The respondents were asked to indicate the age category. The purpose of this section was to determine the most commonly participating age category in the small-scale mining activity. The findings are presented in Figure 4.2 below.

Figure 4.2: Responses by age category (n=200)

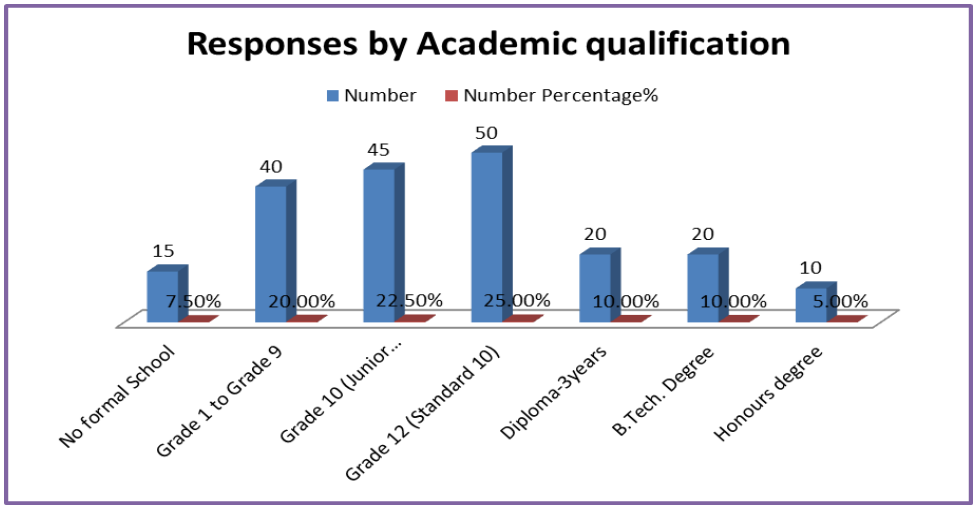


The data in Figure 4.2 above revealed that the youth in the age category of 26 to 35 years representing 32.50% of the respondents were engaged in small-scale mining activity. Forty-five (45%) percent of the respondents aged 36-50 years were engaged in small-scale mining activity compared to 17.50% of the respondents aged 51-61 years. The findings seem to suggest that 57.75% of the respondents were involved in illegal small scale mining and the percentage decreased when respondents were aged 61 years and above. Thus age was a limiting factor for small scale mining of precious metals.

4.2.3 Academic Qualifications

The purpose of getting the statistics on educational qualification of the respondents was to enable the researcher determine if there was any significant proportion of the respondents that were in high school or primary school level. The findings are presented in Figure 4.3 below.

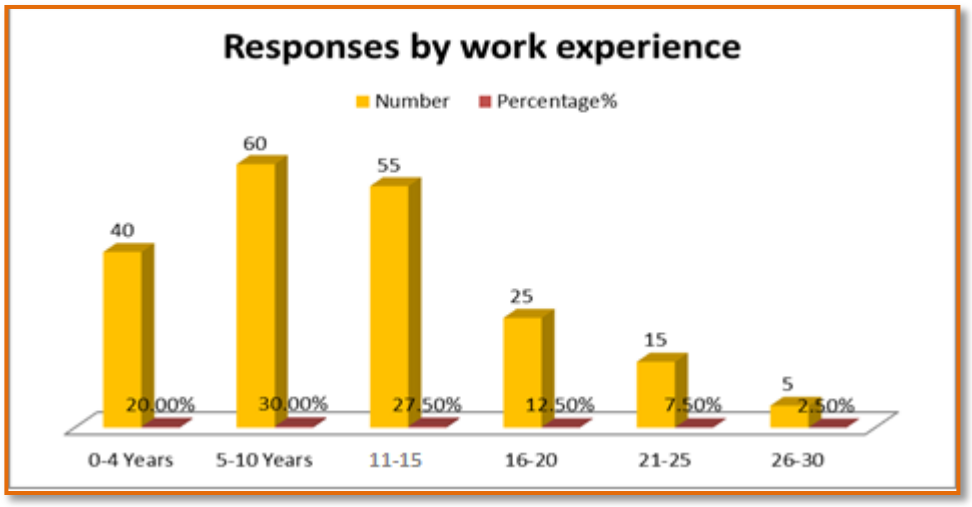
Figure 4.3: Responses by Academic qualification (n=200)



The statistics in Figure 4.3 above revealed that 25% of the respondents had a grade 12 qualification followed by 22.50% who possessed a grade 10 qualification. Twenty percent (20%) and 7.50 % of the respondents indicated that they were in the category of grade 1-9 or no formal education, respectively. Ten percent (10%) of the respondents indicated that they possessed either a diploma qualifications or B.Tech Degree, compared to 5% who possess an Honours degree. The findings seem to suggest that these miners are trainable to change the statusquo of mondus operadi.

4.2.4 Work Experience

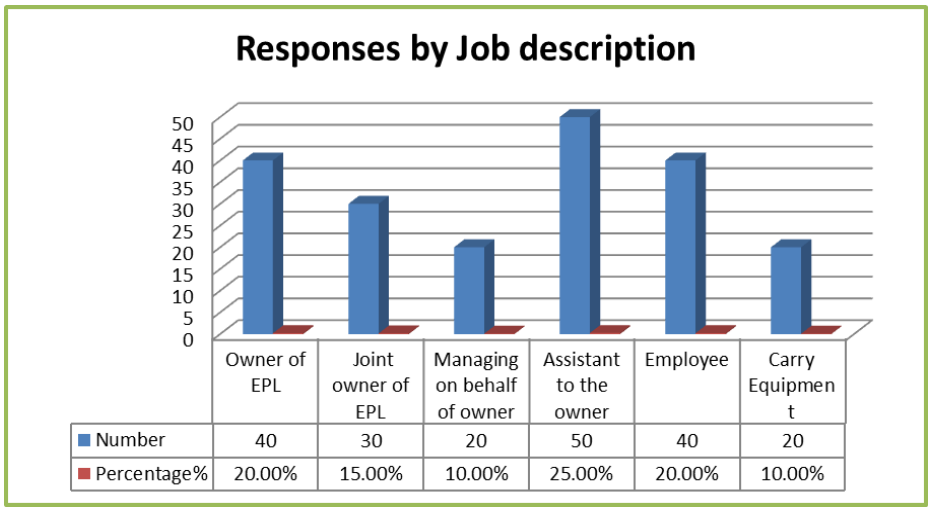
Figure 4.4: responses by work experience (n=200)



Around thirty (30%) percent of the people interviewed had experience of five (5) to ten (10) and some eleven (11) to twenty (20) years, respectively, of working in the mine. Another twenty (20%) percent indicated they only have few months to four (4) years of experience. Those with twenty one (21) to thirty (30) years of experience make up only ten (10%) percent. The findings seem to suggest that the more experienced were less involved in illegal small scale mining activities.

4.2.5 Job Category/Ownership of EPL

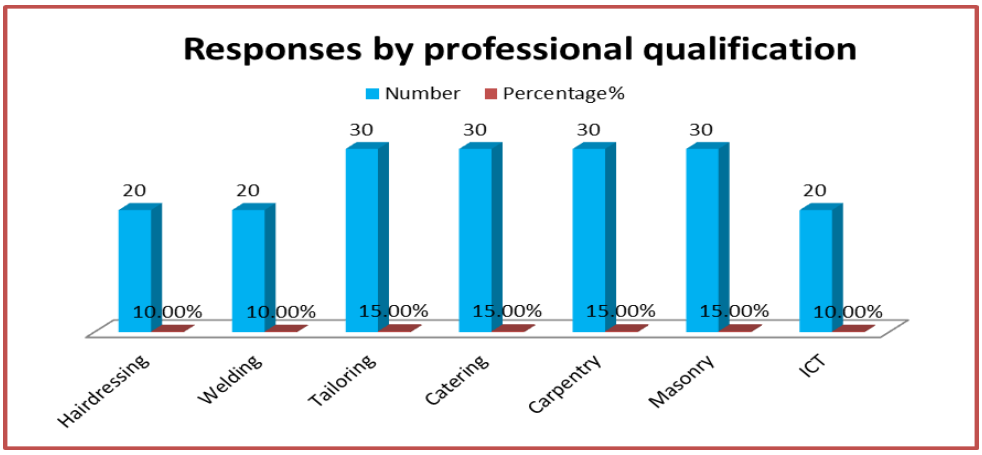
Figure 4.5: Responses by Job description (n=200)



From the total of 200 people interviewed only forty (40) indicated that they are the owners of the Exploration processing license (EPLs) which represents around twenty (20%) percent. Fifteen (15%) percent are joint owners of the EPL, while ten (10%) percent respectively manages the EPL area on behalf of the owner, or are carrying equipment only. Twenty five (25%) percent told the researcher they are only assistants to the owner, while another twenty (20%) percent are employees only.

4.2.6 Professional Qualifications of Respondents

Figure 4.6 Responses by professional qualification (n=200)

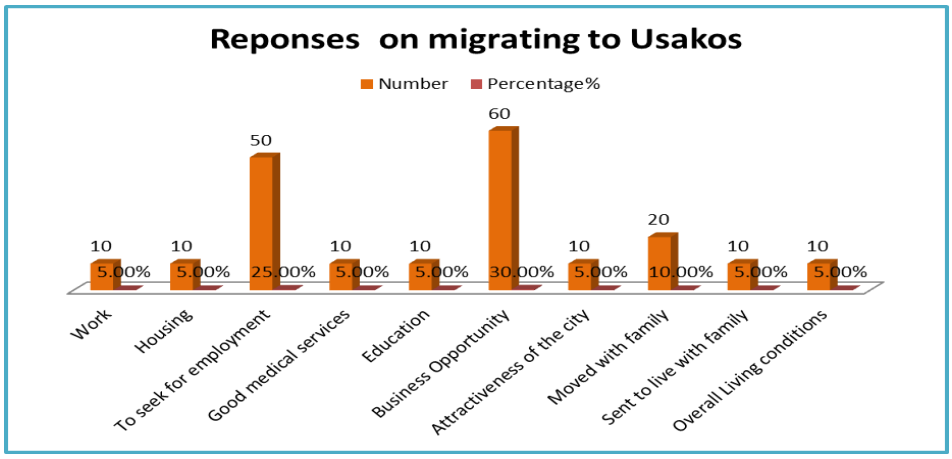


Most of those who were interviewed from the small scale miners indicated that they do not have a direct skill relating to small scale mining. They are involved in it more to make extra income. Around sixty (60%) percent indicated their previous experiences were in tailoring, catering, carpentry and masonry. Around thirty (30%) percent said their qualifications are in ICT, hairdressing and welding.

4.3 Migration into Usakos/Karibib mining sites

The statement below relate to the causes of migration to Usakos/Karibib mining sites.

Figure 4.7: Reponses on migrating to Usakos (n=200)



About thirty (30%) percent of the people responded by saying they came to Usakos for business opportunities offered by the mining area, while around twenty five (25%) percent said they came to seek employment. The rest below ten (10%) percent response said, they moved or to live with the family. Others came because of overall living conditions, it is either a nice city to live in, there is housing available, or because of work related activities or to be close to schools.

4.4 Perceived socio-economic impact of Chinese involvement in small-scale mining in Namibia

4.4.1 Economic Impact

The economic impact will focus on job creation and contribution to GDP of Namibia. Chinese involvement in Small-scale mining activities had resulted in people concentrating in Karibib/Usakos Informal Settlement.

The respondents were asked to indicate the extent to which the Artisan small scale mining has affected their economic status. The statistics are presented in Table 4.1

below. The ratings are presented on a 5-point scale as : 5= Strongly Agree(SA); 4 = Agree(4);3 = Undecided(U); 2 = Disagree(DA);1 = Strongly disagree(SA).

Table 4.1: Responses on economic impact (n=200)

Statement	SA	A	U	DA	SD	Total
The Chinese FDI in Small scale mining has provided direct employment for local people from within Karibib and Usakos, as well as around Erongo Region?	60 (30%)	40 (20%)	50 (25%)	30 (15%)	20 (10%)	200 (100%)
The employment opportunities have provided incomes for local people and therefore improved livelihood for their families	80 (40%)	40 (20%)	30 (15%)	25 (12%)	25 (12.5%)	200 (100%)
Employment and training of locals as machine operators	80 (40%)	70 (35%)	20 (10%)	15 (7.5%)	15 (7.5%)	200 (100%)
Forming business partnerships with locals to engage in the mining activities based on specified arrangements to share proceeds	30 (15%)	30 (15%)	80 (40%)	40 (20%)	20 (10%)	200 (100%)

From Table 4.1, it can be deducted that 50% agreed (Strongly And Agree combined) that the Chinese Foreign Direct Investment (FDI) in Small scale mining has provided direct employment for local people from within Karibib and Usakos, as well as around Karibib and Usakos communities in Erongo Region.

Similarly, 75% of the respondents agreed that employment opportunities created by the small scale mining activities have provided incomes for local people and therefore improved livelihood for their families. Besides, 75% of the respondents agreed that the local have been trained as machine operators. A third of the respondents agreed that the mining activities has resulted in the formation of business partnerships with locals to engage in the mining activities based on specified arrangements to share the proceeds.

4.4.2 Social Impact

The social impact of Chinese involvement in Small Scale Mining in Namibia will focus on Health and Education, Crime and Social behavior

4.4.3 Health Impact

Rapid Small Scale mining had resulted in people concentrating in Karibib/Usakos. The overcrowding of people leads to poor hygienic conditions and/or associated health risks. The respondents were asked to indicate the extent to which the Artisan small scale mining has affected their health status. The statistics are presented in Table 4.2 below. The ratings are presented on a 5-point scale as : 5= Strongly Agree(SA); 4 = Agree(4);3 = Undecided(U); 2 = Disagree(DA);1 = Strongly disagree(SA).

Table 4.2: Responses on impact on health (n=200)

Statement	SA	A	U	DA	SD	Total
Increased in health problems associated with small-scale mining, including skin lesions, scabies, skin rashes, increased malaria cases	80 (40%)	50 (25%)	40 (20%)	20 (10%)	10 (5%)	200 (100%)
Increased prevalence of HIV/AIDS and Sexually transmitted diseases (STI) due to pervasiveness of prostitution.	15 (7.5%)	15 (7.5%)	100 (50%)	50 (25%)	20 (10%)	200 (100%)
High rate of teenage pregnancy, including school leavers explained partly by Chinese miners offering money for sex with young girls	70 (35%)	50 (25%)	50 (25%)	15 (7.5%)	15 (7.5%)	200 (100%)
Gunshots and cutlass wounds from violent conflicts as mining sites, including attempted robberies of Chinese miners	30 (15%)	30 (15%)	80 (40%)	20 (10%)	20 (10%)	200 (100%)
Children falling into open pits and sometimes dying	15 (7.5%)	15 (7.5%)	100 (50%)	30 (15%)	40 (20%)	200 (100%)

From table 4.2 above, it is evident that 40% of the respondents indicated that the presence of small scale mining activities seem to contribute to increase in health problems associated with small-scale mining, including skin lesions, scabies, skin rashes, increased malaria cases.

Also, 35% of the respondents perceived the mining activities as contributing to high rate of teenage pregnancy, including school leavers explained partly by Chinese miners offering money for sex with young girls.

A third of the respondents reported that Gunshots and cutlass wounds from violent conflicts as mining sites, including attempted robberies of Chinese miners.

4.4.2.2 Education Impact

Rapid urbanization resulted in challenges of provision of education services in Karibib/Usakos informal settlements

The respondents were asked to indicate the extent to which the Artisan small scale mining has affected the educational services of the communities. The statistics are presented in Table 4.3 below. The ratings are presented on a 5-point scale as : 5= Strongly Agree(SA); 4 = Agree(4);3 = Undecided(U); 2 = Disagree(DA);1 = Strongly disagree(SA).

Table 4.3: Responses on impact Chinese involvement in illegal small scale mining on education (n=200)

Statement	**SA**	**A**	**U**	**DA**	**SD**	**Total**
Low enrolment and attendance of learners in Primary and Secondary Schools in Karibib/Usakos informal Settlements due to mining activities	80 (40%)	50 (25%)	40 (20%)	25 (12.5%)	5 (12.5%)	200 (100%)
High rate of teenage pregnancy among school girls and/or residents in mining sites often due to young boys having cash incomes with which to lure young girls	60 (30%)	30 (15%)	40 (20%)	40 (20%)	30 (15%)	200 (100%)
Some parents support their children in going to mining sites instead of school and criticize or even attack teachers who discourage them from doing so	80 (40%)	70 (35%)	20 (10%)	15 (7.5%)	15 (7.5%)	200 (100%)
Poor performance of learners in primary and secondary schools in mining community with those in non-mining communities	15 (7.5%)	15 (7.5%)	100 (50%)	40 (20%)	30 (15. %)	200 (100%)

Behavior problems in schools. Lack of respect for teachers as school children earn significant incomes from small-scale mining with teaching becoming increasingly difficult in environment of ill-discipline	70 (35%)	80 (40%)	20 (10%)	15 (7.5%)	15 (7.5%)	200 (100%)

From Table 4.3 above, it is evident that that 75 % of respondents agreed that the mining activities have influenced behavior problems in schools. This resulted in lack of respect for teachers as school children earn significant incomes from small-scale mining. Teaching therefore becomes increasingly difficult in environment of ill-discipline and some parents support their children in going to mining sites instead of school.

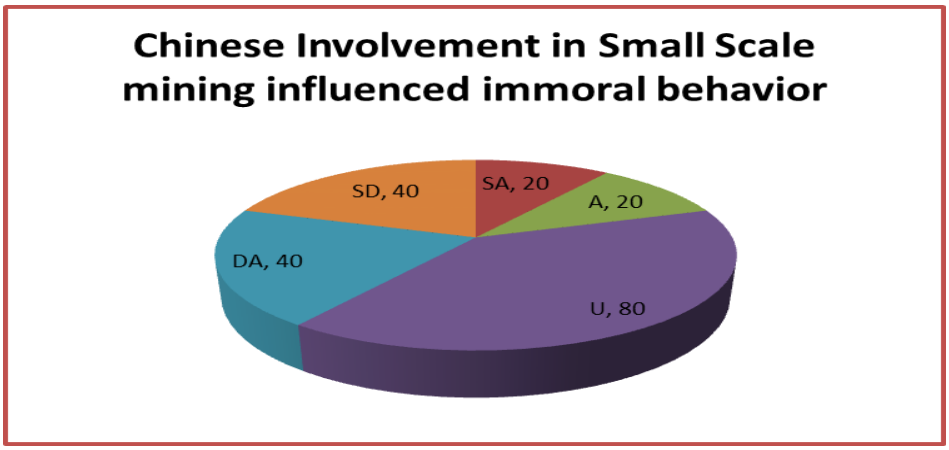
They even criticize or even attack teachers who discourage them from doing so respectively. Similarly, 65% of the respondents agreed that the mining activities has affected the enrolment and attendance of learners in Primary and Secondary Schools in Karibib/Usakos informal settlement. This is due to children engaging in mining activities to generate incomes to sustain themselves as well as their parents.

Besides, 45% of the respondents agreed that the mining activities has influenced rate of teenage pregnancy among school girls and/or residents in mining sites often due to young boys having cash incomes with which to support young girls.

4.4.2.3 Crime and Social Behavior Impact

The process of Chinese involvement had exposed individuals to the influence of Asian culture concepts. One of the examples is the sexual of young people – migrants differ from the sexual behavior away from their home because they are outside the control of family, friends and community. The respondents were asked to indicate the extent to which the Artisan small scale mining has influenced the western culture among the communities. The statistics are presented in Figure 4.8 below. The ratings are presented on a 5-point scale as : 5= Strongly Agree(SA); 4 = Agree(4);3 = Undecided(U); 2 = Disagree(DA);1 = Strongly disagree(SA).

Figure 4.8: Impact on social Behavior (n=200)



The findings presented on Figure 4.8 with regards to small scale mining activities influencing immoral behavior in Karibib and Usakos communities are mixed.

Eighty (80%) respondents were indifferent as to whether small scale mining activities has influenced immoral behavior among the communities compared to 20% who disagreed or strongly disagreed that small scale mining activities do not influenced immorality among the communities.

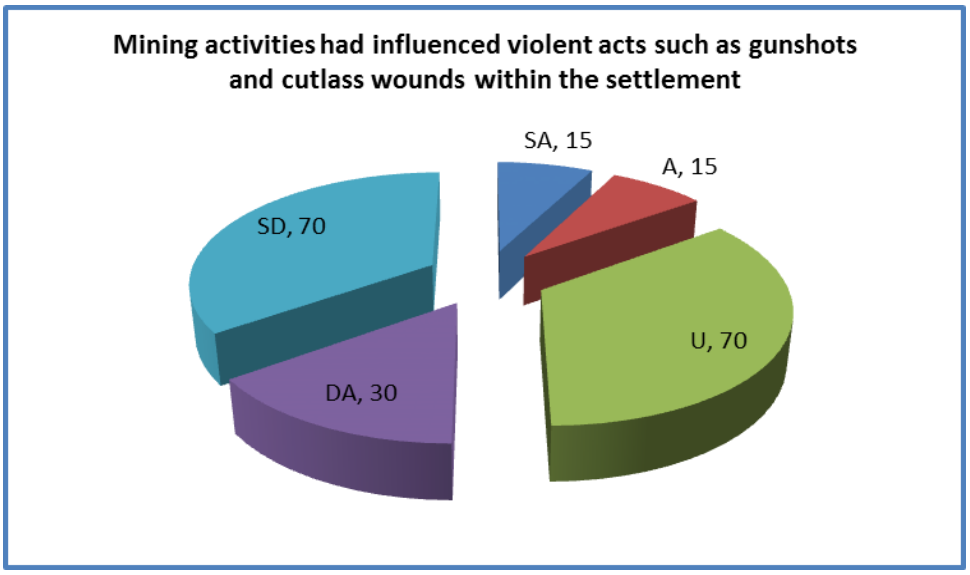
Ten percent of the respondents either agreed or strongly agreed that small scale mining activities has negative immorality among the communities.

4.4.2.4 Impact on Crime

The process of small scale mining can expose individuals to violent activities. The respondents were asked to indicate the extent to which the Artisan small scale mining has influenced criminal activities among the communities.

The statistics are presented in Figure 4.9 below. The ratings are presented on a 5-point scale as : 5= Strongly Agree(SA); 4 = Agree(4);3 = Undecided(U); 2 = Disagree(DA);1 = Strongly disagree(SA).

Figure 4.9: Impact on crime (n=200)



The findings presented on Figure 4.9 with regards to the violent activities resulting from small scale mining activities in Karibib and Usakos communities are mixed. Thirty-five percent of the respondents were indifferent as to whether small scale mining activities influenced violent acts among the communities.

Thirty-five percent of the respondents strongly disagreed that small scale mining activities were influenced violent acts compared to 15% who disagreed that violent acts were influenced by small scale mining activities.

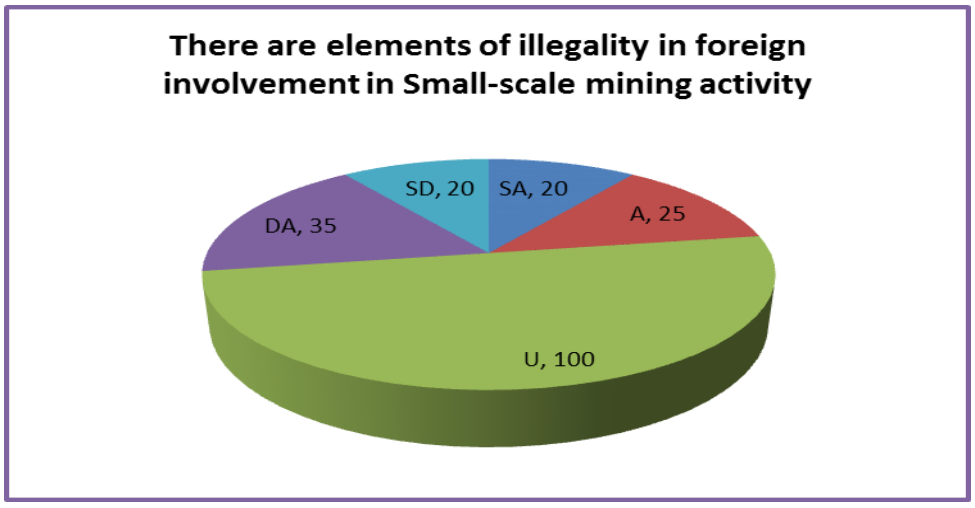
Fifteen (7.5%) of the respondents either agreed or strongly agreed that violent acts were influenced by small scale mining activities.

4.5 Legal Impunity

Despite the various elements of illegality in foreign involvement in small scale mining, these have frequently been ignored and the law not enforced. Example includes foreign purchase of small scale concession from Namibians. Allegations of products from mining activities not being sold through proper channels are very disturbing.

The respondents were asked to indicate the extent to which the Artisan small scale mining has influenced legal impunity activities among the communities. The statistics are presented in Figure 4.10 below. The ratings are presented on a 5-point scale as : 5= Strongly Agree(SA); 4 = Agree(4);3 = Undecided(U); 2 = Disagree(DA);1 = Strongly disagree(SA)..

Figure 4.10: Impact on legal impunity (n=200)



The findings presented on Figure 4.10 with regards the legal impunity of small scale mining activities in Karibib and Usakos communities are mixed. 100 or 50% of the respondents were indifferent whether there are elements of illegality in foreign involvement in small scale mining activities in Karibib and Usakos communities. Thirty-five (17.5%) of the respondents disagreed that there was legal impunity in the small scale mining activities compared to 10% who strongly agreed or strongly disagreed that there were legal impunity in small scale mining activities in Karibib and Usakos communities.

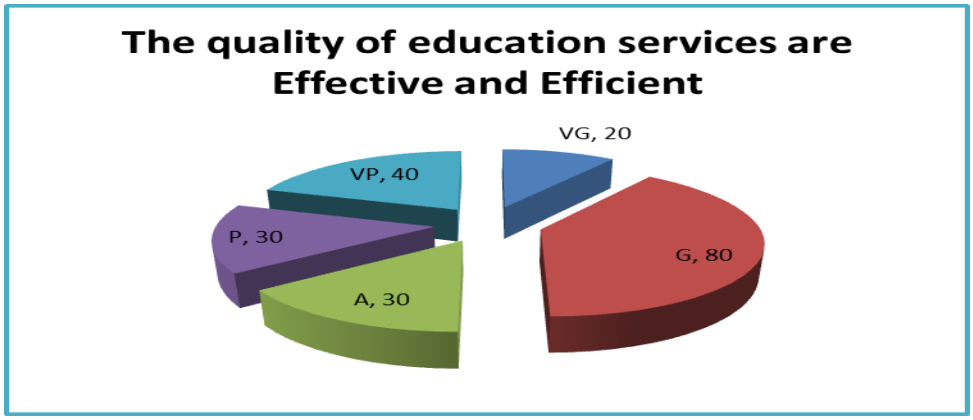
4.6 Overall Rating benefits socio-economic impact on small scale mining activities

4.6.1 Education

Rapid mining activities by Chinese nationals have resulted in challenges of provision of education services in Karibib/Usakos informal settlement. The quality of education services provided by the Karibib Village is presented on a 5-point Likert scale as follows: Very Poor (VP) = 1; Poor (P) = 2; Average (A) = 3; Good (G) = 4; Very Good (VG) = 5. The respondents were asked to indicate the extent to which the Artisan small

scale mining has affected the educational services of the communities. The statistics are presented in Figure 4.11 below.

Figure 4.11 Impact on education services delivery (n=200)

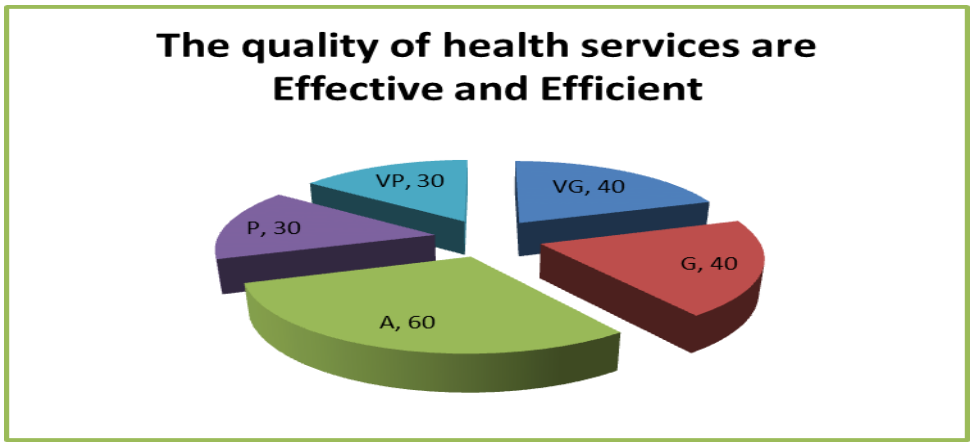


The findings presented on Figure 4.11 with regards the quality of educational services are mixed. Most of the respondents rated the quality of educational services as good (40%) or average (15%) or very good (10%). In contrast, 20% rated the services as very poor or poor (30%).

4.6.2 Health

Rapid mining activities by Chinese nationals have resulted in challenges of provision of health services in Karibib/Usakos informal settlement. The quality of health services provided by the Karibib Village is presented on a 5-point Likert scale as follows: Very Poor (VP) = 1; Poor (P) = 2; Average (A) = 3; Good (G) = 4; Very Good (VG) = 5. .. The respondents were asked to indicate the extent to which the Artisan small scale mining has affected the educational services of the communities. The statistics are presented in Figure 4.12 below.

Figure 4.12 Impact on health services delivery



The findings presented on Figure 4.12 with regards the quality of health services are mixed. Most of the respondents rated the quality of health services as very poor (15%) or poor (15%). In contrast, 20% rated the services as very good or good and 30% rated the quality of health services as average.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

In this section, the conclusions and recommendations based on findings in chapter four as well as the limitations of the study and the implications for future research were addressed.

5.2 Conclusions

The findings on Exploration Processing Licenses (EPLs) seems to suggest that majority of the EPLs were owned by foreigners. It therefore supports Tsurukawa et al (2011) recommendations that the government of Democratic Republic of Congo (DRC) should create more EPLs in the small scale mining of cobalt in Katanga District. On effects of Chinese involvement in illegal small scale mining on health the findings seem to support Crawford et al (2015), Bach et al (2014) and Tsurukawa et al (2011) findings that health was identified as the most adverse social impact of gold and cobalt mining in Ghana and DRC.

Research has shown that escalation of small scale mining (SSM) partly attributed to FDI has considerable social impact often due to unlicensed, unregulated and informal nature of the sector (Crawford et al 2015).

A third of the respondents agreed that the mining activities has resulted in the formation of business partnerships with locals to engage in the mining activities based on specified arrangements to share the proceeds. These findings seem to support Bach (2014) and Crawford et al., (2015) findings that Chinese involvement in Small–Scale mining of gold in Ghana created employment for the locals and provided much needed artisan

skills empowerment for the youth in the communities where mining activities were conducted.

5.2.1 Overall rating benefits socio-economic impact on small scale mining activities

Health

The findings from Table 4.2 revealed that 40% agreed that that the presences of small scale mining activities seem to contribute to increase health problems among the communities.

Also, 35% of the respondents perceived the mining activities as contributing to high rate of teenage pregnancy. It also explain partly that due to pregnancy there are many school leavers as Chinese miners are offering money for sex with young girls. A third of the respondents reported that Gunshots and cutlass wounds, violent conflicts and attempted robberies of Chinese miners were commonly cited as social impacts as a result of Small–scale mining activities.

Education

The findings From Table 4.3 revealed that it is evident that 75 % of respondents agreed that the mining activities have influenced behavior problems in schools. It resulted in lack of respect for teachers as school children earn significant incomes from small-scale mining. Teaching therefore became increasingly difficult in environment of ill-discipline. Some parents supported their children in going to mining sites instead of school. They criticized or even attacked teachers who discourage them from doing so respectively.

Similarly, 65% of the respondents agreed that the mining activities has affected the enrolment and attendance of learners in Primary and Secondary Schools in Karibib/Usakos informal sector. This is due to children engaging in mining activities to generate incomes to sustain themselves as well as their parents. Besides that, 45% of the respondents agreed that the mining activities has influenced rate of teenage pregnancy among school girls and/or residents in mining sites, which led to young boys having cash incomes with which to support young girls.

These findings support Crawford et al 2015, Bach et al 2014 that small-scale mining of gold in some communities in Ghana has resulted in low enrolment and low attendance of pupils in mining villages. Poor performance of pupils at internal and external examinations resulted and behavioural problems occurred in schools (Crawford et al 2015, p. 47).

Immoral Behavior

The findings presented on Figure 4.8 with regards to small scale mining activities influencing immoral behavior in Karibib and Usakos communities are mixed. Eighty or 40% respondents were indifferent as to whether small scale mining activities has influenced immoral behavior among the communities.

This is in comparison to 20% who disagreed or strongly disagreed that small scale mining activities do not influenced immorality among the communities. Ten percent of the respondents either agreed or strongly agreed that small scale mining activities has influenced immorality among the communities.

These findings seem to support Crawford et al. (2015) findings that there were elements of illegality in foreign involvement in small-scale mining of gold in Ghana. Crawford et al. (2015:53) argue that the foreign purchase of small-scale concessions from Ghanaians who are mining in rivers and those allegations that gold produced is not being sold through the proper channels and the simple illegality of non-Ghanaians being involved in the sector in any way.

5.3. Recommendations

In the light of the findings from this study, a number of policy recommendations are put forward to address the current challenges associated with small-scale mining, in particular the issue of foreign involvement.

- These include legislation, taxation policy, law enforcement, provision, mining licenses, taskforce creation and operations, and tackling environmental issues and corruption (See Van Straaten, 2000:45; Tesha & Beinhoff, 2005:112). By such measures, it is also suggested that the sector's contribution to sustainable economic growth and development can be enhanced.

- Relevant government agencies with responsibilities associated with small-scale mining (for instance, the Ministry of Mines and Energy, Ministry of Land Reform, Ministry of Environment and Tourism) need to work more closely with regional and local authorities, as well as with the local police service to ensure that existing laws are indeed enforced, and local communities given greater protection from adverse impacts (Besliu, 2013). Ministry of Mines must be seen to be reaching out to the small-scale miners in providing SME loans that will enable them to buy equipment

and required amenities, and it should be taboo for foreigners to buy EPLs extracting minerals small miners are in, at the said Ministry.

- Ministry of Mines and Chamber of Mines to create an outlet where small-miners should off-set their produce. This outlet to weigh the minerals and determine quality and compensate them on the spot. In that way, these miners will be encouraged to sell to local buyers. In return, cutting and polishing facility can be created with these produce.

- The model of Ministry of Fisheries and Marine Resources to be applied to the mining sector. Let the EPLs with Explorative Studies to awarded to small-miners and selected formerly disadvantages communities, and EPLs in their areas be given to them, to address issues of poverty alleviation and empowerment.

- Education and Health Ministries to visit the site, and to see whether families of small-scale miners are provided with proper health and sanitation facilities, and whether children are going to school, as well as skills are provided to the small-scale miners. Ministry of Tourism and Environment to look out for environmental hazards and open pits, and take to tasks those that are violating the existing legislative provisions.

- The small-scale mining sector is a very important sector, which is a vehicle to alleviate poverty. The earlier the government and relevant stakeholders realize this stark reality, the quicker the communities will be taken out of poverty and placed on sustainable development and human security provided to them.

- This study found that Chinese business people do not have joint venture operations with Namibians. Their exploitation of goods locally is more to extract and does not add value to local products. What they plough back is very little compared to what they take out.

- This is observed in both the retail sector, and the mining sector. Employment provided is not accompanied with training, not is it skills transfer oriented. The impact on socio-economic level is therefore zero, in terms of skills transfer, or provide training, or even to involve themselves in corporate responsibility undertakings.

To downstream markets and industries

- Refrain from any general ban of small scale mining from artisanal sources;
- Engage in direct co-operations with small scale mining communities to mitigate health, safety and environmental hazards, to improve working conditions and community development, and to improve skills and market access.
- Furthermore, as employment security also depends on the profitability of artisanal mining, improved efficiency of artisanal mining will ensure its competitiveness, hence its resistance to economic shocks. Thus it is generally recommended to:
- strengthen the artisanal mining and support investments to upgrade informal groups of miners to formal small-scale mining cooperatives, and to authorize them to negotiate better prices at the right time, finance sample analysis, offer financial security to its members, and

- Integrate artisanal extraction with downstream concentration process.

5.4. Recommendation for further research

A mixed method approach that triangulates sources of data should be used to explore the socio-economic impact of FDI in small-scale mining in Namibia.

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APPENDICES

APPENDIX 1: LETTER TO RESPONDENTS

I am a MA-SSS student/candidate from the University of Namibia. I am currently conducting research on "The Socio-Economic Impact of Chinese Involvement in Small Scale Mining in Namibia". This study is fully endorsed by the Postgraduate Committee of the University of Namibia and my supervisor is Dr. Simon Akpo (Main Supervisor). The findings would benefit the small scale mining sector of how the benefits to be derived are being impacted by the involvement of Chinese mining companies and the socio-economic impact such involvement has in the small scale mining sector in Namibia.

Secondly, the findings of the study will also contribute to the available body of academic knowledge by providing an understanding of the impact that this involvement has on the social, economic and political lives of the small scale miners. The study will also provide the target population better comprehension of how this involvement impacts on their lives.

I thank you in advance for your assistance and co-operation

Yours sincerely

S. D. Jacobs (Mr)

APPENDIX 2: CONSENT FORM

RESEARCH STUDY: THE SOCIO-ECONOMIC IMPACT OF CHINESE INVOLVEMENT IN SMALL SCALE MINING IN NAMIBIA.

CONSENT AGREEMENT FOR THE INTERVIEW

I am a MA student from the University of Namibia. The aim of this study is to establish how Chinese involvement impacts on the socio-economic lives of the small scale mining sector in Namibia. You can help in this study by consenting to complete a questionnaire/interview. As a participant you will be asked to express your expert opinion and judgment on how the Chinese involvement impact on your day to day live and challenges you face in the field of mining. Appendix 1 describes the procedure. The survey will require approximately 20-30 minutes and the data collection would occur over a two month period, commencing on the day I start.

If you are willing to participate in this study, could you please complete the details below?

I understand that I am free to withdraw my consent and discontinue my participation at any time without prejudice. I also understand that all materials in this study are confidential. I agree that the research data gathered for this study may be published, provided that neither my company nor myself is identified.

Name of Participant: ----------

Signed: ---------- Date: ----------

Researcher: S.D. Jacobs

Signed: ----------

APPENDIX 3: QUESTIONNAIRE

1. SECTION A: BIOGRAPHICAL INFORMATION

1.1. What is your Gender?

Please tick ( ) your gender in the appropriate box

Gender	**Please tick only one option**
Male	
Female	

1.2. Age

Please tick your age category in the appropriate box. Please tick only one option

Age Category	**Please tick Only one category**
18- 25	
26-30	
31-35	
36-40	

41-50	
51-60	
61 and above	

1.3. Academic Qualifications

Please tick your academic qualifications in the appropriate box.

Highest Academic qualification	**Please tick one option**
No formal School	
Grade 1 to Grade 9	
Grade 10 (Junior Secondary School Certificate)	
Grade 12 (Standard 10)	
Diploma-3years	
B.Tech. Degree	
Honours degree	
Master Degree	
PHD	

Others. Please specify	

1.4. Work experience

Please tick your work experience category in the appropriate box. Please tick only one option

Work experience as Miner	**Please tick only one category here**
0-4 Years	
5-10 Years	
11-15	
16-20	
21-25	
26-30	

1.5. Job category

Please tick your job category at the EPL

Job description	**Pease tick only one option here**
Owner of EPL	
Joint owner of EPL	I

Managing on behalf of owner	
Assistant to the owner	
Employee	
Carry Equipment	
Any other please specify	

1.6. What professional qualification do you possess? Please tick one option

Type of training	**Please tick only one option**
Hairdressing	
Welding	
Tailoring	
Catering	
Carpentry	
Masonry	
ICT	
Any other Please specify……	

2. SECTION B: MIGRATION INTO USAKOS/KARIBIB MINING SITES

The statement below relate to the causes of migration to Usakos/Karibib mining sites.

Statement	Please tick only one option	
	Yes	No
Work		
Housing		
To seek for employment		
Good medical services		
Education		
Business Opportunity		
Attractiveness of the city		
Land for investment		
Moved with family		
Sent to live with family		
Flood		
Overall living conditions		

3. PERCEIVED SOCIO-ECONOMIC IMPACT OF CHINESE INVOLVEMENT IN SMALL SCALE MINING IN NAMIBIA

3.1. Economic Impact

The economic impact will focus on job creation and contribution to GDP of Namibia

Chinese involvement in Small-scale mining activities had resulted in people concentrating in Karibib/Usakos Informal Settlement. The overcrowding of people leads to poor hygienic conditions and/or associated health risks. Below are perceived statements relating to urbanization impact on health presented on a 5-point Likert scale as follows: SA = Strongly Agree; A = Agree; U = Undecided; DA = Disagree; SD = Strongly Disagree. You are required to tick only one option per statement below.

Statement	**SA**	**A**	**U**	**DA**	**SD**
3.1.1 The Chinese FDI in Small scale mining has provided direct employment for local people from within Karibib and Usakos, as well as around Erongo Region?					
3.1.2 The employment opportunities have provided incomes for local people and therefore improved livelihood for their families					
3.1.3 Employment and training of locals as machine operators					
3.1.4 Forming business partnerships with locals to engage in the mining activities based on specified arrangements to share proceeds					

3.2. Social Impact

The social impact of Chinese involvement in Small Scale Mining in Namibia will focus on Health and Education, Crime and Social behavior

3.2.1. Impact on Health

Rapid Small Scale mining had resulted in people concentrating in Karibib/Usakos. The overcrowding of people leads to poor hygienic conditions and/or associated health risks. Below are perceived statements relating to urbanization impact on health presented on a 5-point Likert scale as follows: SA = Strongly Agree; A = Agree; U = Undecided; DA = Disagree; SD = strongly disagree. You are required to tick only one option per statement below.

Statement	**SA**	**A**	**U**	**DA**	**SD**
3.2.1.1 Increased in health problems associated with small-scale mining, including skin lesions, scabies, skin rashes, increased malaria cases					
3.2.1.2 Increased prevalence of HIV/AIDS and Sexually transmitted diseases (STI) due to pervasiveness of prostitution.					
3.2.1.3 High rate of teenage pregnancy, including school leavers explained partly by Chinese miners offering money for sex with young girls					
3.2.1.4 Gunshots and cutlass wounds from violent conflicts as mining sites, including attempted robberies of Chinese miners					
3.2.1.5 Children falling into open pits and sometimes dying					

3.2.2. Impact on Education

Rapid urbanization resulted in challenges of provision of education services in Karibib/Usakos informal settlements. The overcrowding of people leads to poor hygienic conditions and/or associated health risks. Below are perceived statements relating to urbanization impact on education presented on a 5-point Likert scale as follows: SA = Strongly Agree; A = Agree; U = Undecided; DA = Disagree; SD = Strongly Disagree. You are required to tick only one option per statement below.

Statement	**SA**	**A**	**U**	**DA**	**SD**
3.2.2.1 Low enrolment and attendance of learners in Primary and Secondary Schools in Karibib/Usakos informal Settlements due to urbanization					
3.2.2.2 High rate of teenage pregnancy among school girls and/or residents in mining sites often due to young boys having cash incomes with which to support young girls					
3.2.2.3 Some parents support their children in going to mining sites instead of school and criticize or even attack teachers who discourage them from doing so					
3.2.2.4 Poor performance of learners in primary and secondary schools in mining community with those in non-mining communities					
3.2.2.5 Behaviour problems in schools. Lack of					

respect for teachers as school children earn significant incomes from small-scale mining with teaching becoming increasingly difficult in environment of ill-discipline					

3.2.3. Impact on Crime and Social Behavior

The process of Chinese involvement had exposed individuals to influence of western cultural concepts. One of the examples is the sexual behavior of young people – migrants differ from the sexual behavior away from their home because they are outside the control of family, friends and community. Below are perceived statements relating to Mining activities impact on social behavior presented on a 5-point Likert scale as follows: SA = Strongly Agree; A = Agree; U = Undecided; DA = Disagree; SD = Strongly Disagree. You are required to tick only one option per statement below.

Statement	**SA**	**A**	**U**	**DA**	**SD**
Chinese Involvement in Small Scale mining influenced immoral behaviour					

3.2.4. Impact on Crime

The process of urbanization exposed individuals to violent activities. Below are perceived statements relating to urbanization impact on crime and are presented on a 5-point Likert scale as follows: SA = Strongly Agree; A = Agree; U = Undecided; DA = Disagree; SD = Strongly Disagree. You are required to tick only one option per statement below:

Statement	SA	A	U	DA	SD
Mining activities had influenced violent acts such as gunshots and cutlass wounds within the settlement					

4. LEGAL IMPUNITY

Despite the various elements of illegality in foreign involvement in small scale mining, these have frequently been ignored and the law not enforced. Example includes foreign purchase of small scale concession from Namibians and allegations of products from mining activities not being sold through proper channels. Your opinion about the above statements is presented in a 5-point Likert scale as follows: SA = Strongly Agree; A = Agree; U = Undecided; DA = Disagree; SD = Strongly Disagree. You are required to tick only one option per statement below:

Statement	SA	A	U	DA	SD
There are elements of illegality in foreign involvement in Small-scale mining activity					

5. OVERALL RATING OF BENEFITS OF SOCIO-ECONOMIC IMPACT ON URBANIZATION

5.1. Education

Rapid mining activities by Chinese nationals have resulted in challenges of provision of education services in Karibib/Usakos informal settlement. The quality of education services provided by the Karibib Village is presented on a 5-point Likert scale as follows: Very Poor

(VP) = 1; Poor (P) = 2; Average (A) = 3; Good (G) = 4; Very Good (VG) = 5. You are required to tick only one option per statement below.

Statement	**VG**	**G**	**A**	**P**	**VP**
The quality of education services are Effective and Efficient					

Health

Rapid mining activities by Chinese nationals have resulted in challenges of provision of health services in Karibib/Usakos informal settlement. The quality of health services provided by the Karibib Village is presented on a 5-point Likert scale as follows: Very Poor (VP) = 1; Poor (P) = 2; Average (A) = 3; Good (G) = 4; Very Good (VG) = 5. You are required to tick only one option per statement below.

Statement	**VG**	**G**	**A**	**P**	**VP**
The quality of health services are Effective and Efficient					