

Development/Exploration Funding for Black Junior Miners in South Africa

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by

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I further declare that:

This work was done wholly or mainly while in candidature for the Master in Commerce: Development Finance degree at the University of Cape Town: Graduate School of Business;

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Where I have consulted the published work of others, this is always clearly attributed and referenced;

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None of this work or its parts have been published or submitted before.

Signed:

Signed by candidate

Dated: 05 December 2018

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- My Employer: IDC for support.
- My Supervisor, for his patience, mastery, and fully sharing his knowledge.

DEDICATION

This study is dedicated to all junior miners who experience fund-raise challenges for their projects. To a previously disadvantaged community that is trying to get ahead amidst all apartheid consequences that prevail today such as poverty, among others.

ABSTRACT

The lack of racial transformation in most industries has led the government to craft policies geared towards distributing the pillars of power and influence of all races, especially the previously disadvantaged people of South Africa. A policy is not stand-alone; hence, on its own will not lead to the materialisation of any of government's plans. It is on the back of this that a solution to any problem needs to be a product of a collaborative system. In 2015, over 80% of all prospecting rights held by black owners expired and changed ownership from blacks to whites. The purpose of this research study is to investigate the proportion of black junior miners holding prospecting rights that manage to advance to obtain a mining license and then to production. Moreover, this study aims to describe and explain attributes that influence the investigated phenomenon to derive mitigations and remedies. It is assumed that since black people could participate in natural resources, economic activity post the apartheid era of the nation, the representation of blacks in this industry regarding ownership of productive assets is still less than 15%. This study uses a qualitative research methodology by examining the funding challenges experienced by black junior miners in taking their projects forward by investigating the proportion of allocated prospecting rights to blacks that reach production. A literature review was undertaken as a backbone to the phenomenon being researched. The researcher conducted qualitative research, interviewing 12 respondents; 8 of whom are middle to senior managers in their prospective companies and 4 of whom are aspiring mining owners with prospecting rights. The research findings revealed predominant themes, among which are the inefficient application process, poor quality applications, little to no government support to help execute their transformation agenda within mineral economics, limited funding allocated towards the development of early-stage mineral resources projects and the nation's deficiency of experienced early-stage funders and funding mechanics. Practical recommendations were provided, and these show a correlation between a participant-private-public relationship that needs to happen to achieve the intended purpose of the study. In absence of funding commitment from private entities, the only option the country has might be to constitute a consolidation policy, forcing majors to financially adopt juniors with a clawback option.

CLARIFICATION OF TERMS AND CONCEPTS

ntn	Not known/given
HC	Human Capital
BBBEE	Broad Based Black Economic Empowerment
DMR	Department of Minerals
DTI	Department of trade and industries
IDC	Industrial Development Corporation
NKJV	Bible of the New King James Version
P-P-P	Private-Public-Partnerships

LIST OF FIGURES

Figure 1: Generic Structure of a Special Purpose Vehicle	12
Figure 2: Mineral project lifecycle	17
Figure 3: Stepwise representation of the data analysis spiral	30

LIST OF TABLES

Table 1: General characteristics of qualitative research.....	23
Table 2: Sample Demographic.....	28
Table 3: Eligibility criteria.....	65

TABLE OF CONTENTS

DECLARATION.....	i
ACKNOWLEDGEMENTS	ii
DEDICATION	iii
ABSTRACT	iv
CLARIFICATION OF TERMS AND CONCEPTS	v
LIST OF FIGURES.....	vi
LIST OF TABLES.....	vi
INTRODUCTION AND BACKGROUND OF THE STUDY	1
1.1 Introduction	2
1.2 Background.....	2
1.1.1 Junior Miners.....	2
1.1.2 History of black ownership in South Africa.....	3
1.4 Problem definition	3
1.5 Statement of research objectives.....	3
1.5.1 Specific research objectives	3
1.6 Research questions	4
1.6.1 Specific questions.....	4
1.7 Delimitations of the study.....	4
1.8 Ethical considerations	4
1.8.1 Harm to experimental participants	5
1.8.2 Violation of privacy (or right to confidentiality)	5
1.9 Limitations of the Study.....	5
1.10 Justification of the study.....	5

1.11	Scope of study	5
1.12	Organisation of study	5
1.13	Summary.....	6
CHAPTER 2: LITERATURE REVIEW		8
OVERVIEW OF RELEVANT LITERATURE		9
2.1	The exclusion of Previously Disadvantaged Individuals (PDIs) from Mineral economy participation	9
2.2	Broad Based Black Economic Empowerment (B-BBEE)	9
2.3	Funding Black owned Transactions	11
2.3.1	Project Finance through SPV	11
2.3.2	Different SPV structures	12
2.3.3	Third Party Finance	13
2.3.4	Derivatives (Options) (Nhlapo, 2008)	14
2.3.5	Preference Shares.....	15
2.3.6	Equity Offering.....	15
2.3.7	Vendor Financing	15
2.4	Transformation of the Minerals and Mining Policy.....	16
2.5	Mineral Resource Licencing: DMR.....	16
2.6	Project Development Cycle	16
2.7	Knowledge Gap.....	18
2.8	Conclusion of the Literature Review.....	19
CHAPTER 3: RESEARCH METHODOLOGY		20
RESEARCH METHODOLOGY		21
3.1	Research method/ paradigm	21
3.2	Research Design.....	22
3.3	Research questions	24

3.4	Population and sample.....	25
3.4.1	Sample population.....	25
3.4.2	Sample and sampling method	26
3.5	The Research Instrument.....	28
3.5.1	Data collection	28
3.6	Data Analysis and interpretation	29
3.7	Limitations of the study	31
3.8	Measures of trustworthiness	31
3.8.1	Credibility.....	31
3.8.2	Dependability.....	32
3.8.3	Triangulation.....	32
3.8.4	Confirmability.....	33
3.9	Ethical considerations	33
3.10	Summary	33
CHAPTER 4: DATA PRESENTATION AND ANALYSIS.....		34
DATA PRESENTATION and ANALYSIS		35
4.1	Introduction	35
4.2	Data Presentation and Analysis	36
4.3	Overall Findings	50
4.3.1	Positive Findings	52
4.4	Summary.....	53
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS.....		54
CONCLUSION AND RECOMMENDATIONS.....		55
5.1	Introduction	55
5.2	Summary of findings linked to objectives	55

5.3	Recommendations	57
5.4	Suggestions for further research	58
5.5	Limitations	58
5.6	Conclusion	58
	REFERENCES.....	59
	ANNEXURE 1: CONSOLIDATION APPROACH	63
	ANNEXURE 2-Questionnaire Sample	67
	ANNEXURE 3: PROFILES OF THE RESPONDENTS	69
	ANNEXURE 4: ETHICAL FORM	70
1.1.1.	1. PROJECT DETAILS.....	71
1.1.2.	2. PARTICIPANTS	72
1.1.3.	3. Provision of Services	75
1.1.4.	3. ORGANISATIONAL PERMISSION	77
1.1.5.	4. INFORMED CONSENT	79
1.1.6.	5. Sponsorship of Research	80
1.1.7.	6. RISK TO PARTICIPANTS	81

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 INTRODUCTION

This study will focus on South African black owners of mineral resources' prospecting rights (the subject is also referred to as black-junior miners) and their encounters in their pursuit of raising funding for prospecting or early exploration work. Prospecting is a pre-requisite to attaining a mining licence, which consequently gives mine owners production rights. The introduction provides the background, problem statement and draws on some relevant literature considerations. Furthermore, the primary and secondary objectives are presented with the methodology required to achieve the objectives.

1.2 BACKGROUND

South Africa's total reserves are some of the most valuable in the world, with an estimated worth of over R20.3 trillion (Kearney, 2012). According to the Chamber of Mines as cited by Kearney (2012), mining has for years been a key pillar of the South African economy, contributing over 25% towards employment amid its cyclical nature.

According to the Mining Charter (2016), effective ownership of blacks is a requisite instrument to achieve the integration of blacks into the mainstream economy. A previous minimum of 26% black ownership has been upped to 30% in the new Mining Charter, effective from 2018. The allocation to black people is to enable meaningful economic participation considering section 37 (2) of the Companies Act, 2008 (Act No. 71 of 2008). Currently, black South Africans own less than 10% of mineral resources (Amber, 2017).

Mining is capital intensive; it requires more long-term than short-term investors. Over and above the actual construction investment, prior investment is required to understand the orebody at various levels of confidence to qualify for a mining right/licence (MPRDA, 2008).

1.1.1 Junior Miners

Junior miners refer to exploration companies in search of new deposits (Mthenjwa, 2016). This study, however, further separates the junior miners according to race and only focuses on black junior miners in South Africa.

1.1.2 History of black ownership in South Africa

Due to the history of South Africa that took every form of right from black people, blacks were not allowed to own mineral assets. Since the inception of more inclusive policies such as Broad Based Black Economic Empowerment (BBBEE), blacks are also allowed to participate in mineral economics (Kearney, 2012). Due to the required elements of lodging an application, affordability, however, becomes a huge factor of success. Due to the historical disparities between blacks and whites, even in the current period, most blacks cannot afford such applications.

1.4 PROBLEM DEFINITION

Due to black junior miners having access to resources (Mining charter, 2016 & 2018), it was observed that they usually sell their prospecting rights, or they soon expire. Most black holders of prospecting rights never see them to production (Molefe, 2017). When investigated further, the deduction was that they struggle to access funding to develop newly allocated resources.

According to Molefe (2017), although most prospecting rights (about 50%) are granted to blacks, it seems as if many of them struggle to access funding for early development funding or prospecting work. Funding is a pre-requisite to be given a mining licence and subsequently, going into production (MPRDA, 2008).

This study aims to investigate the proportion of blacks or junior miners holding prospecting rights that manage to advance from this stage to the mining licence stage and subsequently, to production. Moreover, this study aims to describe attributes that influence this and how they can be disempowered.

1.5 STATEMENT OF RESEARCH OBJECTIVES

1.5.1 Specific research objectives

The primary research objectives for the study is to investigate why black junior miners holding prospecting rights hardly ever advance from this stage to the mining licence stage and subsequently, to production. Moreover, the study aims to describe how finances influence this, if it does.

The secondary objectives to achieve the primary objective are:

- I. to assess the level of black-owned prospecting rights that expire before any development takes place;
- II. to establish how much is allocated towards mineral prospecting by commercial and development financial institutions; and
- III. to investigate how many of the prospecting projects that have been funded by either DFIs or commercial banks were/are black-owned and white-owned.

1.6 RESEARCH QUESTIONS

According to Hulley and Cummings (2013), research questions are aimed at assessing whether the research is relevant and ethical.

1.6.1 Specific questions

The main question for this study is “Why do black junior miners find it challenging to advance projects from prospecting license to production?”

The secondary research questions are:

- I. What is the level of black-held prospecting rights that expire before any development takes place?
- II. How much funding is allocated towards exploration by DFIs and commercial banks?
- III. Of all funded exploration projects, what proportion of the funds were for black junior miners?

1.7 DELIMITATIONS OF THE STUDY

This study focuses on mining prospecting rights held by 51% to 100% black individuals. These are all early stage and have not gone into production.

1.8 ETHICAL CONSIDERATIONS

The two key ethical considerations when conducting research of this nature is the harm to experimental participants and violation of privacy (or right to confidentiality).

1.8.1 Harm to experimental participants

Participants gave their full consent to participate in the study. The full intent of the study was explained to them. Moreover, all participants were informed of their right to withdraw at any time during the study. Participants were not exposed to any physical or psychological discomfort (Strydom, 2013).

1.8.2 Violation of privacy (or right to confidentiality)

According to Strydom (2013), the researcher must protect the participants' privacy. No real names are used, and researcher communicated with participants in their preferred languages.

1.9 LIMITATIONS OF THE STUDY

There exist no BEE transactions and no statistics on black-owned prospecting and mineral rights on public platform. In addition, according to Reuben and Bobat (2014), there is limited literature on the transformation of SA regarding BBBEE and its effects. DMR does not have a database; hence, limiting any form of quantitative analysis.

1.10 JUSTIFICATION OF THE STUDY

There is minimal participation of black people in the mining industry. This study wants to fully describe the situation. The findings will act as a magnifying glass to see what is happening and help change some investment decisions/attitudes towards black prospecting rights holders. Furthermore, the study will show areas of further research

1.11 SCOPE OF STUDY

This study is limited to black junior miners in South Africa with prospecting rights in South Africa. Only factors that hinder black junior miners are examined.

1.12 ORGANISATION OF STUDY

This study will have five chapters:

- Chapter One introduces the study and explains the topic and purpose of the study. A problem statement is clearly stated, along with the objectives of the study.
- Chapter Two will cover the literature review that helps process and makes deductions on the collected data.
- Chapter Three will report on the research methodology employed to achieve the study's objectives. Areas to cover are research design, method, and data collection.
- Chapter Four will focus on the findings of the study. The results will then be discussed by focusing on the implications of the findings for managers.
- Chapter Five will discuss the conclusion reached resulting from the study as well as any recommendations that can be made to management and recommendations for future studies.

1.13 SUMMARY

This study focuses on South African black owners of mineral resources' prospecting rights (the subject is also referred to as black-junior miners) and their encounters in their pursuit for raising funding for prospecting or early exploration work. Although South Africa has some of the richest reserves in the world, the ownership of these reserves is not well representative of all races, especially blacks. Due to the history of the country, there still exists prominent ripples of the discriminatory government; hence, blacks are not so well represented across all economic sectors (Kearney, 2012). The government is trying to change the narrative by putting policies in place that promote the inclusion of blacks; in this case, in mineral economics.

Due to black junior miners having access to resources (Mining charter, 2016 & 2018), it was observed that they usually sell their prospecting rights, or they soon expire. Most black holders of prospecting rights never see them to production and funding is one of the key causes of this fate (Molefe, 2017). The state of funding towards exploration projects in South Africa influences the sustainability of the mining industry.

This study aims to investigate the proportion of blacks or junior miners holding prospecting rights that manage to advance from this stage to the mining licence stage and subsequently, to production. Moreover, this study describes the attributes that influence this and how they can be disempowered. The next section gives an overview of the consulted literature.

CHAPTER 2: LITERATURE REVIEW

OVERVIEW OF RELEVANT LITERATURE

This section gives an overview of literature considerations for the study.

2.1 THE EXCLUSION OF PREVIOUSLY DISADVANTAGED INDIVIDUALS (PDIs) FROM MINERAL ECONOMY PARTICIPATION

From 1912–1913: In South Africa, pre-1913, mineral rights ownership lied with the state. This was governed under the Land Settlement Act of 1912 (Cawood & Minnit, 1998). The Common Law system legislated that a surface landowner automatically had “below surface” rights as well. On the back of this, through the Native Land Act 27 of 1913, 87% of the South African land was to be transferred to white people as per the apartheid regime. This automatically excluded blacks from owning mineral rights and could not participate in mineral economic activities (Mogoeng, 2013).

From 1917: The ownership of mineral rights was privatised except for gold, precious stones, and silver. From 1991: The Mineral Act 50 (1991) that was promulgated in 1992 provided for exclusive mineral ownership by private entities (Cawood & Minnit, 1998). All the above laws failed to address the exclusion of PDIs for land and mineral ownership.

2.2 BROAD BASED BLACK ECONOMIC EMPOWERMENT (BBBEE)

BBBEE or BEE was introduced by the current ANC government in a bid to address and redress the legacy of the apartheid government and broaden the participation of historically disadvantaged individuals in the economy (Kruger, 2011). BEE-Act 53 of 2003s main objective is to ensure that past inequalities are overcome through the development of black owned enterprises and growth/development of blacks in the workplace (DTI, 2016a).

BEE has evolved over the years. The first phase involved white companies selling a stake of the unissued shares to some few pre-identified black potentials. The phase focused on ownership and board representation. Most of these transactions were funded through loans received from financing institutions and were executed at a discount. Most of these deals were funded through preference shares or instruments that allowed them to only take ownership once they had paid back these loans. This meant tangible transformation would take long, as is the case today. (Acemoglu, Gelb & Robinson, 2007).

The second phase (2000–2014) involved the broadening of the BEE framework through the Broad Based Black Economic Empowerment (BBBEE). The phase started to include enterprise development, skills development, employment equity, preferential procurement, ownership and control of enterprises, ownership of economic assets and investments. This mirrored a plan that NAFCOOC had once proposed that was to take place for a period of ten years and encompass the following pertaining corporations listed on the JSE: 30% black directors, 40% black share ownership, 60% black management and 50% black suppliers for production inputs (Acemoglu, Gelb & Robinson, 2007).

Most researchers concluded that the impact of BEE on South Africa as negative. Factors that have not yielded any positivity ever since the inception of BEE are financial performance, domestic competitiveness, global competitiveness, service excellence, client satisfaction, quality of products, level of productivity, entrepreneurial spirit, human development, business ethics and access to markets (Kruger, 2011).

The key challenge is that the government has still not provided the institutional and financial support required for a more sustainable black empowerment and that the wrong targets had been chosen for the transformation plan (Acemoglu, Gelb & Robinson, 2007).

2.3 FUNDING BLACK OWNED TRANSACTIONS

From the early 1990s there has been various research on BEE funding models and most of them have not deemed successful. Some of the identified factors are, but is not limited to, lack of business experience, no track-record, insufficient pool of financial capital and limited collateral (Phillips, 2004). Nhlapo (2008) identified some suitable funding instruments for BEE transactions that would also be ideal for early stage projects such as vendor financing, SPV, preference shares equity participation, derivatives, and options.

Most junior explorers start issuing stock at the stock market or get access to venture capitalists. Non project owners can be in a form of family, friends, commercial banks and DFI (Abor & Biekpe, 2009). They can either choose to fund on an equity basis, debt, or hybrid (Abor & Biekpe, 2009). Often, such type-projects require long-term funders who are willing to take an equity stake.

2.3.1 Project Finance through SPV

An SPV is created for the sole purpose of re-investment and to acquire ordinary shares in the parent company (Nhlapo, 2008). The BEE junior mining company would issue preference shares to the financing company (financier) and hold 100% of the ordinary shares. The junior mining company would get voting rights in the parent company (Bowman Gilfillan, 2001). An SPV structure is a high-risk instrument because of the following (BusinessMap, 1999 as cited in Phillips, 2004):

- longer investment term;
- loss or dilution of voting control; and
- lack of liquidity within the structure

Downturn economic times make it difficult for junior miners to service their facilities and hence, shares do not always get transferred back (Jacks, 2010). Preference shares can be bought back.

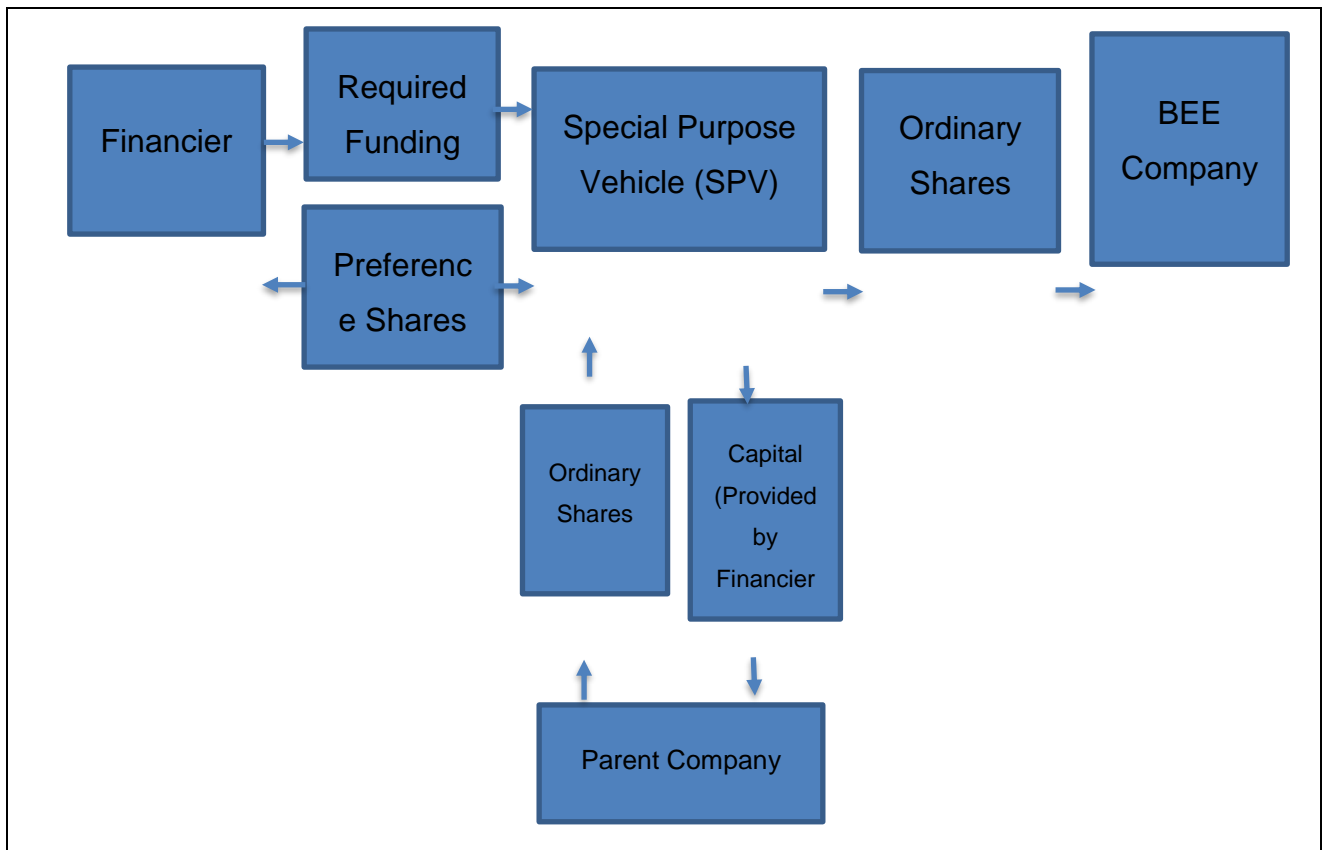


Figure 1: Generic Structure of a Special Purpose Vehicle (Nhlapo, 2008)

2.3.2 Different SPV structures

2.3.2.1 *Equity Participation (Nhlapo, 2008)*

- Black junior mining company owns 100% A-class shares
- The financier is given 100% B-class shares
- The junior mining company holds the majority voting rights
- The financier owns shares in the parent company until the junior company redeems the B-class shares

2.3.2.2 *Put Options granted by Existing Shareholders (Nhlapo, 2008)*

- Black junior mining company owns 100% A-class shares
- The financier is given 100% B-class shares through extending a loan to the party above

- In a case where the junior company cannot redeem preference shares owned by the financier, the financier can sell these to other investors in the parent company as per 'Put Option' agreement

2.3.2.3 Asset Securitization (Levitt, 2004)

- Grouping cash generating assets under an SPV and using them to raise funds
- Issuing these assets to investors as securities
- Assets that back the securities are separate from the parent company

2.3.2.4 The use of N-Ordinary Shares (JSE, 2014)

N-Ordinary shares are like ordinary shares. They only differ by the fact that they hold voting rights and that these hold a capital gain benefit.

2.3.3 Third Party Finance

Debt financing is given by all types of financial institutions from venture capitalist firms, development finance institutions (DFIs), commercial banks and private equity firms (Correia et al., 2011). Corporate Finance is one of the various approaches these institutions take when funding. Corporate finance is all about maximising the company's value through systems that balance risk and profits. It umbrellas the capital structure of a company, including its funding and management actions to increase the value of companies (Ross et al., 2009). It has three main activities.

2.3.3.1 Capital investments & Capital budgeting

Capital investments and budgeting are concerned with which projects to acquire or invest in. Investments' objective is to try and earn the highest possible risk-adjusted return.

A company estimates cash flows from the proposed capital projects, compares planned investments with projected income, identifies capital expenditures, and decides whether to include the project in the capital budget. The economic impact is estimated by a financial model where the investment opportunity is compared to alternative projects. An Internal Rate of Return (IRR) in conjunction with Net Present Value (NPV) compare projects and then pick the optimal one (Ross et al., 2009).

3.3.3.2 Capital financing

Capital financing is concerned with the mechanics used to fund capital investments, which could be anything from equity, debt, hybrid, selling company stocks, or issuing debt securities in the market through investment banks. The mix between equity and debt should be carefully managed to moderate the risk. Too much debt triggers the risk of default in repayment, and too much equity could dilute earnings and value of original investors. The capital structure needs to be kept optimal by lowering its Weighted Average Cost of Capital (WACC) (Ross et al., 2009).

3.3.3.3 Dividends and return capital

Dividends and return capital are concerned with how and when capital will be returned to investors. The challenge with corporate finance relating to junior mining companies is that most do not have their own equity contribution, and this significantly renders a poor structure; however, justifiable. Hence, most institutions see these projects as non-optimal to consider for capital budgeting. It is the take of most institutions that project finance is a better approach as it naturally cushions long-term investments that take time to go into production and consequently, take time to turn a profit (Molefe, 2017).

Due to a lack of collateral offered by the junior mining companies, most of these institutions charge high interest rates and transaction costs (Nhlapo, 2008). Due to the substantial risk associated with junior miners, it is usually only DFIs that have an appetite to fund such entities. Angel finance usually gives funding in exchange for a significant equity stake. The acquired stake is reduced as the loan gets paid back (Nhlapo, 2008).

2.3.4 Derivatives (Options) (Nhlapo, 2008)

The underlying asset informs the value of an option. The party buying will get a call-option, which refers to the right but the obligation to buy shares in the parent company at an agreed future date and an agreed strike price. The buying company can have a discount or premium position at the time of purchasing the shares depending on where the share price is sitting at the time. The main advantage is that this instrument offers

an opportunity to benefit from the movement of the parent company's share price. The key disadvantage of options is the fact that it does not yield ownership. Furthermore, it does not give voting rights.

2.3.5 Preference Shares

Some financiers offer funding in exchange for preference shares. These preference shares are a form of security to their funding. Should the junior mining company default on dividends/payments, these preference shares are then converted to ordinary shares (Nhlapo, 2008). Even though it works like an SPV, there is no SPV created in this case.

2.3.6 Equity Offering

Capital raising comes in many forms. The local stock exchange has strict criteria for floating and raising capital for exploration projects (Mothomogolo, 2012). It is less risky for investment companies to invest in listed companies.

2.3.7 Vendor Financing

Vendor financing usually works when the funder owns the assets and is helping the black-owned company to acquire class-B shares. This method gives assets to a black-owned company before it has money to pay. It can take different forms of vendor facilitation such as vendors providing a guarantee to third party funders, an agreed dividend schedule based on cash availability to service debt and an earn-out structure (Nhlapo, 2008). The challenge of no contribution remains and is a deal-breaking risk. According to Mothomogolo (2012) most of these instruments or sources are underdeveloped in South Africa.

2.4 TRANSFORMATION OF THE MINERALS AND MINING POLICY

In 1994, the African National Congress (ANC) was voted into power. In this dispensation, notable transformational strides were observed. These were supported and informed by the Freedom Charter of 1955, which in relation to the study, advocated that all forms of wealth including that of minerals shall be shared by all people (Congress of the People, 1955). A policy document was drafted and submitted to the government and this included all stakeholders, the National Union of Mine workers, the Government of National Unity, and the Chamber of Mines. In October 1998, the South African government approved a white paper on minerals and mining policy (Rocha, 2013). In 1999, cabinet drafted and approved a Minerals and Petroleum Resources Development Act (MPRDA No. 20 of 2002) in 2002. This act came into being in 2004 (Rocha, 2013). MPRDA would focus on redressing the adverse effects of apartheid regulations and would be regulated through a framework of tools, referred to as the Mining Charter.

2.5 MINERAL RESOURCE LICENCING: DMR

The granting of a Mining licence/right rights by the department of minerals (DMR) has a standard process as stipulated in the MPRDA (2008). First you apply for a prospecting right, giving you the right to prospect and not economically mine. After you are allocated a prospecting right, you need to prospect/explore for occurrence and establish a resource classification statement. This means the resource must be comfortably explored to suit the DMR as part requirement for granting a mining license/right. Other requirements include, but are not limited to, environmental assessment, social labour plan and a rehabilitation guarantee (MPRDA, 2008).

2.6 PROJECT DEVELOPMENT CYCLE

Seeking finance from a financial institution, either commercial or DFI, is commonly done when the mineral resource classification is considered bankable; implying the layout of the orebody and grade of the resource is confidently defined and known. Bankable is associated with a de-risked, minerals projects. Figure 2 shows the different risks rating in the mining project development cycle.

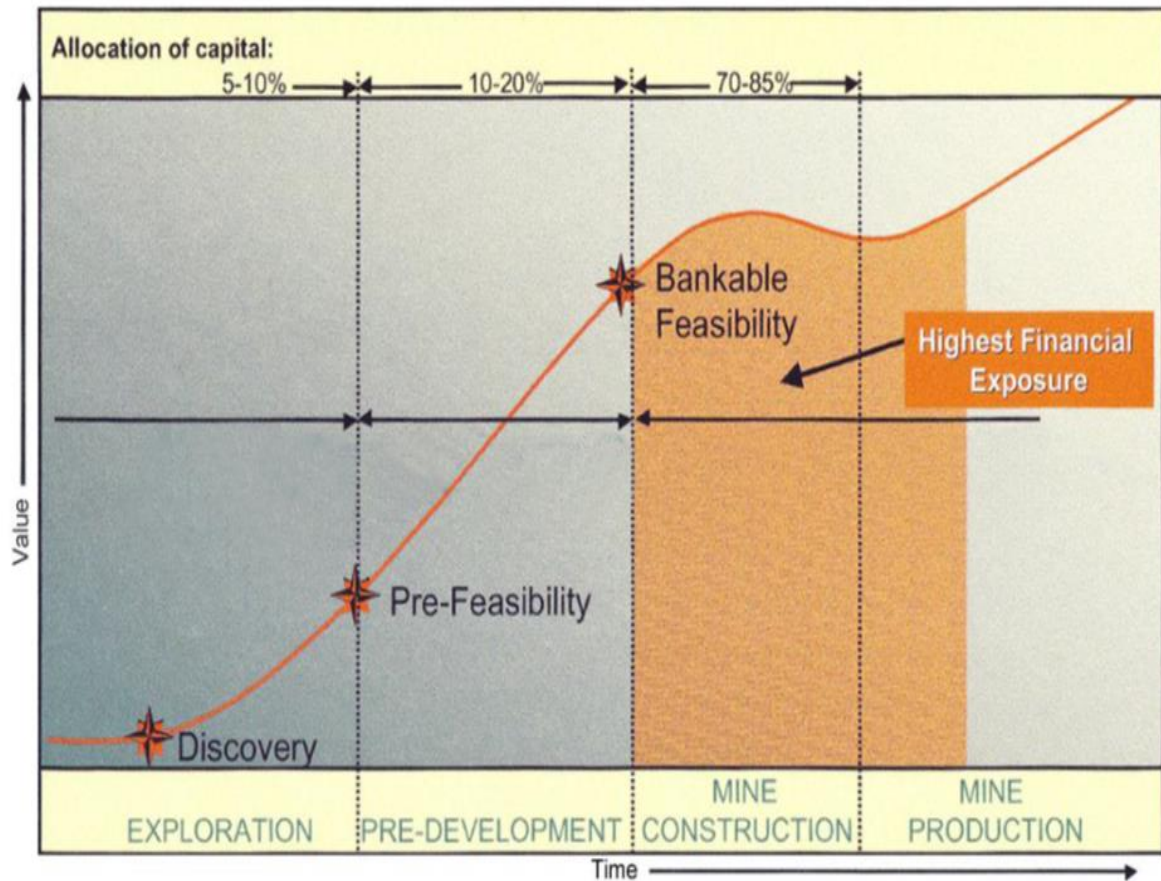


Figure 2: Mineral project lifecycle (Source: Stear, n.d. as cited by Leijh, 2013)

Mineral resources projects are all at various stages. The lifecycle of a mineral resources projects has the following stages:

- exploration;
- feasibility;
- development and construction;
- operation and production; and
- closure and reclamation.

All the development lifecycle levels require a financial injection either as the owner's contribution or by funding. This study focuses only on the exploration level, where preliminary exploration, also referred to as prospecting, needs to be done to determine, based on sound geological reasoning, where a mineral resource occurs and whether it be economically viable for exploitation (Leijh, 2013). Prospecting entails drilling a few holes to proof occurrence on an area being targeted, conducting geological, geophysical, geochemical, and topographic studies on the area. Moreover, doing some legislative requirements by the DMR such as environmental assessment, social impact studies and obtaining a rehabilitation guarantee (MPRDA, 2008). The result of all these activities lead to a pre-feasibility study report.

A significant cost is associated with all the different activities that need to be done. According to Amber (2017), the least that IDC has had to fund these activities has been R6 million; still at pre-feasibility. The higher the level, the more expensive it becomes; over three times the cost of the prior level. For the first three levels of the development cycle before construction, the least funding application ever received was R45 million, given in three phases. The reason it was not much is because the resource was close to the surface. Within most resources getting deeper, the chance of getting such cheap application rates are less than 5% (Mthenjwa, 2016).

Most financial institutions are averse towards funding mining or mineral resources' projects because the commodity cycles can be unfavourable. To make the situation worse, production/mining costs have been rising in yester-years (Ericsson, 2010; PWC, 2011). Early stage funding on mineral resources projects means that after granting the prospecting right, investors become more cautious than when funding happens at post bankable feasibility. Hence, it is more difficult to get funding for prospecting/exploration than for mining-construction.

2.7 KNOWLEDGE GAP

No empirical studies exist on the subject in South Africa. One would assume that "transformation" being such a major concept in the country much should be done by now, but it is the contrary.

This is a descriptive study. Further work can be done post this study to explore and explain the subject. However, without first taking the time to analyse existing data and fully describe the subject not much explanatory or qualitative work can be done to add more value. The next section gives an overview of the correct methodology to use to achieve the study's objectives.

2.8 CONCLUSION OF THE LITERATURE REVIEW

The examined literature only examined theories potentially contributing to the funding progress of black junior miners. The literature clearly showed that South Africa hosts limited funds for exploration work in the natural resources space. The literature also highlighted the level of under-representation of black participants in the mineral economy due to difficulties in accessing funding and, to some degree, minimal government support. Moreover, also revealed is the level of quality of applications by black junior miners versus white-held prospecting rights due to economies of scales allowing some individuals to outsource work to consultants and relevant mining qualifications held by applicants.

CHAPTER 3: RESEARCH METHODOLOGY

RESEARCH METHODOLOGY

This section covers the description of the methodology used to conduct the study, which will consist of two phases, namely literature review (previous section) and an empirical study. Additionally, outlined in this section will be the research design and relevant research instruments.

3.1 RESEARCH METHOD/ PARADIGM

The most suitable method adopted for this study was a qualitative paradigm. A paradigm refers to a philosophy comprising a belief system and a world view of framework that guides the research and practice in the field. The three acceptable paradigms are interpretative, positivism and critical theory (Willis, 2007:6). This study was conducted per a simple interpretative paradigm, which helps understand perceptions relating to the phenomena being studied.

This approach is more focused on natural scenarios and their complexities. This leads to the establishment of themes derived from the data, to better understand perceptions, feelings, and attitudes (Bowen, 2005:210). It is an interactive process rather than a passive one.

This study aims to investigate the lack of participation of black junior miners in primary mineral economic activity. A qualitative research method is more suitable for the study because it can give an elaborative view of the scene within the industry pertaining the subject being investigated. A key attribute of qualitative research is that it uses exploratory and descriptive strategies to meet the aims and objectives of the study (Willis, 2007). Hence, the method would help gain new insights through explanations and descriptions, considering that not much is known or even researched on the concept of black junior miners (Willis, 2007;6).

The exploratory phase is achieved by studying the background information that could help answer the research questions. Respondents were made to relate to key stories and incidents relating to the research topic. The other phase is descriptive referring to the product of a qualitative enquiry where words are used to convey the results of the study (Cooper & Schindler, 2008).

3.2 RESEARCH DESIGN

This section covers the selection of participants and their induction to the research process by undertaking interviews and interview feedback for validity and facilitation of data collection. Research design involves planning, theoretical reading, modifying theory, empirical data gathering, analysing of data, and addressing validity threats (Maxwell, 2005).

Interviews were executed to enable flexibility and allow for more in-depth insight into the concept (Maxwell, 2005). A triangulation approach was applied where various sources were asked the same question. This helped develop common themes among a small group of respondents and to identify conflicting and common views. According to Maxwell (2005), this approach allowed probing for further insights and reasoning. Hence, complexities were better understood by respondents giving actual examples.

Table 1: General characteristics of qualitative research

Characteristics	Description
Concern for content	Human experience takes its meaning from historical, social, political, and cultural influences
Purpose	To understand the social phenomenon of multiple realities
Rich narrative description	Experience and perspectives, detailed descriptions, data in the form of words
Sample	Purposeful, non-random, and small
Method	Interviews
Natural setting	It is natural and there are no attempts to manipulate behaviour
Human instrument	The researcher is the agent for the gathering and analysis of data; relies on fieldwork methods
Inductive analysis	Collection of data and analysis takes place simultaneously, identification of recurring patterns

Source: Adapted from Richie & Lewis (2003)

The main disadvantages are (Maxwell, 2005):

- the conclusion, unlike with quantitative, is not factual;
- the differing views make it difficult to extrapolate common themes; and
- the analysis stage is time consuming.

The challenge is that because the researcher is also an industry specialist, biases had to be dealt with and a more objective and neutral approach had to be taken.

3.3 RESEARCH QUESTIONS

The primary question is why black junior miners holding prospecting rights hardly ever advance from this stage to the mining licence stage and subsequently, to production?

The three secondary questions are:

- I. How many of the black and white-owned/allocated prospecting rights have expired prior to realisation or economic activity?
- II. How much funds have previously been allocated by Development Financial Institutions (DFI) and commercial institutions in South Africa to help black prospecting rights holders to prospect/develop their areas of interest further from the first descend of a mining charter back in 2002?
- III. Of all the prospecting funded projects by DFIs and commercial banks, how many were black-owned and how many were white-owned?

To address the above the research questions were as follow:

DFI and Commercial bank: Funding criteria:

1. How long have you been in the finance industry?
2. What is your highest qualification?
3. Do you have a specific budget allocated for early stage projects?
4. Is the budget further partitioned into white-owned and black-owned?
5. What are the criteria of funding early stage projects (e.g. score card)?
6. How are early stage projects funded (preferred instruments)?
7. How are these priced?
8. Of all your early stage funded projects, how many were black-owned and by what percentage?
9. Is there a difference in the quality of application by black-owned entities and white-owned early stage entities? (reflects lack of experience)
10. What are the typical commercial clauses incorporated into the model?

DMR

1. How often do black-held prospecting rights manage to raise funding for exploration or early stage development?
2. Of all the prospecting rights holders, would you say the majority are black or white?
3. What happens when a holder of the prospecting right cannot develop it further?

Prospecting Right holder

1. How long did/ have you held the right for?
2. What are the main challenges encountered by prospecting rights holders?
3. Does the DMR do something to help develop these early stage projects?
4. How much does it cost to develop an early stage?
5. Do you feel the government and private sector are supportive enough to prospecting rights holders?

3.4 POPULATION AND SAMPLE

3.4.1 Sample population

As per De Vaus's (2002) advise, a well-rounded representation of a population helps mitigate the risk of bias. The population of the study includes all key role players in the South African black junior mining sector, the department of minerals, South African DFIs mandated to fund natural resources projects and commercial banks.

Though there is no formal database that is kept long enough by the relevant government department to draw a sufficient statistic, a total average figure of black-owned prospecting rights given by some government officials is no more than 100 in South Africa. Only four (4) respondents were interviewed from the total known number and these were probable clients of some financial institutions that were willing to participate. Among institutions that have been known to fund exploration projects, though some have collapsed, only four (4) institutions do such funding. From these, only two (2) institutions were selected to participate, interviewing six (6) respondents.

There is only one (1) department that deals with prospecting and mineral rights and only two (2) respondents participated from the department.

In total, 12 proficient individuals with varying experiences, all related to junior miners through the application of rights, exploration funding and actual execution participated. Though there could have been more participants, some individuals were not comfortable to participate even though the interviews were done anonymously.

The four groups are relevant to give a holistic and more credible conclusion. In total, 12 participants were engaged; four (4) DFI managers, two (2) Commercial Bank Managers, two (2) representatives of the relevant government department and four (4) prospecting rights holders. Not only black participants were selected.

3.4.2 Sample and sampling method

3.4.2.1 Sampling method

This study used purposive or judgemental sampling. This comprises participants selected based on their experience and knowledge pertaining to the research subject. The ability to expound using purposive sampling instils confidence and validity for the research findings (De Vaus, 2002). Key goals of purposive sampling are receipt of data from the most relevant population of the study, receipt of reliable representation and establishment of comparisons from different participants.

3.4.2.2 Sample size

Two degrees determine the sample size, namely the degree of accuracy and degree of variation in the population (De Vaus, 2002). An adequate sample size of 12 respondents (mid-senior managers and executives) were selected through the principle of data saturation and the sample was as follows:

Finance Participants:

- 2 respondents from a commercial bank
- 4 respondents from a DFI

Industry participants:

- 2 DMR respondents
- 4 previous and current prospecting rights holders

Other considerations to make when establishing a sample size are (BRME Study Guide, 2014):

- a) The researcher can be a full-time employee and have time constraints; and
- b) Limited budget for travelling to the interview location and hiring a transcriber.

The above considerations were closely monitored, as they could increase the margin of error if not well planned for.

Table 2: Sample Demographic

Institution	Gender & Race	Pseudo Name
DFI	Male & white	DFI Respondent 1
DFI	Male and black	DFI Respondent 2
DFI	Female & black	DFI Respondent 3
DFI	Male & coloured	DFI Respondent 4
Commercial Bank	Male & black	Commercial Bank Respondent 1
Commercial Bank	Female & white	Commercial Bank Respondent 1
Government Department	Female & black	Government Department Respondent 1
Government Department	Female & black	Government Department Respondent 2
Junior Miner	Male & Black	Prospecting Right Holder Respondent 1
Junior Miner	Male & White	Prospecting Right Holder Respondent 2
Junior Miner	Male & Black	Prospecting Right Holder Respondent 3
Junior Miner	Female & black	Prospecting Right Holder Respondent 4

3.5 THE RESEARCH INSTRUMENT

The research instrument consisted of semi-structured interviews. Questions were informed by the literature review content and industry experience.

3.5.1 Data collection

Qualitative data was collected through a field research, mainly ethnographic research (Pellissier, 2007). Semi-structured, one-on-one interviews were used on the selected sample. First, semi-structured interviews were for the DMR list of current prospecting rights holders and ex-prospecting rights holders from 2006. The second semi-

structured interviews were for a commercial bank and DFIs investment officers in the mining space.

The instrument allowed for probing to narrow deeper into consolidation factors and thematic views. The open nature of the questions allowed the respondents to give their wide perspectives and understanding of the phenomena being studied. According to Pellissier (2007), the main disadvantage of interviews is that it is time-consuming because it requires detailed preparation of questions, employment of a tactful ways of interviewing, scheduling of interviews in advance, transcribing and analysis.

Most scheduled interviews were successfully rescheduled. Even though the planned time per interview was no more than 30 minutes, most of them went over the allocated time because participants went into giving examples and elaborating on their experiences.

Open-ended questions were posed during the interviews to elicit in-depth information on the research topic. Main instruments used in the study were pencil, notebook, and transcribing. Transcribing can be described as a transformational process from words to text; it is an interpretative process (Pellissier, 2007). See Appendix B for semi-structured interviews.

3.6 DATA ANALYSIS AND INTERPRETATION

Content analysis method was used, which refers to a detailed and systematic examination of contents with a view of identifying patterns and themes (Leedy & Ormrod, 2010). The first step in data analysis is coding, which simply means to summarise, synthesise, and sort observations. It is ideal for textual data (Forman & Damschroder, 2015). Data analysis was done by means of ordering, categorising, manipulating and summarising data to obtain the answers to the main questions asked in the study. Some of the activities that were associated with the analysis were:

- a) studying of previous case studies;
- b) semi-structured interviews; and
- c) old surveys reviews.

In content analysis, data are recorded using categories that are inductively generated. Moreover, empirical data are used to analyse open-ended answers. Five key steps to content analysis are (Hseih, 2005):

- Read the written content and establish views of participants;
- Categorise each participant separately;
- Extract key categories of themes that emerge from responses;
- Define each category; and
- Have a verification factor.

Moreover, another data analysis methodology, linked to the above method of analysis as developed by Creswell (2003) is detailed below;

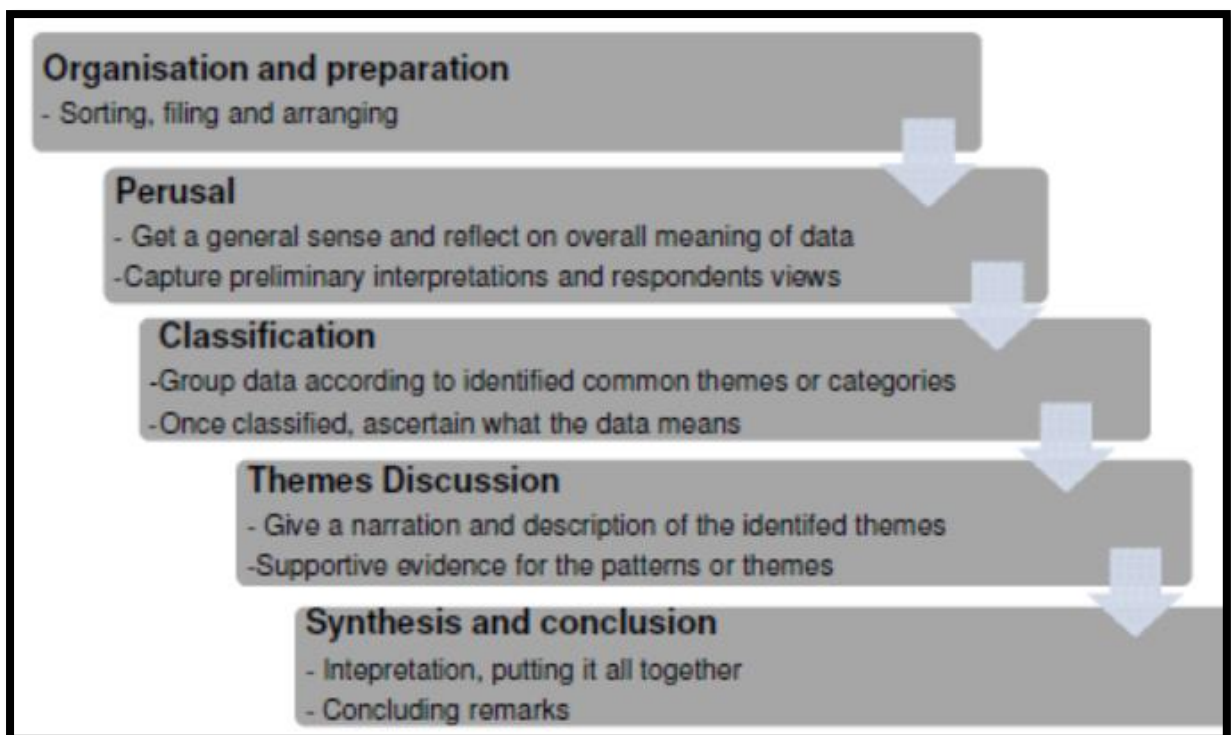


Figure 3: Stepwise representation of the data analysis spiral (Creswell, 2003)

All non-verbal behaviours were noted. Due to resource constraints, interviews were not recorded as per the original plan. Data collected from the interviews were transcribed by one person and reviewed by another person who was present at all interviews to ensure that there was no bias in the transcription and that all key themes were well identified to cover all present patterns and trends. Findings are articulated in Chapter 4.

3.7 LIMITATIONS OF THE STUDY

No matter how well thought a methodology is, all methods have their limitations. Some of the limitations of a qualitative research methodology applicable to the study are (Leedy & Ormrod, 2010):

- a) It does not provide cause-and-effect relationship identification; hence, it cannot be used for root cause analysis.
- b) The semi-structures nature of the interview might gather information that hinder making comparisons. In the study, it was likely that DFI specialists will hold a different perception to holders of prospecting rights.
- c) The size of the sample could be viewed as small and hence, can make it difficult to generalise the study to the whole industry.
- d) The researcher's knowledge, biases or preconceived ideas influences the interpretation of the data. The researcher is an industry specialist.

3.8 MEASURES OF TRUSTWORTHINESS

3.8.1 Credibility

Credibility refers to internal validity and is the most important instrument of establishing trustworthiness. It requires a truthful reflection of reality (Yilmaz, 2013). In this study, credibility has been ensured by:

- I. using an interview guide during the semi-structured interviews;
- II. having a thorough understanding of the respective institutions and interviewees;

- III. using different data collection methods such as observations and interviews to ensure triangulation;
- IV. interviewing only those interviewees that were interested and willing to participate; and
- V. applying content analysis in analysing the data.

Research is deemed credible when it recognises the opinions of those considered less powerful (Yilmaz, 2013). A value proposition was communicated early in the process for participants to fully understand the purpose of the study and that their role in the study would be important. The non-random selection method used might hinder the ability to generalise beyond the environmental context of the current study. Most junior mining companies, especially those seeking capital, however, have similar strategies; hence, there could be wide areas of commonalities even outside the mining industry itself.

3.8.2 Dependability

Dependability is an instrument that ensures that the same outcome is achieved when the study is repeated. A qualitative study is a bit more challenging because the phenomenon being studied can change and hence, the design, collect and content analysis methods will also change (Yilmaz 2013). Interviews from different sectors concerned with the same phenomenon confirmed dependability.

3.8.3 Triangulation

Triangulation is cross-checking multiple data sources and collection methods to evaluate the extent to which all evidence converges (Carugi, 2016). A clear link exists between data collected and literature reviewed. Triangulation limits limitations and biases and allows a broader perspective of the issues investigated (Willis, 2007). It is when different methods lead to the same results. If different results are obtained, then the researcher would have to reframe questions or have the whole method reconsidered.

3.8.4 Confirmability

Anney (2014) defined the concept as the alignment between findings and perspectives of the interviewees and not those of the researcher. It is synonymous to “objectivity” in quantitative study.

3.9 ETHICAL CONSIDERATIONS

Ethics refer to norms of behaviour that inform moral conduct (Codwell & Herbst, 2004). The purpose of ethics is to ensure that no participants are harmed or negatively affected. To ensure employing the highest level of ethics, ethical procedures were followed to inform and consent the study. Unethical behaviour would refer to things such as non-disclosure of material issue, violating the non-disclosure agreement, misrepresenting the report, and avoiding legal liabilities (Cooper & Schindler, 2008).

Participants should not suffer physical harm, pain, discomfort loss of privacy or embarrassment because of the research. Hence, participants need to understand their rights, protection and obtain informed consent (Cooper & Schindler, 2008). All participants gave a verbal consent to the interview and were made aware that they did not have to answer any question that made them uncomfortable.

3.10 SUMMARY

Chapter 3 explained and justified the research design. Qualitative research paradigm was employed and discussed. Elaborations were made on purposive sampling and the exploratory and descriptive phases of the research. The chapter also covered ethical considerations, research design and the profiles of participants. Interviews were field noted and transcribed. Data analysis using content analysis while maintaining trustworthiness was elaborated on. Methodology is appropriate for the nature of study. The following chapter is on data analysis. It employs the methodology discussed in the current chapter.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS

DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

This chapter covers the data analysis and results of the study. Trends and patterns collected through field research are presented. This study's main question and secondary questions were:

- a) Why do black junior miners holding prospecting rights hardly ever advance from this stage to the mining licence stage and subsequently to production?

The three secondary questions are:

- I. Is there a considerable number of black-owned junior mining companies that are or have gone into production?
- II. How much funds have previously been allocated by Development Financial Institutions (DFI) and Commercial institutions in South Africa to help black prospecting rights holders to prospect/develop their areas of interest further from the first descend of a Mining charter back in 2002?
- III. Of all the prospecting funded projects by DFIs and Commercial banks, how many were black-owned and how many were white-owned?

Each interview was transcribed by two individuals and because over 80% of the participants wanted to be anonymous, every participant was given a pseudo name. Body language was closely observed and noted. Where possible, interview information was correlated with the literature review and helped identify themes and trends. The content analysis approach that was used was informed by Hsieh's (2005) methodology. The key themes were extracted and defined.

The first part of the chapter looks at the industry position and depth of experience per respondent. The deviation between planned and actual sample is explained in detail as well. Moreover, a presentation of the results relating to the key research questions is condensed according to the four groups of respondents and presented in the following manner:

- a) Responses are bulleted in line with the key themes;
- b) Conclusion remarks regarding all questions are given per question number, based on responses above;
- c) Identification of factors not covered in the literature but mentioned by the respondents; and
- d) Presentation of the summation of the results.

4.2 DATA PRESENTATION AND ANALYSIS

Pseudo names have been used to conceal the real names of the respondents. First, responses are captured per question. The presentation of the data analysis in the study is done first per group or institution and then per question. Respondents are as follows:

Finance Participants:

- 2 respondents from a commercial
- 3 respondents from a DFI

Industry participants:

- 3 relevant department respondents
- 4 previous and current black prospecting rights

When asked the questions, this is how the respondents answered:

Commercial Banks and DFIs

Question1 & 2: How long have you been in the finance industry?

Commercial Banks Respondents

Sector	Years of Experience	Qualifications
Natural Resources Investments	5 Years	BSc in Finance Currently MA Philosophy
Natural Resources Investments (Female)	13 Years	CA (SA) MBA

DFI Respondents

Position	Years of Experience	Qualifications
Small Scale Mining Fund Manager (Female)	16 Years	BEng. Mechanical engineering
Senior Development Grants Manager	22 Years	Honours in Applied Mathematics Post Graduate Diploma in Actuarial Science
Industry champion (male)	33 Years	BSc Geology CFA

Question 3: Do you have a specific budget allocated for funding of early stage projects?

Commercial Bank Respondent 1: *No pre-bankable funding*

Commercial Bank Respondent 2: *No Feasibility funding*

DFI Respondent 1: *The DFI is mandated to do transformational deals*

DFI Respondent 2: *Yes*

DFI Respondent 3: *R50 million*

Funding Institutions' Budget:

The theme that arose was that in South Africa, a commercial bank would not consider investing in an exploration because it does not realise return immediately and it is high risk. Although DFIs would consider funding, they also have limited funding for such exploration.

Question 4: Is the budget further partitioned into white-owned and black-owned?

Commercial Bank Respondent 1: *Are there transformational targets: NO. There is a preference shares team and focus on BEE HOLDCO companies.*

Commercial Bank Respondent 2: *Are there transformational targets: NO. We invest in earnings hence it is not important whether a person is black or white*

DFI Respondent 1: *The DFI is mandated to do transformational deals*

DFI Respondent 2: *Yes, to support black participation only, regardless of stake.*

DFI Respondent 3: *It is only for black owned (51% black owned)*

Budget:

The only theme that arose was that DFIs are mandated to fund transformation; hence, previously disadvantaged individuals are high on their list. The only time they will fund exploration in South Africa is if there is significant black shareholding.

Question 5: What re the criteria of funding early stage project (eg score card)?

Commercial Bank Respondent 1: *What are criteria of funding projects: BFS, strong management team, type of commodity (opaque minerals: diamond/ minerals sands- would want a market report from a reputable consulting company), strong sponsor (technical expertise and deep pockets).*

Commercial Bank Respondent 2: *We mainly focus on profitability ratios and how achievable they are. We would however not do an exploration deal.*

DFI Respondent 1: *We mainly focus on future achievable profitability ratios*

DFI Respondent 2: *Potential resource indication. Black owned (at least 51%). Exploration license (have done all requirements of DMR, rehabilitation, etc)*

DFI Respondent 3: *You want to know that they have a geological model and identified targets based on the geological model.*

Funding Criteria:

For DFIs that fund exploration, their main criterion is made up of one component: identified geological target (could be a few holes).

Question 6: How are early stage projects funded (preferred instruments)?

Commercial Bank Respondent 1: *What are criteria of funding projects: BFS, strong management team, type of commodity (opaque minerals: diamond/ minerals sands- would want a market report from a reputable consulting company), strong sponsor (technical expertise and deep pockets).*

Commercial Bank Respondent 2: *NA*

DFI Respondent 1: *Through Equity*

DFI Respondent 2: *More equity because it is a risk intervention.*

DFI Respondent 3: *Equity. Participate in the risk.*

Funding approach:

Due to the high-risk nature of these transactions, equity is more appropriate.

Question 7: How are these priced?

Commercial Bank Respondent 1: *They have a system that uses cost of capital, probability of default rating, investment rate- done by credit department (also have internal hurdle rate-...)*

Commercial Bank Respondent 2: *These would typically not even be debt but equity.*

DFI Respondent 1: *IRR based*

DFI Respondent 2: *None*

DFI Respondent 3: *You can't price it at that stage. You are evaluating a possibility.*

Funding approach:

These cannot be priced yet because they cannot yield revenues yet. Once operational, however, IRR would be more appropriate.

Question 8: Of all your early stage funded project, how many were black-owned and by what percentage?

Commercial Bank Respondent 1: *NA*

Commercial Bank Respondent 2: *Race is no criteria when funding. However, of most of the natural resources deals we do, less than 5% are of black people.*

DFI Respondent 1: *I would guess 51% black ownership, as per required by the mining charter.*

DFI Respondent 2: *None so far. But we insist on 51% black ownership.*

DFI Respondent 3: *35% black and the rest white.*

Black ownership:

The main finding here is that it is unclear because the department does not keep a database. Moreover, most blacks hardly ever afford the application fees falling below LSM 5.

Question 9: Is there a difference in the quality of application by black-owned entities and white-owned early stage entities? (reflects level of experience)

Commercial Bank Respondent 1: *NA*

Commercial Bank Respondent 2: *I have never paid attention. It would also be an unfair comparison; every deal is unique.*

DFI Respondent 1: *I have never made the observation.*

DFI Respondent 2: *Whites because some have the means they turn to have done a bit more investigation.*

DFI Respondent 3: *Most white companies are generally geologists who are putting in the application. From black entities, there is no technical or geologist involved in the application.*

Quality of application:

The finding was that due to a better financial position of most white applicants, they can afford to hire qualified consultants to help with the packaging. Hence, white applicants usually produce better quality.

Question 10: What are the typical commercial clauses incorporated into your agreement for exploration funding?

Commercial Bank Respondent 1: *NA*

Commercial Bank Respondent 2: *NA*

DFI Respondent 1: *If there is requirement for more funding, all parties to contribute proportional to shares. If there is early stage success, the DFI should be able to convert their contribution into equity in the operating entity. But DFI should make sure that the BEE has the majority stake in the business.*

DFI Respondent 2: *I hardly ever participate in the legal agreements phase. If I were to assume, I would say no change of shareholders until the development is complete. If there is early stage success, the DFI should be able to convert their contribution into equity in the operating entity. But DFI should make sure that the BEE has the majority stake in the business.*

DFI Respondent 3: *Rights of access to information, rights to follow-on if they raising more money, tag along and come along rights (eg if the sell out to someone and you don't want to be associated with that person, they buy you out at the same rate), right to appoint directors, drag-along right.*

Terms of agreement (commercial clauses) of funding:

The main finding is that the typical terms of agreement are geared towards protecting the funder as a shareholder and rein-fencing the facility.

Question 11: Which regions have gotten it right (Junior mining funding)?

Commercial Bank Respondent 1: *NA*

Commercial Bank Respondent 2: *One would require funds with an appetite for equity for long term projects. Project Finance firms.*

DFI Respondent 1: *Canada. It is easy to raise funding through stock exchange. They do not need to be a listed company.*

DFI Respondent 2: *Canada. It is easy to raise funding through stock exchange. They do not need to be a listed company.*

DFI Respondent 3: *Canada, Australia and London applicants raise money on the stock exchange. This type of fund raising is not happening in South Africa because of the nature of our big mine culture, structure of mining houses; exploration was a cost centre in our big mining companies and investors were never exposed to that risk. With introduction of New South Africa, we had no experienced investors in such funding only big retail institutional funders. In Canada and Australia there is a large chunk of pensioners who invest in risky funds.*

Regions that successfully raise funds for exploration projects:

It has been found that these regions have extensive experience in raising funds for early stage projects. In over 20 years, one of the most successful ways of doing it was through the stock exchange and venture capitalism. South Africans do not have this experience; hence, they always resort to the traditional methods of gaining funds such as banks. The rigid structure of South Africa's mining houses allowed for reinvestment by mines into exploration. This structure does not accommodate junior miners.

Prospecting Rights Holders' Profiles

Question 1&2: Profiles?

Position	Years of Experience	Qualifications
CA SA (Black Male)	11 Years	CA (SA)
Geologist (White male)	28 Years	Honours in Engineering Geology
Entrepreneur (Black Male)	35 Years	B. Education
Communication Specialists (Black female)	14 Years	BCom General

Question 3: How long did/have you held the right for, and have you started working on exploration?

Prospecting Right Holder 1: *7-Months. No but are in talks with relevant people to help with the funding*

Prospecting Right Holder 2: *1.9-Year. Yes, we started late though, about 8 months ago.*

Prospecting Right Holder 3: *3.5-Years. No. We have gone to all DFIs and haven't been as lucky.*

Prospecting Right Holder 4: *4.0-Years. Yes, we started two months ago with the development work. An exploration company has decided to do the work for us because Eskom is keen to give us as a black women consortium a chance. Moreover, our farm is surrounded by mines that produce good quality coal.*

How long and what it takes to get funding:

The key finding here is that there is no knowing. Your type of background and qualification, however, can help get things started, such as a geologist who hired a core drilling machine and is doing the work by himself. The second finding is that your network could help, a non-committal letter of support from someone key at Eskom has helped a women consortium get support from a service provider company.

Question 4: How long did it take you to get a prospecting right?

Prospecting Right Holder 1: *Over 2 years*

Prospecting Right Holder 2: *Over 2 years*

Prospecting Right Holder 3: *Over 2 years*

Prospecting Right Holder 4: *About 3 years*

Application of prospecting:

The first finding is that it takes time because of the backlog of applications at the department. The second finding is that people do not submit adequate information aggravated by poor communication from the department.

Question 5: What is required to get a mining license?

Prospecting Right Holder 1: *EHS, Social labour plan (includes community buy-in), Geological report, Financial guarantee for rehabilitation.*

Prospecting Right Holder 2: *Contacts within the department or your application will not move.*

Prospecting Right Holder 3: *Social labour plan, Geological report*

Prospecting Right Holder 4: *A good network within the department is first price.*

Application:

Another finding pertaining to applications is the fact that most applicants feel they need to know someone senior at the department to get it receiving attention.

Question 6: What and how much is required to get your prospecting right into a production ready mine?

Prospecting Right Holder 1: *It depends on commodity-type. This project requires about R50 million because the ore body is wide and deep.*

Prospecting Right Holder 2: *It depends to the size of the project, rock type and standards required to achieve (eg in Coal you need a 2.5m by 2,5m spacing). For my project I need R27 million.*

Prospecting Right Holder 3: *Over R10 million on a good project*

Prospecting Right Holder 4: *Though we are not paying yet, the drilling quote alone is about R4.1 million*

Funding amount:

According to the various interviews, the researcher found that the funding amount required to advance an early stage project is not fixed. The funder would have to work with their required return once the project goes into production.

Question 7: What are the main challenges encountered by prospecting rights holders?

Prospecting Right Holder 1: *No feedback from DMR. Officials are hardly ever available.*

Prospecting Right Holder 2: *The public database on prospecting fields is not regularly updated hence there is a lot of fraud and lack of transparency*

Prospecting Right Holder 3: *Official at the department tend to expect bribery for them to fast track the application. If you do not know anyone it becomes challenging.*

Prospecting Right Holder 4: *They have a backlog of applications and hence it takes long for them to process applications.*

Application process challenges

The first finding is that the process is not transparent enough, and the second is that there is no proper communication from the department once you have lodged your application.

Question 8: Does the relevant minerals department do something to help develop these early stage projects?

Prospecting Right Holder 1: *No*

Prospecting Right Holder 2: *They recently advertised a junior miners fund which is not even active yet. We applied over a year ago.*

Prospecting Right Holder 3: *No*

Prospecting Right Holder 4: *No. It is not within the department's mandate. I know they have/had something on small scale mining, but the fund was managed by a financial institution.*

Funding support from the relevant department:

The department's responsibility is only confined to administering applications and not funding.

Question 9: Do you feel the government and private sector are supportive enough to prospecting rights holders?

Prospecting Right Holder 1: *There is no effort to collaborate in order to make it easier*

Prospecting Right Holder 2: *Yes. You just need to know their different roles and submit all that is required from you.*

Prospecting Right Holder 3: *Not enough.*

Prospecting Right Holder 4: *Fairly so, but the applicant needs to drive the collaboration.*

Correspondence between public and private sector:

The only finding is that there has always been attempts to collaborate but not much has materialised in a form of supporting applicants.

Question 1: What is your experience in the administration of granting prospecting rights/mining permits/junior mining facilitation?

Question 1&2: Profiles

Position	Years of Experience	Qualifications
Economists (Black Female)	11 Years	BSC Honours in Geology Masters in Economics
Senior Economist (Black male)	17 Years	BCom (General) Post graduate diploma in Business
Economist (Black Female)	8 Years	BCom (Economics)

Question 2: How often do black held prospecting rights manage to raise funding for exploration or early stage development?

Relevant Government Department Respondent 1: *Rarely, but it does happen.*

Relevant Government Department Respondent 2: *Because the charter has no influence on the shareholding of the prospecting right, there are very few blacks who ultimately get granted prospecting licences. It is usually your middle class and upper black people that can afford resources to put together an application of this sort. Statistically though the middle class is starting to grow in South Africa, it is still a limited number. The few that have find it challenging to obtain funding because they don't have resources to put together required applications (eg Detailed financial model, farm drilled to a satisfying or measured resource, etc).*

Relevant Government Department Respondent 3: *Based on the applications that we managed to source for a prospective junior mining projects, I would say not many are black. Of that total, most of them come back to us and ask how can they raise funds and consistently complain about DFIs we try to link them up with.*

Fund raising:

The theme, according to most government officials, is that most applicants fail to develop their prospecting farms, which is similar to what the prospecting rights holders said.

Question 3: Of all the prospecting rights holders, would you say majority are black or whites?

Relevant Government Department Respondent 1: *No*

Relevant Government Department Respondent 2: *No. Unless the mining charter starts including black shareholding as a requirement, this will remain.*

Relevant Government Department Respondent 3: *No*

Black representation:

The finding is that there is still little black representation in the mineral economics space.

Question 4: What happens when a holder of the prospecting right cannot develop it further?

Relevant Government Department Respondent 1: *It expires.*

Relevant Government Department Respondent 2: *Someone else gets an opportunity to try make it work.*

Relevant Government Department Respondent 3: *They either re-apply, consolidate or give up.*

Inevitable outcome of applicants who fail to develop their prospecting farms:

Most black-held prospecting rights are never developed further.

4.3 OVERALL FINDINGS

South Africa's black junior miners are considered focal to the growth in the mining industry, which contributes over 20% towards the GDP. Themes attributable to some of their challenges are:

- Funding Institutions' Budget

The theme that arose is that in South Africa, a commercial bank would not consider investing in an exploration because it does not realise return immediately and it is a considerable risk. Though DFIs would consider funding, they also have limited funding for such exploration. DFIs are mandated to fund transformation; hence, previously disadvantaged individuals are high on their list. The only time they will fund exploration in South Africa is when there is significant black shareholding.

- Funding Criteria

For DFIs that fund exploration, their main criteria is made up of a few components: Identified geological target (could be a few holes) and a significant black ownership.

- Funding approach:

These cannot be priced yet because they cannot yield revenues yet; however, once operational, IRR would be more appropriate.

Ideally, a project finance approach to funding would be more appropriate. Some of the technical qualities of it are that it focuses on long-term projects, some of which do not turn profits in the first five to ten years (Molefe, 2017). In addition, it is not capital structure focused such as corporate finance and it allows for more risk to be taken. An SPV is usually set up as a risk mitigant for the execution of security. Corporate finance requires collateral that these junior miners cannot afford to give (Ross et al., 2009).

- Quality of application Funding

The finding was that due to a better financial position of most white applicants, they can afford to hire qualified consultants to help with the packaging; hence, white applicants usually produce better quality. Mothomogolo (2012) is of the view that there is a lack of technical and business knowledge contained within the community of the historically disadvantaged South Africans (HDSA) who have recently gained increasing participation rights in the mineral economy.

- How long and what it takes to get funding

The key finding here is that there is no knowing. Your type of background and qualification, however, can help get things started, like a Geologist who hired a core drilling machine and is doing the work by himself. The second finding is that your network may help, a non-committal letter of support from someone key at Eskom has helped a women consortium get support from a service provider company.

- Terms of agreement (commercial clauses) of funding

The main finding is that the typical terms of agreement are geared towards protecting the funder as a shareholder and rein-fencing the facility.

- Funding support from the relevant department

The department's responsibility is only confined to administering applications and not funding.

- Application of prospecting

The first finding is that it takes time because of the backlog of applications at the department. The second finding is that people do not submit adequate information, aggravated by poor communication from the department. Another finding pertaining to applications is the fact that most applicants feel they need to know someone senior at the department to get it receiving attention. The process is not transparent enough and there is no proper communication from the department once you have lodged your application.

- Level of blacks owning prospecting rights

The main finding here is that it is not clear because the department does not keep a database. Moreover, most blacks hardly ever afford the application fees falling below LSM 5. The finding is that there is still little black representation in the mineral economics space. Most black held prospecting rights are never developed further.

- Level of correspondence between public and private sector

The only finding is that there has always been attempts to collaborate but not much has materialised in supporting applicants.

- Regions that successfully raised funds for exploration projects

It has been found that these regions have extensive experience in raising funds for early stage projects. In over 20 years, one of the most successful ways of doing it was through the stock exchange and venture capitalism. South Africans do not have this experience; hence, they always resort to the traditional methods of gaining funds such as banks. The rigid structure of our mining houses allowed for the reinvestment by mines into exploration. This structure does not accommodate junior miners.

4.3.1 Positive Findings

Most of the respondents realise the need to collaborate private and public initiatives that support the growth of black junior miners in the industry.

Some of the positive findings found are:

- I. although not overflowing, there exists a budget for junior miners' projects in South Africa;
- II. the relevant government department is undergoing advisory on how to help junior miners;
- III. black people own non-productive assets that can be turned into earning projects; and
- IV. the mining policy advocates for ownership of mineral resource assets by black

4.4 SUMMARY

Inefficient application process, inadequate quality applications, little to no government support to help execute their transformation agenda within mineral economics, limited funding allocated towards development of early stage mineral resources projects. The nation's deficiency in experienced early stage funders and funding mechanics has further set South Africa aback when it comes to advancing early stage mineral projects.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This study explored various challenges experienced by black junior miners in their attempt to advance their early stage or exploration projects. Factors affecting the advancement of exploration projects were discussed in Chapter 1, 2 and 4. Data were collected and analysed. Furthermore, literature was surveyed to answer the research questions. Below is a summary of the key findings of the study.

5.2 SUMMARY OF FINDINGS LINKED TO OBJECTIVES

Primary Objective: To investigate why black junior miners holding prospecting rights hardly ever advance from this stage to the mining licence stage and subsequently, to production. Moreover, to describe how finances influence this, if it does.

The secondary objectives to achieve the primary objective are:

Objective 1

To assess the level of black-owned prospecting rights that expire before any development takes place

It is difficult to be accurate because the relevant department does not keep a database, at least according to employees. Mothomogolo (2012) among other researchers, however, has reported that most black applicants struggle to raise funding to advance projects and to pay a rehabilitation fee. The respondents from the relevant government departments reported that most of these even expire prior to fully paying the rehabilitation fee, and it is only a few that make it to full-prospecting right stage. Even these ones expire because they never get to comply with mining license requirements.

Objective 2

To establish how much is allocated towards mineral-prospecting by commercial and development financial institutions

Due to an evident lack of experience in funding early stage mineral resource projects found in South Africa, most venture capitalists, stock markets locally do not play in this space. There was a dispensation where commercial banks started looking at funding such projects but since the economic crisis, most commercial banks closed this wing of funding. The responsibility now lies with DFIs, predominantly because they affect financiers, focus on matrix elements such as mass-jobs and slightly less on risk especially, political, and economic risk. Having investigated the proportion of funds allocated towards such funding, however, it has been found that minimal or even an insignificant amount gets allocated towards early stage mineral resource projects funding. In the last two years, about four (4) projects in total have been funded by the DFI in question, amidst the hundreds that exists. This has been due to the quality of application, inability to raise further funds because the DFI does not 100% fund and ease of access to the minerals, which is a huge cost factor when considering funding.

Objective 3

To investigate how many of the prospecting projects that have been funded by either DFIs or Commercial banks were/are black-owned and white-owned

Though there is no definite answer, the study has found a qualitative measure that satisfies the question. According to DFIs, mostly white-owned assets are funded. Phillips (2004) said that the quality of applications by PDIs was of inadequate quality and incomprehensible. This notion was later supported by Mothomogolo (2012) about ten years later, arguing that blacks lack technical and financial skills. Moreover, they lack the financial muscle that can afford them consultants who can help.

Due to a better financial position of most white applicants, they can afford to hire qualified consultants to help with the packaging; hence, white applicants usually produce better quality. Mothomogolo (2012) is of the view that there is a lack of technical and business knowledge contained within the community of the historically disadvantaged South Africans (HDSA) who have recently gained increasing participation rights in mineral economy.

The key finding here is that there is no knowing. Your type of background and qualification, however, can help get things started, like a Geologist who hired a core drilling machine and is doing the work by himself. The second finding is that your network could help. A non-committal letter of support from someone key at Eskom has helped a women consortium get support from a service provider company

5.3 RECOMMENDATIONS

Recommendation: Government support

Government through entities such as the DTI should establish a grant system that supports the growth and sustainability of mining as a key contributor to the economy. Moreover, the department that handles applications should establish an incubation hub that helps package applications to the quality required, but only for applicants who cannot afford consultants to help with the application.

Recommendation: Application support

There should be consideration of PDIs regarding their financial position, which is not equivalent to the financial position of most white people, as some costs that need to be paid such as the rehabilitation commitment should only be required from them once they have developed the asset and made it production ready.

Recommendations: Raising Funds

South African projects that make it also go to Australia, Canada to raise funds. It is usually people that know the project in-depth and understand both the technical and the costing aspects of transactions that are sent to present them. It is unfortunate that most PDIs do not have the technical knowledge of how to present their projects to a funding team. Hence, government and private sector specialists should form a raising funds' panel that packages and raises funds for South African projects, especially for PDIs.

An alternative way of raising funds locally can be through the consolidation of assets where a large mining company, private or otherwise, funds on a Return on Investment (ROI) a junior company that complements its own mineral products mix. For instance, a South 32 Coal mining giant funding black junior miners in the coal space. South 32 already has market entry and dominance; their assets undersupply their demand and such consolidations can help cater for the demand. Annexure 1 shows at high level a practical consolidation plan that can be followed through a private-public-partnership initiative. All the recommendations above touch on aspects of a private-public-partnerships or partnerships that need to take place before we can start seeing any strides.

5.4 SUGGESTIONS FOR FURTHER RESEARCH

There is not much research work about black junior miners. Some related areas of interest to further study the problem and to carve better strategies are:

- I. Consolidation studies: Partnerships between private entities (e.g. Junior and major mining company), private-public (mining house and government through concessions, etc.)
- II. Raising funds for exploration in the stock exchange: How the model could ever work in South Africa

5.5 LIMITATIONS

The twelve respondents came from sparse companies but related to mining or early stage mining projects. The views might not necessarily be like everyone else's view.

5.6 CONCLUSION

The findings from this study showed that black junior miners experience adverse challenges when it comes to accessing tools that can help advance their projects. Though some influencing factors have been identified such as no experienced funders for early stage projects, lack of budget, and minimal government support, South Africa is making slow progress in this regard. Recommendations have been given to address the lack of advancement of projects by black junior miners.

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ANNEXURE 1: CONSOLIDATION APPROACH

THE FUTURE OF MINING IN SOUTH AFRICA

CONSOLIDATION OF JUNIOR MINERS

1. PURPOSE

The purpose of the document is to outline the implementation plan for the consolidation of Junior miners in South Africa and to set up a framework for monitoring the set strategies of the Future Mining of South Africa as established at the Intergenerational Mining dinner that was held on the 19th of September 2019 in Sandton.

2. CONSOLIDATION OF JUNIOR MINERS

2.1. Junior Miners

- Junior miners are small companies in the process of developing natural resources; at various stages of development. Moreover, they are usually seeking finance to further develop their projects and to get them into implementation. Most of the assets held are considered small in terms of life of the resource and its potential revenues.
- Challenges experienced by Junior miners are difficulties accessing finance, getting product to market due to required size of product not achieved and logistical or rail limitations.

2.2. Consolidation of Junior Miners

- Consolidation: Consolidation of junior miners refers to the merging of natural resource assets under one umbrella company, could be a special purpose vehicle (SPV). It leads to increased asset value and diluted shareholding.
- Mineral Rights are issued based on farm boundaries and not on geological models. Consolidation leads to combining different mineral rights over one coherent ore body providing efficiency and appropriate extraction of the resource.

- Benefits: Some of the key benefits of the model are that it brings down costs and helps improve the margin. Increases asset base (Better the balance sheet position) and this can help in accessing funding to further develop projects.

2.3. Emerging trends that inform Consolidation

- Balance sheet strength: A balance sheet gives a company power to boost future growth. When one project does not generate sufficient investment opportunities, it can be boosted by the other
- Rising cost pressures: Rising costs are because of skills-shortages, deeper resources, resource nationalism, increase in energy prices. These adversely affect margins. Increased economies of scale through consolidations can help improve margins.
- Liquidity squeeze on junior: Juniors do not have a balance sheet to trade to acquire funding, a consolidation can help improve balance sheet position and better chances of acquiring funding.
- Volatility of equity markets: Difficult for juniors to raise equity hence strategic alliances such as consolidations may help grow/ develop projects.

3. IMPLEMENTATION PLAN

- The Department of Mineral Resources (DMR) and IDC
 - The IDC to get access into the database of DMR to identify small prospecting rights held by Juniors. Pair adjacent or complimentary prospecting rights for consolidation or merger potential.
 - Approach Juniors individually and sensitize them on the process of consolidation to establish some form of a buy-in. Use this interaction to highlight sustainable shareholder benefits (eg. Return) and long-term economic benefits as well.
 - Eligibility criteria to be followed

Table 3: Eligibility criteria

Item	Detail
Applicants to be considered	Prospecting rights with a minimum 30% black shareholding (Mining charter informed).
Stage of exploration	At or having advanced the following stages: Target and Inferred resource classification
Preference and prioritization will be afforded in terms of	Commodity type and depth of deposit

- Draft a consolidation term sheet detailing the fundamental commercial terms (eg. Jointly controlled entities) under which the consolidation will be entered.

4. RECOMMENDATIONS

- Committee

Future Mining Committee (FMC)

A 'Future Mining' Committee (FMC) will be established. The committee will be multigenerational body with a diverse set of skills that can unlock the potential of the South African mining industry. FMC will be required to expand the strategy of the South African mining industry and collate an execution plan. The committee will also be responsible for monitoring progress of the mining strategy.

APPENDIX "A"

NOTES ON EXPLORATION AND FUNDING

EXPLORATION

ADDITIONAL INFORMATION ON CLASSIFICATION OF MINERAL RESOURCES

Reconnaissance Resource (Target)

Evidence of Mineralization and extrapolation of data to define an area that “could” contain continuous mineralization— (could be used during target generation phase)

Inferred Resource

Drilling has confirmed mineralization over an interval and a grade, Geological model is used to infer the size of the potential ore body. This would be used after exploration to justify doing a Pre-Feasibility study. The IDC may (careful due diligence) participate and equity fund against inferred resources.

Indicated Resource

Drilling has confirmed configuration of some potential ore body, internal continuity and detail needs more work, insufficient detail to be sure of continuity of the orebody on a micro scale.

Measured Resource

Tonnage can be confirmed; grade is confirmed to reasonable levels of confidence to be able to develop a mine plan and raise debt funding to build the mine

ANNEXURE 2-QUESTIONNAIRE SAMPLE

DFI and Commercial bank: Funding criteria:

Question 1: How long have you been in the finance industry?

Question 2: What is your highest qualification?

Question 3: Do you have a specific budget allocated for early stage projects?

Question 4: Is the budget further partitioned into white owned and black owned?

Question 5: What are the criteria of funding early stage project (eg score card)?

Question 6: How are early stage project funded (preferred instruments)?

Question 7: How are these priced?

Question 8: Of all your early stage funded project, how many were black owned and by what percentage?

Question 9: Is there a difference in the quality of application by black owned entities and white owned early stage entities? (reflects lack of experience)

Question 10: What are the typical commercial clauses incorporated into the model?

Relevant Government Department

Question 1: What is your experience in the administration of granting prospecting rights and mining permits/ licenses?

Question 2: How often do black held prospecting rights manage to raise funding for exploration or early stage development?

Question 3: How often are prospecting licenses renewed prior to adhering to the requirements of a mining license issue?

Question 4: Of all the prospecting rights holders, would you say majority are black or whites?

Question 5: What happens when a holder of the prospecting right cannot develop it further?

Prospecting Right holder

Question 1: What is your qualification?

Question 2: What is your professional background and for how long?

Question 3: How long did/ have you held the right for?

Question 4: How long did it take you to get a prospecting right?

Question 5: What is required to get a mining license?

Question 6: What and How much is required to get your prospecting right into production?

Question 7: What are the main challenges encountered by prospecting rights holders?

Question 8: Does the DMR do something to help develop these early stage projects?

Question 9: How much is it to develop and early stage?

Question 10: Do you feel the government and private sector are supportive enough to prospecting rights holders?

ANNEXURE 3: PROFILES OF THE RESPONDENTS

Institution	Gender & Race	Pseudo Name
DFI	Male & white	DFI Respondent 1
DFI	Male and black	DFI Respondent 2
DFI	Female & black	DFI Respondent 3
DFI	Male & coloured	DFI Respondent 4
Commercial Bank	Male & black	Commercial Bank Respondent 1
Commercial Bank	Female & white	Commercial Bank Respondent 1
Government Department	Female & black	Government Department Respondent 1
Government Department	Female & black	Government Department Respondent 2
Junior Miner	Male & Black	Prospecting Right Holder Respondent 1
Junior Miner	Male & White	Prospecting Right Holder Respondent 2
Junior Miner	Male & Black	Prospecting Right Holder Respondent 3
Junior Miner	Female & black	Prospecting Right Holder Respondent 4

Most successful empowerment deals are those where PDIs are acquiring a stake in existing white owned mineral assets.

ANNEXURE 4: ETHICAL FORM



COMMERCE FACULTY ETHICS IN RESEARCH APPLICATION FORM

Any person planning to undertake research in the Faculty of Commerce at the University of Cape Town is required to obtain ethical clearance. This form is intended for undergraduate students, honours students, PD Dip students and Masters students whose research component is less than 90 credits.

Once this form is completed it should be sent via email to your departmental ethics representative. Your supervisor will be able to provide you with the contact details.

It is assumed that the researcher has read the UCT Code for Research involving Human Subjects (Available at <http://web.uct.ac.za/depts/educate/download/uctcodeforresearchinvolvinghumansubjects.pdf>) in order to be able to answer the questions in this form. Students must include a copy of the completed form with the dissertation/thesis when it is submitted for examination.

1.1.1. 1. PROJECT DETAILS

Project title:

**Principal
Researcher/s:**

**Email
address(es):**

molebogengm@idc.co.za

mtshoma@gmail.com

**Research
Supervisor:**

**Email
address(es):**

hermanb@uj.ac.za

Co-researcher(s):

**Email
address(es):**

NA

Department: MCOM Development Finance

Brief description of the project:

Data collection: (please select)

Interviews Questionnaire Experiment Secondary data Observation

Other (please specify): _____

Have you attached a research proposal OR a literature review with research methodology?
(please select) Yes No

1.1.2. 2. PARTICIPANTS

2.1 Does the research discriminate against participation by individuals, or differentiate between participants, on the grounds of gender, race or ethnic group, age range, religion, income, handicap, illness, or any similar classification?	YES	NO
2.2 Does the research require the participation of socially or physically vulnerable people (children, aged, disabled, etc.) or legally restricted groups?	YES	NO
2.3 Will you be able to secure the informed consent of all participants in the research? (In the case of children, will you be able to obtain the consent of their guardians or parents?)	YES	NO
2.4 Will any confidential data be collected, or will identifiable records of individuals be kept?	YES	NO
2.5 In reporting on this research is there any possibility that you will not be able to keep the identities of the individuals involved anonymous?	YES	NO
2.6 Are there any foreseeable risks of physical, psychological, or social harm to participants that might occur in the course of the research?	YES	NO

2.7 Does the research include making payments or giving gifts to any participants?	YES	<input checked="" type="checkbox"/> NO
--	-----	--

If you have answered **YES to any of these questions**, please describe how you plan to address these issues (append to form):

2.3 I have spoken to the participants and they are willing to sign.

2.6 Allocated budgets by both commercial and the specific DFI may be queried publicly and consequently institutions could suffer reputational damage. However, pseudo name will be used for the organization and respondents. The

Affiliations of participants: (please select)

Company employees Hospital employees General public Military staff Farm workers Students

Other (please specify): Entrepreneurs holding prospecting rights _____

Race / Ethnicity:

Are you asking a question about race/ethnicity in your questionnaire?

Yes No

Which race categories have been used? Black, White

Have you included the option: “Prefer not to answer” as part of your race/ethnicity question?

I have stipulated in advance that if a question makes a respondent uncomfortable, they should not answer it.

1.1.3. 3. Provision of Services

Does your research involve the participation of or provision of services to communities?

If your answer is YES, please complete below:

3.1 Is the community expected to make decisions for, during or based on the research?	YES	NO
3.2 At the end of the research will any economic or social process be terminated or left unsupported, or equipment or facilities used in the research be recovered from the participants or community?	YES	NO
3.3 Will any service be provided at a level below the accepted standards?	YES	NO

If you answered YES to any of these questions, please describe below how you plan to address these issues.

1.1.4. 3. ORGANISATIONAL PERMISSION

If your research is being conducted within a specific organisation, please state how organisational permission has been/will be obtained:

- **I will send a request letter to the Head of the relevant department.**

Have you attached the letter from the organisation granting permission? (please select)

Yes No, but this **will be** obtained before commencing the research Not applicable

Are you making use of **UCT students** as respondents for your research? (please select)

Yes No

If yes, have you contacted Executive Director: Student Affairs for permission? (please select)

Yes No

Was approval granted? (please select)

Yes No Awaiting a response

Are you making use of **UCT staff** as respondents for your research? (please select)

Yes No

If yes, have you contacted Executive Director: Human Resources for permission? (please select). Yes No

Was approval granted? (please select)

Yes No Awaiting a response

Contact Emails: Executive Director: Human Resources (Miriam.Hoosain@uct.ac.za)

Executive Director: Student Affairs (Moonira.Khan@uct.ac.za)

1.1.5. 4. INFORMED CONSENT

What type of consent will be obtained from study participants?

- Oral Consent
- Written Consent
- Anonymous survey questionnaire (covering letter required , no consent forms needed)
- Other (Please Specify)

How and where will consent/permission be recorded?

Have you attached an informed consent form to your application? Yes No

1.1.6. 5. Sponsorship of Research

If your research is sponsored, is there any potential for conflicts of interest?

If your answer is YES, please complete below

4.1 Is there any existing or potential conflict of interest between a research sponsor, academic supervisor, other researchers, or participants?	YES	<input checked="" type="checkbox"/> NO
4.2 Will information that reveals the identity of participants be supplied to a research sponsor, other than with the permission of the individuals?	YES	<input checked="" type="checkbox"/> NO
4.3 Does the proposed research potentially conflict with the research of any other individual or group within the University?	YES	<input checked="" type="checkbox"/> NO

If you have answered **YES** to any of these questions, please describe how you plan to address these issues (append to form)

1.1.7. 6. RISK TO PARTICIPANTS

Does the proposed research pose any physical, psychological, social, legal, economic, or other risks to study participants you can foresee, both immediate and long range? (please select)

Yes No

1. It may pose reputational risk to the financing institutions. Institutions whose mandate covers development of natural resources, if seen to not be doing enough by junior miners and the society at large will be criticised.

3. The identity of these institutions may/will not be revealed

4. These are the only institutions that can give financial assistance to junior miners/ early stage natural resource projects to find their way into positive economic participation. Most other institutions don't have the same risk appetite for the region of Sub Saharan Africa.

I certify that I have read the Commerce Faculty Ethics in Research policy
(<http://www.commerce.uct.ac.za/Pages/ComFac-Downloads>)

I hereby undertake to carry out my research in such a way that

- there is no apparent legal objection to the nature or the method of research;

- the research will not compromise staff or students or the other responsibilities of the University;
- the stated objective will be achieved, and the findings will have a high degree of validity;
- limitations and alternative interpretations will be considered;
- the findings could be subject to peer review and publicly available; and
- I will comply with the conventions of copyright and avoid any practice that would constitute plagiarism.

Signed by:


	Full name and signature	Date
Principal Researcher/Student:	Molebogeng Mazibuko	

This application is approved by:

Supervisor	Dr Herman Boikanyo	
Departmental Ethics Rep		

ANNEXURE 5: Questionnaire checklist on next page

CHECKLIST	SELECT
A full copy of a research proposal or a literature review with methodology is attached in a separate file	<input type="checkbox"/>
Interview schedules / cover letters / questionnaires / forms and other materials used in the study are attached in separate files	<input type="checkbox"/>
Organisational consent letter / UCT student or staff approval letter	<input type="checkbox"/>

<p>On your cover letter to your questionnaire have you included the following?</p>	<p>NA <input type="checkbox"/></p>
<p>1. The following  UCT Logo</p>	<p><input type="checkbox"/></p>
<p>2. A sentence explaining the aim of the research</p>	<p><input type="checkbox"/></p>
<p>3. Sentences of a similar nature to below must be included in the cover letter or consent form:</p>	<p><input type="checkbox"/></p>
<p>This research has been approved by the Commerce Faculty Ethics in Research Committee.</p>	<p><input type="checkbox"/></p>
<p>Your participation in this research is voluntary. You can choose to withdraw from the research at any time.</p>	<p><input type="checkbox"/></p>
<p>The questionnaire will take approximately X minutes to complete</p>	<p><input type="checkbox"/></p>
<p>You will not be requested to supply any identifiable information, ensuring anonymity of your responses.</p>	<p><input type="checkbox"/></p>
<p>Due to the nature of the study you will need to provide the researchers with some form of identifiable information however, all responses will be confidential and used for the purposes of this research only.</p>	<p><input type="checkbox"/></p>
<p>Should you have any questions regarding the research please feel free to contact the researcher (insert contact details).</p>	<p><input type="checkbox"/></p>
<p>4. Have you scanned in your signature for the last section of the form?</p>	<p><input type="checkbox"/></p>