

Mining Regulation and Development in Botswana:
The Case Study of the Debswana Mining Joint Venture

By
Jennifer Wilcox

A Thesis Submitted to
Saint Mary's University, Halifax, Nova Scotia
in Partial Fulfillment of the Requirements for
the Degree of Master of Arts in
International Development Studies.

April, 2015. Halifax, Nova Scotia

Copyright Jennifer Wilcox, 2015

Approved: Dr. Suzanne Dansereau
Supervisor

Approved: Prof. May Hermanus
Reader

Approved: Dr. Chris Brown
External Examiner

Date: April 24, 2015

Mining Regulation and Development in Botswana:
The Case Study of the Debswana Mining Joint Venture

by Jennifer Wilcox

Abstract

The case study of Debswana Diamond Company, a joint venture between the Botswana government and the De Beers Group of Companies, illustrates Botswana's semi-directed model of mining regulation. Under this model, the Botswana government collects substantial mining revenues, which it invests in social spending because of a transparent and accountable governance structure. The government also uses its regulatory role to integrate the mining sector into national development plans. Through document analysis and interviews with government, mining and labour officials, this thesis concludes that to an extent the semi-directed model of mining regulation has mitigated the resource curse and contributed to development in Botswana. The country, however, continues to face significant challenges regarding economic diversification and employment. I conclude that under a semi-directed model of mining regulation, under which the private sector engages in production, the state has an important regulatory role to play integrating the mining sector into national development.

April 24, 2015

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	5
LIST OF ABBREVIATIONS	6
LIST OF FIGURES	6
CHAPTER 1 INTRODUCTION	
Introduction.....	7
The Research Question.....	10
Literature Review.....	11
Mining and Development.....	12
<i>Resource Booms, Government Spending and Price Volatility</i>	15
<i>Dutch Disease and Deindustrialization</i>	17
<i>The Declining Terms of Trade</i>	20
<i>Health and Education Spending</i>	21
<i>Rent Seeking and Institutional Capacity</i>	23
The Role of the State in Mining and Development	
The Market-Directed Model.....	27
<i>Corporate Social Responsibility</i>	31
The State-Directed Model.....	39
<i>State Ownership</i>	40
<i>Developmental States</i>	43
<i>Building Domestic Industry</i>	45
<i>Institutional Capacity and Development</i>	46
<i>The Potential for the Developmental State in Africa</i>	49
<i>A Democratic Developmental State</i>	51
<i>The African Mining Vision</i>	54
<i>Mining Revenues</i>	56
<i>Creating Linkages</i>	57
<i>Corporate Social Responsibility and the State</i>	61
Thesis Statement.....	62
Methodology.....	65
<i>Data Needs and Collection Techniques</i>	66
<i>Limitations to the Scope of the Study</i>	72

CHAPTER 2	BOTSWANA’S MODEL OF MINING REGULATION	
	Introduction.....	74
	Botswana’s Colonial Inheritance.....	78
	Evolution of Botswana’s Semi-Directed Mining Regulatory Framework.....	80
	Debswana: A 50/50 Partnership.....	82
	New Players in the Diamond Sector.....	96
CHAPTER 3	DIAMONDS AND DEVELOPMENT	
	Introduction.....	98
	Social Development.....	100
	Mining Revenues.....	100
	Vision 2016 & Debswana’s Corporate Social Investment Programme.....	107
	<i>Education and Skills Training</i>	108
	<i>Employment in the Mining Sector</i>	114
	<i>Health and HIV/AIDS</i>	118
	<i>Corporate Social Investment and Development</i>	122
	Economic Diversification	
	<i>Beneficiation: Establishing a Cutting and Polishing Industry</i>	125
	<i>Sustainability of the Cutting and Polishing Industry in Botswana</i>	137
CHAPTER 4	CONCLUSIONS	
	Conclusions.....	141
REFERENCES		151
APPENDIX 1: INTERVIEW TABLE		169

Acknowledgements

There are many people to thank for their support and guidance in this work. First, I would like to thank Dr. Suzanne Dansereau for her support throughout this process. Dr. Dansereau was an exceptional Supervisor who dedicated many hours of her time to ensure my success, and I am incredibly grateful for her advice and guidance. Thank you for cultivating my interest in mining and development!

A heartfelt thank you to Professor May Hermanus who was exceptional as Reader. Dr. Chris Brown also provided exceptional support as External Examiner. Thank you both for your contributions to this thesis. I am grateful for your thoughtful questions and guidance.

Field research would not have been possible for this thesis without the generous financial support provided by the Saint Mary University's International Mobility Award, and the Saint Mary's University Students Association's International Development Initiative Fund.

Thank you to Dr. Motsomi Marobela who provided guidance and acted as a partner for my fieldwork in Botswana. I am grateful for all the people in Botswana who assisted me in my research, and their contributions to this thesis. A special thank you to Shathiso and Ditiro Coyne who opened their home to me, and ensured I experienced all Botswana had to offer.

I am thankful for my Langman. I will be eternally grateful that you made sure I was well supplied with tea, and did not starve during the thesis writing process. Thank you for your humour, love and support as we went on this journey together.

A special thank you and love goes to Grandps and Grandms, for the 'Grandma cookies', and our Friday phone calls. Most of all, thank you to my parents David and Lori Wilcox, who taught us kids to work hard and dream big.

List of Abbreviations

AMV	The African Mining Vision; also known as the Vision
ART	Anti-Retroviral Treatment
BDP	Botswana Democratic Party
DTCB	Diamond Trading Company of Botswana
CKGR	Central Kalahari Game Reserve
CSI	Corporate Social Investment
CSO	Central Selling Office
CSR	Corporate Social Responsibility
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNI	Gross National Income
HDI	Human Development Index
ICMM	International Council on Mining and Metals
FAP	Financial Assistance Policy
MASA	‘New Dawn’ in Setswana, the name for the National ART Programme of the Ministry of Health of Botswana
MFDP	Ministry of Finance and Development Planning
MMEWR	Ministry of Minerals, Energy and Water Resources
NDPs	National Development Plans
NHRD	National Human Resources Development Strategy
NICs	Newly Industrialized Countries
ODC	Okavango Diamond Company
OECD	Organization for Economic Cooperation and Development
OPEC	Organization of the Petroleum Exporting Countries
SAPs	Structural Adjustment Programs
SBI	Sustainable Business Index
UNECA	United Nations Economic Commission on Africa
UNCTD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization

List of Figures

Figure 1. GDP by Sector 2004 to 2014.....	76
Figure 2. Total Natural Resource Rents as Percentage of GDP.....	101
Figure 3. Debswana Production Carats 2004 to 2014.....	102
Figure 4. Categories of the Grant-Loan Scheme.....	110

Chapter 1

Introduction

Natural resources are an important source of national wealth for many developing countries in Africa. As such, the mining sector can potentially contribute to development in countries that are rich in natural resources. The mining sector, for example, can allow the government to accrue revenues to invest in social spending such as health and education. The sector can also positively impact development as an employer of the local population, and engine of economic growth and diversification of the national economy.

The contribution of mining to development is controversial, however, as countries whose economies are dominated by natural resources often fail to benefit from their immense natural resource wealth (see for example Auty, 1993). Development indicators in developing countries with abundant natural resource wealth are often dismal. Rather than contributing to development, natural resources often have the opposite effect, as development is impeded by the resource curse.

The resource curse refers to the paradox that countries with abundant natural resources tend to have less economic growth, and worse development outcomes than countries with fewer natural resources (Auty, 1993). Countries that suffer from the resource curse are often characterized by a lack of economic diversification (Sachs and Warner, 2001), and underinvestment in social spending, such as in health care and education (Havro and Santiso, 2011). As a result of the resource curse, natural resource wealth does not automatically translate into development, and there are many examples of countries that despite their immense natural resources have a low human development index (HDI).

Some developing countries with abundant natural resources have made significant development gains, suggesting that poor development outcomes are not an inevitable result of natural resource wealth. Botswana, for example, is exemplified as an African miracle because of its high economic growth rates, and good development indicators. At independence in 1966 Botswana was one of the ten poorest and least developed countries globally. The weak economy depended on cattle exports, remittances from migrant labour in South African mines, and foreign aid. Today the country is hailed as a rare development success story in Sub-Saharan Africa. Development indicators such as literacy rates, access to education, primary health care and clean water are high, and the gross national income (GNI) per capita is USD \$7703 (World Bank, 2014).

Botswana's development is largely attributed to the discovery of substantial diamond deposits just after independence. The diamond sector has been critical to Botswana's economy, constituting a significant portion of its economic growth rates over the decades since independence. Diamond revenues provide a significant source of government revenue, and are invested heavily in social spending.

There are many policy responses to mining's potentially adverse impact on development, and different models of mining regulation are employed by developing countries in an attempt to mitigate the resource curse. These different models of mining regulation assign varying roles to the state in the relationship between mining and development. They dictate the developmental nature of the state, shaping its regulatory framework, institutions, and the state's relationship with the private sector in mitigating the resource curse. The role of the state under these various models defines the

subsequent role of the private sector, and corporate social responsibility (CSR) in mining and development. For example, the state-directed model of mining regulation, which was dominant in the 1960s and 1970s, prescribes the state an active role in the mining sector as an agent of development. The nature of the state under this model is characterized by a developmental state. Since the 1980s, however, market-directed models of mining regulation, espoused by the World Bank, have limited the role of the state in favour of self-regulation and CSR.

The state plays an active role in mining and development in Botswana. The government engages in mining joint ventures with the private sector, and integrates the mining sector into national development plans. Botswana also uses its regulatory role to leverage the country's dominant position in the global diamond pipeline to diversify the economy through the establishment of a diamond cutting and polishing industry.

Botswana's mining regulatory framework is a semi-directed model, under which the state and private sector both have important roles in mining's impact on development. Botswana's semi-directed model of mining regulation is best exemplified in the mining joint venture Debswana. Debswana's operations have a significant impact on Botswana, as it is not only the country's largest mining company, but also the largest supplier of rough diamonds to the De Beers Group of Companies' global operations. The mining company is also the largest private sector employer in Botswana. Due to its economic importance to the national economy, Debswana's operations thus have a significant impact on development in Botswana.

As a 50/50 partnership between the Botswana government and the De Beers Group of Companies, Debswana most clearly illustrates Botswana's semi-directed model of mining regulation. While Debswana, as a private company, is engaged in production, the Botswana government has used its regulatory role to integrate the company's mining activities and corporate social investment programs into national development plans.

The Research Question

As a developing country with immense natural resource wealth, which has posted significant development gains since independence, Botswana illustrates the potential of mining to contribute to development. Through examining the regulatory framework that governs Botswana's mining sector, this thesis seeks to determine the role of the state in mining and development. The research question to be answered by this thesis is thus "How has Botswana's semi-directed model of mining regulation contributed to development?".

Literature Review

A review of the literature on the resource curse, and role of the state in mining and development is required to answer the above research question. Botswana's development is largely attributed to its robust mining sector, specifically the impact of Debswana's mining operations on development. Yet, there is much debate in the literature regarding the relationship between mining and development. As such, the literature review will commence with a review of the resource curse literature, exploring how mining impedes or contributes to development in developing countries with natural resource wealth. This will illustrate the potential impact of mining on development in Botswana.

This thesis seeks to explore the relationship between mining regulation, and development in Botswana. There are different models of mining regulation identified in the literature to mitigate the resource curse, and ensure mining's contribution to development, with varying roles for the state. These models of mining regulation range from state-ownership of the means of production to the market-directed model, characterized by self-regulation and CSR. The second section of the literature review will therefore explore the role of the state in mining and development under the different models of mining regulation prescribed in the literature. The literature review of the role of the state in mining and development consists of two sections, the first of which is an examination of the market-directed model followed by an examination of the state-directed model.

The current model of mining regulation prescribed by the World Bank is the market-directed model. This section of the literature review will analyze the negatives and positives to a reduce role for the state in mitigating the resource curse. It will explore the debate around the role of the private sector, and CSR in mining and development.

There is an important role for both the state and the market in mining and development under Botswana's semi-directed model of mining regulation. The third, and final section of the literature review will therefore examine the literature on the state-directed model of mining regulation, where the state plays a more active role in mining and development. In this section, the debates around state-ownership and the developmental state will be presented. It will end with an examination of the African Mining Vision, which incorporates roles for both the state and private sector in mining and development. This literature will analyze the role of a developmental state in mitigating the resource curse, such as is present in Botswana's semi-directed model of mining regulation.

Mining and Development

Mining is an important economic activity in many developing countries, but resource rich countries tend to perform lower on development indicators than those that are resource poor. The role of mining in development has thus been much contested in the literature. Developing states are said to suffer from the resource curse, which hinders the ability of natural resource wealth to contribute to development for a variety of political and economic reasons. Natural resources, however, are also viewed as beneficial

to development, contributing to economic growth and sustainable development. This section will examine the debate around the resource curse, and mining's impact on development.

Neoclassical economists emphasize natural resource wealth as an immense benefit to developing countries, and mineral resources are seen as part of a country's natural capital that is essential to economic growth and development. According to the neoclassical production function, a country's capital increases its output and results in a higher gross domestic product (GDP) and per capita income. Minerals, however, are unproductive until they are extracted, so mining is viewed as an important step in the development process through transforming unproductive minerals into an output that can be transformed into another form of capital to raise future outputs in other sectors (see for example Rostow, 1962).

Neoclassicism regards natural resources as important strategic inputs for industrialization that contribute to the economic growth of developing countries (Rostow, 1962). Developing countries are regarded to have imbalances in the factors of production, with surpluses in labour, but shortages of investable capital. The latter could be remedied through the export of primary commodities, and the country's attractiveness to foreign investors. Under neoclassicism natural resource abundance is thus seen as an economic windfall, and it is regarded that “[developing states’]...would find it easier to collect revenues and hence provide public goods” (Ross, 1999, p. 301).

In the 1990s a series of empirical case studies challenged the neoclassicism doctrine when they found that on average countries with abundant natural resources have lower economic growth rates and higher levels of poverty, experience barriers to economic diversification, and are more prone to conflict and corruption than resource poor countries (see for example Auty, 2001 and 1993; Sachs and Warner, 1995, 2001; Reno, 1998). It was found that natural resource abundance tends to lower economic growth (Auty, 1993; Auty and Gelb; 2001; Leite and Weidmann, 1999; Sachs and Warner, 2001), and increases poverty rates (Ross, 2001) and inequality (Engerman and Sokoloff, 2002). Natural resources were also found to increase the tendency towards corruption and conflict (Bannon and Collier, 2004; Bayart et al., 1999; Ross, 2004; Reno, 1998) and weaken institutional capacity (Isham, Woolcock & Busy, 2005; Ahmad and Singh, 2003). The World Bank found that as the mining sector gains a greater share in the GDP (equaling 15 to 50 per cent of exports), domestic economies experience an average GDP per capita drop of 1.1 to 2.3 per cent (Ross, 2004, p. 20). Countries with abundant natural resources, therefore, experience worse development outcomes than developing countries that are resource poor.

Resource Booms, Government Spending and Price Volatility

The contribution of mining to development is impeded by the volatility of the international commodities markets, which is characterized by boom and bust cycles (Blattman, Hwang and Williamson, 2007; Deaton, 1999). High commodity prices have positive short-term impacts on developing countries, and account for an average increase of 2.5 per cent to economic growth rates in Africa (Collier, 2007, p. 4). Yet, price volatility can wreck havoc on developing countries, as a downturn in commodity prices renders government spending unsustainable.

De Beers, however, has substantial influence over global diamond prices as the largest producer of diamonds. Although its control over the global diamond market has dropped from a once high of approximately 80 per cent the De Beers Group of Companies still accounts for approximately 45 per cent of global diamond production (Economist, 2004). De Beers maintains a buffer stock of diamonds, buying and selling stock from producers to stabilize market prices. During periods of excess supply the Diamond Trading Companies buy and store stock to avoid a decrease in world prices, while selling stock during periods of excess demand. Countries that mine diamonds are therefore still negatively impacted by decreased demand, as De Beers slows down or ceases production at its mines to avoid an oversupply of diamonds. The result is less mining revenue collected from operations, which can have the same impact on countries as a drop in commodity prices.

A 'resource boom', resulting in a temporary rise in commodity prices and revenue, encourages a surge of borrowing by the government resulting in unsustainable debt levels when commodity prices decline. In resource boom times the government is able to depend on mining revenues to support government expenditures in key areas, such as health care and education. Natural resource prices are highly volatile, however, making mining revenue an unreliable source of revenue for the government. Natural resources are characterized by boom and bust cycles, and governments can acquire unsustainable debt when they engage in external borrowing based on future revenue. In the 1980s, a bust in commodity prices resulted in many developing countries experiencing a debt crisis.

Governments have a pivotal role in mitigating the resource curse as they implement policies to minimize its impact, and determine whether natural resource abundance contributes to development (World Bank, 2003). Prudent fiscal controls, subsidizing the agricultural and manufacturing sectors, and converting mining revenues into foreign currency to prevent the exchange rate from appreciating are some policies that governments in resource abundant developing states can implement to mitigate the resource curse (Ross, 1999, p. 307). Prudent tax policies also help states avoid an over dependence on natural resource revenues (Harvo and Santiso, 2011, p. 30). Relying on tax revenue, rather than mining revenue, also increases government accountability to the population (people want to ensure that the government is not wasting tax dollars), and allows for extra security during commodity downturns (Ibid.). This ensures a reliable source of revenue, insulating the government from the volatility of the international commodities market.

Dutch Disease and Deindustrialization

Another symptom of the natural resource curse is Dutch disease, which undermines long-term economic development (see for example Corden and Neary, 1982). Dutch disease is a common ailment of countries with abundant natural resources experiencing a resource boom, and refers to the impact of the two effects that commonly follow resource booms. These two effects are a real exchange rate appreciation caused by a sharp rise in exports, and the tendency of the booming sector to attract labour and capital away from the manufacturing and agricultural sectors, raising production costs. This leads to a decline in agricultural and manufactured exports, and inflates the cost of non-imported goods and services (Ross, 1999; Sachs and Warner, 1999).

With the onset of Dutch disease, countries experiencing a resource boom have a tendency to deindustrialize. This deindustrialization occurs because of real exchange rate appreciation that makes the manufacturing industry less competitive. Dutch disease is characterized by high labour costs as demand for labour increases, creating a relative wage rate rise, and structural imbalances in economic development. These symptoms are detrimental to domestic industries, such as agriculture and manufacturing. This impedes economic diversification essential for reducing dependence on the volatile natural commodity market. Dutch disease also postulates that the traditional export sectors will be unable to be revived, or require significant cost inputs, once the resource boom is finished (Davis and Tilton, 2005, p. 236).

Some scholars of the resource curse argue that export growth in the manufacturing sector is small and relatively weak in resource abundant countries (Sachs and Warner, 2001, p. 835), and emphasize that countries with more diverse exports are better protected against market fluctuations, and less prone to the 'resource curse' (Ross, 2004, p. 22). This is partly a result of the high cost of inputs into the manufacturing sector as a result of inflation and the appreciation of the exchange rate due to resource growth, but is also a result of a lack of active promotion of exports by the government (Sachs and Warner, 2001). The export sector, where international prices have a low elasticity, is therefore rendered uncompetitive, and countries cannot successfully pursue export-orientated growth.

Other scholars of the resource curse thesis, however, argue that there are unexploited opportunities for industrial development through the development of linkages of the commodities sectors to other areas of the economy (Auty, 1993; Morris et al., 2011; World Bank, 2003). These scholars emphasize that "the strengthening of the industrial sector lies at the heart of the development agenda", and the resource curse can be mitigated, and industrial development can occur, by building linkages out of the commodity sector (Morris et al., 2011, p. 6).

Mining's contribution to development has an important employment aspect to it. The mining sector can generate significant employment opportunities for the local population and mining communities through the development of upstream and downstream industries (World Bank, 2003). Government policies to encourage economic diversification through the development of linkages with the mining sector thus are

essential to mitigate the resource curse (Morris et al., 2011).

Mining operations, however, are often enclaves with few links to the domestic economy, and dominated by foreign multinationals. The literature emphasizes that resource exports are unlikely to contribute to economic development in other sectors of the economy if the sector is dominated by foreign multinationals that repatriate profits, instead of reinvesting them locally (as cited in Ross, 1999, p. 301). Without this crucial local investment, it is unlikely that linkages with the resource sector would be created (Ibid.; see also Morris et al., 2011).

Linkages between the mining sector, and other sectors of the economy are limited. Foreign mining companies import most of their mining equipment, in addition to technical, financial, and managerial services required to run the mines. Extracted raw minerals are often exported for further refinement or processing as there are insufficient linkages “into the local and national economy that would stimulate more private sector development and job creation” (Lambrechts, 2009, p. 15). In addition, the capital-intensive nature of industrial mining means that there are few jobs created relative to the abundant labour supply in developing countries (Ibid.) Many developing countries operate only as a raw materials exporter, and locals often are employed in menial labour, excluded from higher skilled, and higher paying positions within the mining operations, such as in upper management.

The Declining Terms of Trade

Structuralism and development theorists emphasize the declining terms of a trade as an impediment to development from resources. According to the Prebisch –Singer thesis, resource based growth would be ineffective “because the world prices of primary exports relative to manufactures show a deep tendency towards secular decline”, and that the demand for manufactured goods would outstrip the demand for primary products (Sachs and Warner, 1995, p. 4; see also Girvan, 1976).

The declining terms of trade challenge the neoclassical view that natural resource abundance is an economic windfall for developing countries. Structuralism and development theorists also argue that the demand for manufactured goods would outpace the demand for primary products, and that developed countries would enact more protectionist policies towards primary imports than manufacturing imports (Ibid.). Instead of the development of upstream and downstream linkages for growth in export manufacturing, their policy solution is import substitution industrialization (ISI) – the Prebisch – Singer hypothesis – and to thus “shun their dependency on natural resource exports, through state-led industrialization” (Sachs and Warner, 1995, p. 5).

Health and Education Spending

The importance of pro-poor spending on health and education for poverty relief is highlighted by *The World Development Report 2000/2001* (World Bank, 2001).

Proponents of the mining sector emphasize the beneficial impact of increased mining revenue on the provision of health and education (Weber–Fahr, 2002). CSR programs, meanwhile, most commonly target the areas of health and education, and often involve building local schools and clinics in mining communities. Mining dependence, however, correlates with lower health and education indicators. Developing countries dependent on mineral exports generally have high levels of child mortality, and lower life expectancies than resource poor countries (Ross, 2001).

Natural resource dependence often results in lower public health expenditures relative to GDP (Cockx and Francken, 2010, p. 10). A 10 per cent increase in the share of natural capital in total national wealth corresponds to an average decrease of public health expenditures by 0.12 per cent of GDP (Ibid.). This is in addition to the health risks to miners and communities from the mining operations themselves, and the impact of migrant workers, which can lead to higher rates of prostitution, and communicable diseases such as HIV/AIDS (McMahon and Remy, 2002).

Education is also adversely impacted by mining activities, as mineral dependent countries have lower rates of investment in education (Birdsall et al., 2000). Empirical studies found that as mineral exports increase in the share of GDP, female school enrollment rates, secondary school enrollment, and the percentage of gross national product (GNP) spent on education decreases (Glyfason, 2000). This undermines assets

essential for effective government, and economic management (Collier et al., 2010; see also Gylfason, 2000). These public goods are "...associated with effective government and economic management ...[and]... resource revenues – even if temporary and unreliable – provide a way to finance such investments" (Collier et al., 2010, p. 85).

If converted into physical or human capital, mineral resources contribute to economic growth, and if consumed can lower current levels of poverty (Davis and Tilton, 2005, p. 237). Dutch disease postulates that private sector exports are crowded out by resource spending, but investment in the public sector can mitigate Dutch disease "...if domestic spending of resource revenues is concentrated on public investment that is complementary to these private sector activities – such as improvement of productive infrastructure or labor skills – then these adverse effects are mitigated and may even be reversed" (Collier et al., 2010, p. 101).

The impact of the resource curse on education and health spending is crucial because empirical studies found that states with high economic growth rates invest 5 to 7 per cent of the GDP in education, health and infrastructure, whereas countries with slow growth invest approximately 3 per cent (Ibid.). Rather than establish external funds, therefore, developing countries should use mining revenues for investment in infrastructure, human capital (health and education), and the strengthening of institutions (Havro and Santiso, 2011, p. 36). The lack of these three factors can hamper the creation of linkages from the extractive industry, and subsequently economic diversification, which is key to achieving sustainable development. This leaves the developing country more at risk to the adverse effects of the resource curse, and challenges the sustainability

of resource-based development. As a non-renewable resource, it is imperative that the economy diversifies, and lessens its dependence on mineral resources. A healthy and educated workforce is key to this diversification by providing a stable, and profitable workforce to the private sector.

Rent Seeking and Institutional Capacity

Another element of the resource curse is that of the rentier state, and ineffectual institutions. According to the resource curse theory, a rentier state occurs when the government acquires most of its revenues from external sources, such as resource revenues, rather than domestic taxes. This results in a less accountable government, as they do not have to atone for the use of tax revenues (Bannon and Collier, 2004; Ross, 2004, 2001). Resource wealth raises economic rents, increasing the returns from rent seeking for political officials, and other economic and political actors. The absence of fiscal controls, transparency and accountability, and the presence of patronage politics, increases the likelihood of corruption and ineffective government (Reno, 1998; Ross, 2004 and 1999; World Bank, 2003).

The institutional capacity to mitigate the resource curse is critical for mining to positively contribute to development, as the quality of the state's institutions influence the occurrence of the resource curse (Boschini et al., 2007, p. 594). Good institutions are key to insulating economic enterprises from political pressure and rent seeking, and the interaction between good policies and institutions is "...key to good resource management" (Havro and Santiso, 2011, p. 34). Resource wealth negatively affects

political institutions in three main ways. First, the availability of resource rents obviates the reliance on domestic taxes, and deprives citizens of a crucial mechanism to hold government's accountable. Secondly, the existence of resource wealth reduces the disciplinary effects of budgetary constraints. Third, resource rents results in rent seeking, and corruption. Although increased revenue flows are an opportunity for growth and development, the resource curse demonstrates that without the proper institutions and governance, natural resource abundance is a bane on development rather than an important contributor (Ross, 1999).

Studies have found that institutional quality is the main conduit through which natural resource abundance contributes to economic growth (Boschini et al., 2007; Mehlum et al., 2006). It was found that states with poor institutions, and scarce in natural resources still experienced higher rates of economic growth compared to states rich in natural resources, but with poor institutions (Boschini et al., 2007, p. 606). Using regression analysis it has been shown that the resource curse is more prevalent in countries with weak institutions, but barely present in states with strong institutions (Mehlum et al., 2006). Resource abundant states are thus cursed when they possess low quality institutions, as it is the institutional capacity that assists states in mitigating the resource curse (Boschini et al., 2007; Mehlum et al., 2006; contra. Sachs and Warner, 1995).

Norway's resource based development, for example, was supported by strong institutions that allowed the state to implement policies to transform petroleum wealth into sustainable development. Norway's government made it a priority to strengthen the

institutional capacity of government agencies, and in return this promoted better policy decisions, both at the macroeconomic and sector-specific policy level. It also allowed the state to be more capable in its negotiations with the petroleum industry, negotiating contracts that were mutually beneficial to the private sector, and the state (Havro and Santiso, 2011).

Institutional capacity, therefore, is imperative to mitigate the resource curse and support resource-based development. Many of the states that have successfully developed based on natural resources did so because of their institutional make up. Strong and capable institutions supported policies diversifying the economy, and mitigating the resource curse.

Summary

Natural resources are not the golden ticket to development as argued by neoclassical economists. Instead, through a variety of avenues manifested in the resource curse, natural resource abundance impedes development. Economic growth is negatively impacted by Dutch disease, declining terms of trade, deindustrialization and the price volatility of commodities that render government spending unsustainable during commodity price downturns. Natural resources also encourage a rentier state, and conflict that weakens institutions key for economic growth and development. There is also an underinvestment in health and education in resource rich countries that impedes economic diversification and growth, and keeps the state dependent on natural resources.

The natural resource curse, however, is not inevitable and the negative impact of natural resource wealth on developing countries can be mitigated through a combination of good institutions and policies. The World Bank attributes these good policies to prudent fiscal policies, like establishing stabilization funds, prudent tax policies and exchanging earnings into foreign currency. Investment in human and physical capital, however, is also important for the mitigation of the resource curse, as it diversifies the economy away from resource dependence. It is crucial that states possess strong and capable institutions to support resource-based development.

The above review of the resource curse literature highlighted the negative impact of resource wealth on development in resource wealthy developing countries. The literature review will now examine the models of mining regulation used to mitigate the resource curse, and ensure mining contributes to development. Different models of mining regulation have been employed with differing roles for the state and private sector to mitigate the resource curse. These models range in varying degrees from outright state ownership of the means of production to a market-directed model, and will be discussed in the following section.

The Role of the State in Mining and Development

Each model of mining regulation prescribes a different regulatory role to the state in the relationship between mining and development. The different roles of the state under these models of mining regulation have evolved from state ownership to market-directed approaches, to the developmental state, and the African Mining Vision (AMV; the Vision). Under state ownership, the state owns the means of production, and is engaged in the production of the mining sector. The market-directed mining regulatory model, in contrast, minimizes the role of the state, and prescribes a dominant role for market forces and the CSR programs of mining companies. The developmental state prescribes to the state a key role in the creation of linkages between mining and other sectors of the economy. Under this latter mining regime, the state may not necessarily own the means of production, but it does play an active role in the creation of industrialization policy, and the harnessing of the mining sector to achieve development goals. The following section of this literature review will examine these different approaches to the role of the state in mining and development.

The Market-Directed Model

A neoliberal paradigm shift occurred in the 1980s that transformed the role of the state so that it was no longer the main agent of development, and instead gave a prominent role to the private sector as a driver of development. Neoliberal economists, such as Milton Friedman from the Chicago School of Economics, argued that the only role for the state was “to create the right environment for businesses and individuals to

maximize their potential” (cited in Rapley, 2007, p. 65). This meant that the state was to discard policies such as nationalization, and transform the economy from state-directed to market-directed. In the mining sector this meant that the state was transformed from its owner and operator role into that of regulator, while the private sector assumed the role of owner and operator.

Until 1992 state-owned mining companies had been largely untouched, however, this changed with the World Bank’s report, *The Strategy for African Mining*. The report argued public ownership of mining enterprises hindered foreign direct investment (FDI), and that state-owned mining companies were inefficient and corrupt (World Bank, 1992). The World Bank noted that African mining was attracting only 5 per cent of global exploration and mining development expenditure (UNECA et al., 2011, p. 15). This was a significant deficit in what the World Bank identified as an important economic sector for the resource rich continent.

The World Bank emphasized that mining could contribute to the economic development of Africa through exports, foreign exchange earnings, and tax receipts (Ibid., p. 14). According to *The International Study Group Report on Africa’s Mineral Regimes* (2011), the key to Africa’s economic recovery was to attract high risk capital from foreign mining companies to develop the mineral sector. Historically, it was international mining companies that provided the necessary financing, and technical and management capabilities that were absent in many state owned enterprises (Ibid.) The IGS Report thus emphasized that African governments had to implement policy regimes that would attract private investors to mining (Ibid.).

The mining codes rewritten by the World Bank were designed to gear the mineral sector towards export production. As such, they focused on designing the sector to adhere to market discipline to reduce the risks to private capital, and creating a favourable FDI environment. While these mining codes vary from state to state, there are common elements that run throughout. These market-directed models of mining regulation aimed to streamline investment legislation, foreign exchange regulations, taxation and labour laws, all aimed at gearing production for export (Moody, 2007, p. 21).

The characteristics of a market-directed model of mining regulation are a stable legal and fiscal framework, contractual stability, a guaranteed fiscal regime, assured profit repatriation, and easy access to foreign exchange (Ibid.). The reforms by the World Bank reduced or eliminated state participation in mining enterprises, provided incentives for FDI, introduced competitive tax regimes, liberalized exchange controls and exchange rate policy, and introduced investment protection assurances, including stability of the fiscal regime, dividend repatriation and non-expropriation (Ibid., p. 17).

As discussed above, according to the resource curse thesis developing countries rich in natural resources often suffer from rent seeking, and corruption (see for example Auty, 2001 and 1993; Sachs and Warner, 1995, 2001; Reno, 1998). The World Bank thus has identified 'good governance' as an important factor in the contribution of mining to development. The market-directed mining codes written by the World Bank thus incorporate governance aspects, core aspects of which are transparency, and accountability. Under the good governance agenda there is also a concern for effective constraints on political authority, and a normative orientation that includes respect for

human rights, the legitimacy to rule, and macroeconomic balance (Fritz and Menocal, 2007, p. 539).

The concept of governance first appeared in development discourse in the World Bank's 1989 *Long-Term Perspective Study* on sub-Saharan Africa, where Africa's development problems were attributed to a crisis of governance. For successful economic reforms that contribute to a state's economic growth, and thus development, it was argued that the state needed to act ". . . in a more predictable rule-based and transparent manner" (Crawford, 2006, p. 117-118). The World Bank emphasized that after the failure of the structural adjustment programs ". . . it became abundantly clear that no economic project was likely to succeed unless minimum conditions for political legitimacy, social order and institutional efficiency were met" (de Alcántara, 1998, p. 106). This allowed international financial institutions, like the World Bank, to reconsider crucial social and political questions related to the agenda of economic restructuring.

The mining codes espoused under the good governance agenda limit the role of the state in favour of a market-directed model. Under the market-directed model the market is the main agent of development, and as such the mining regulatory framework is designed to support the private sector. This regulation focuses on creating a regulatory environment that attracts FDI, and as such emphasizes low taxes and royalty rates. Under this model, mining's contribution to national development is through export-oriented growth, while community development occurs through the mining companies' CSR programs. Another important aspect of the mining codes under the market-directed

model, therefore, is the role of CSR in the contribution of mining to development.

Corporate Social Responsibility

The market-directed models of mining regulation implemented under the direction of the World Bank, are based on the model of CSR that emphasizes self-regulation of the mining industry, and ‘win-win’ partnerships between the government and private sector (Campbell, 2010; Dansereau, 2005, 2009, 2010). Under the good governance agenda, mining is seen to be an integral component of sustainable development and poverty reduction. Under this mining regime, the main agent through which mining can contribute to sustainable development and poverty reduction is the private sector, mainly in the form of the CSR programs of the mining companies.

CSR is a broad concept of environmental and social sustainability practiced by the private sector, with no standard definition (Van Marrewijk, 2003; UNCTAD, 1999). The concept of CSR, however, is generally used to refer to the private sector’s responsibility to society and the environment, and “the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large” (WBCSD, 1999, p. 3).

The term became popular in development discourse after the 1992 Rio Earth Summit, organized by the United Nations Conference on Environment and Development, at which a group of CEOs brought a business presence to discussions on climate change. Subsequently, the Business Council on Sustainable Development was formed, and later

the World Business Council on Sustainable Development, representing the interests of the business sector. This conference linked CSR with sustainable development.

For the mining sector, CSR was outlined in the 2000 – 2002 Mining, Minerals and Sustainable Development project, in which stakeholders identified key issues concerning mining and sustainable development. It “...was an important milestone for industry recognition of its role in contributing to sustainable development priorities on social development as well as environmental stewardship” (UNECA et al., 2011, p. 82). The 2002 World Summit on Sustainable Development included a global commitment to advance mining as a vehicle for sustainable development. The summit identified the importance of supporting efforts to “address the environmental, economic, health and social impacts and benefits of mining, minerals and metals throughout their life cycle, including workers’ health and safety”, and to enhance the participation of stakeholders (Ibid., p. 83).

The International Council on Mining and Metals (ICMM) was also established in 2001 to improve sustainable development performance in the mining sector. The ICMM’s Sustainable Development Framework is the main industry framework for CSR, and commits members to 10 principles. These principles are integrating sustainable development into the corporate decision-making process; upholding human rights; respecting local cultures; seeking continual improvement in health and safety performance; environmental performance; contributing to the social, economic and institutional development of the communities; and implement effective and transparent engagement, communication and independently verified reporting arrangements with

stakeholders (ICMM, 2004).

According to the World Bank, developing countries can mitigate the resource curse when companies adopt voluntary practices and codes of conduct that benefit local communities, protect the environment, and contribute to state coffers (Dansereau, 2010). It is argued that “by following socially responsible practices, the growth generated by private sector will be more inclusive, equitable and poverty reducing” (as cited in Jenkins, 2005, p. 525).

Community development activities vary among mining sites, but generally include infrastructure projects such as the building of roads, wells, schools and hospitals, but also local employment, training and skills development, and service provisions (mainly in health care and education). Community development, as defined by the extractive sector, thus aims to build the capacity of the local community, and replace the central authority of the state for the provision of these social services and infrastructure.

Proponents of CSR emphasize the benefits of the programs to the local mining community, government, and mining company. The provision of health care services, for example, ensures a healthy and productive workforce for the corporation, contributing to increased productivity and profit. CSR also plays a crucial role in gaining community acceptance of mining operations, and the social license to operate. It can quell community resistance, which can cause costly delays in business operations (Hamann and Acutt, 2003). CSR can thus help companies manage their risks and bottom lines, as well as improve their reputation, and strengthen the corporation’s ties to the community (Hopkins, 2007; Sayer, 2005).

The ability of CSR to capture the benefits of FDI is emphasized by the World Bank (Fox, Ward, & Howard, 2002). It is emphasized that through CSR, governments can ensure that foreign investors contribute to development through local job creation, knowledge and technology transfer, and the provision of infrastructure (Ibid.). CSR proponents emphasize that voluntary initiatives have evolved beyond simple philanthropic measures such as building a school or clinic, and now include community development projects developed with extensive community consultation (Frynas, 2005). It is emphasized that these community development projects will contribute to sustainable development (Ibid).

Multinational corporations, including the mining industry, use CSR individually, and in conjunction, with other companies and organizations “to raise and maintain standards of corporate conduct within the sector” (Brereton, 2002, p. 5), and “...sign up to these schemes because of the reputational benefits to be derived from participating” (Ibid., p. 11). Voluntary schemes can promote change within the industry, and “codes and standards have assisted internal change agents and external organizations to leverage greater transparency and improved performance in participating companies” (Ibid., p. 14). Participation in voluntary initiatives may also assist the introduction of compulsory codes and regulatory frameworks, as “...participation in voluntary initiatives will offer learning opportunities about compliance, the result being that corporations will have less reason to fear the introduction of compulsory codes” (Kuper, 2004, p. 12).

In addition, industry is often resistant to independent oversight, preferring the flexibility of the self-regulation and voluntary nature of CSR. Therefore, the “willingness

of industry actors to adopt more independent, and rigid forms of certification is directly related to the perceived level of threat that civil society is able to exercise over the industry” (Ibid., p. 70). Proponents also emphasize that CSR can introduce standards that are greater than that required by local law, resulting in an ethical race to the top when CSR is consistently observed. In this case, principles enshrined in codes may potentially transform into national, and international norms of corporate behaviour (Oshionebo, 2009, p. 81; also see Blowfield and Frynas, 2005; Sayer, 2005).

CSR is argued to fill the voids of under-resourced, weak or ineffective government institutions. It promotes the private sector as an important rural and urban development agent, “...particularly in partnership with the government, community groups and non-government organisations (NGOs)” (Hamann and Acutt, 2003, p. 256). Voluntary initiatives can also circumvent ineffective or predatory regimes, by engaging industry with civil society and critics (Szablowski, 2007; see also Kuper, 2004). Corporations can fill a void that is left by the state, and “...if on some occasions corporate leaders are better (morally) motivated than rulers of developed as well as developing states, then we cannot decide by fiat that states are the primary agents of development” (Kuper, 2004, p. 15).

Voluntary initiatives, however, are not effective unless supported by regular monitoring, and enforcement of regulation (Oshionebo, 2009). Since CSR is voluntary, corporations cannot be penalized if they fail to, or stop, providing goods and services that are outside their scope of business, or if they do not meet a code of conduct or other voluntary initiative. Proponents of CSR emphasize that it is only meant to complement,

not replace, government regulatory frameworks. Under the good governance agenda, however, the ability of the state to implement and enforce regulatory frameworks is severely weakened, and CSR has taken the place of the government as agents of development have been privatized.

CSR privatizes development, which compromises long-term structural change crucial for development. A corporation's best interests are not the same as civil society, and the objectives of corporations and development organizations are often conflicting and incompatible, as the market cannot enact long term social benefits because of the short terms demands of shareholders and the stock market, which provide disincentives for costly, but imperative long-term structural change (Blowfield and Frynas, 2005). For CSR to make a significant contribution to development, it "...needs to address the structural and policy determinants of underdevelopment and the relationship to these determinants" (Utting, 2005, p. 385).

The dependence of communities on the mining company, in the absence of government, is problematic when the company leaves if the government does not step in. CSR requires coordination between the planning and investment of the state, and the CSR programs of the mining company to "improve the value of both streams of expenditure" (UNECA et al., 2011, p. 88). CSR should complement the government's provision of basic infrastructure and other public goods, it "...should not be considered a substitute for government responsibility towards its citizens" (IGS Report, 2011, p. 89). The CSR frameworks should thus be developed within a national policy debate on the mining sector's obligation regarding social development objectives. The CSR of mining

companies should be incorporated into national development plans.

CSR also fails to challenge companies in the provision of taxes and royalties (Jenkins, 2005; Utting, 2005). This is a crucial point, as developing countries have seen their share of mining revenue dwindle with the rewriting of mining codes by the World Bank. The World Bank emphasizes that governments should implement tax policies that maximize government revenue over the full length of the mining operation, and that “this would require policies that promote investment in new mines” (Lambrechts, 2009, p. 8). Emphasizing the boom-bust cycle of commodity markets, which would make cash flows unpredictable, the World Bank argues, “the tax system should emphasize profit-related taxes” (Ibid.). When relying, however, on profit related taxes the state is exposed to the same volatility of international commodity prices as mining operations. Therefore, “to break the resource curse, and turn mineral wealth into revenue for development, the laws, policies, and institutions that govern the financial payments made by mining corporations to national governments need to be reformed” (Lambrechts, 2009, p. viii).

Without proper revenue, governments are unable to finance their own development plans that could potentially address the structural issues of underdevelopment that CSR fails to. Weak institutional capacity is one symptom of the resource curse, and starves developing countries from not only essential revenues, but also the capacity to implement the necessary development policies to diversify the economy and mitigate the resource curse (UNECA et al., 2011). Under the good governance agenda “...over a decade’s concentration on attracting inward private investment ... left government bodies with precious little structural capacity to enforce

any improvements” (Moody, 2007, p. 25). This is critical, because as discussed above, studies have shown institutions are critical for development.

The mining regulatory framework prescribed by the World Bank emphasizes that mining will contribute to economic growth, and thus development, through FDI and the growth of the export sector. Under this regulatory framework, the market directs the mining sector, while the state is reduced to a regulatory role that creates a favourable foreign investment environment. Emphasis is placed on CSR for contributing to community development. The role for the state under this market-directed model, however, limits its ability to integrate the mining sector into national development plans.

CSR focuses on development at the community level, but it does not address the ability of the state to pursue broader national development goals. States need to implement mining tax regimes that are complementary to national development plans, and tax schemes need to be reformed so that states gain a greater share of their own resource wealth. This means that the generous tax and royalty concessions granted foreign multinationals during the eras of structural adjustment and good governance need to be repealed, and replaced with a fairer scheme for developing states (Ibid., p. 4).

The State-Directed Model

Although the extensive reforms to mining codes carried out under structural adjustment and the good governance agenda created a more favourable environment for foreign investment in African mining, it had poor results in its contribution to development. The *International Study Group Report on Africa's Mineral Regimes* (2011) describes a 'winner's curse' for host countries. Although FDI is up in the mining sector, a race to the bottom for host countries has been triggered "not only in the more static sense of forgone fiscal earnings but also in the terms of giving up policy options necessary to organize a more dynamic long term growth path" (p. 17). With the minerals and metals boom, the African Union and United Nations Economic Commission on Africa (UNECA) have urged African states to "extract better terms from natural resources exploitation and to catalyse growth and poverty alleviation across the continent", ensuring natural resource laws and regulations better accommodate the interests of these developing countries (Ibid., p. 19).

Long-term, sustainable development must address the structural impediments to development that prevent the industrialization and economic diversification of the economy, but this requires institutional capacity, and human capital and physical infrastructure that CSR cannot provide. These structural impediments can be addressed with the state-directed model of mining regulation, which mobilizes the mining sector for national development goals. The state-directed model "situates the state as the main agent of development, capable of harnessing economic actors to meet social ends" (Dansereau, 2009, p. 2). Under this model the mining sector is integrated into national development

strategies aimed at achieving sustainable development

The state-directed model has varying degrees of state involvement, ranging from state ownership of the means of production, to the developmental state and the African Mining Vision. Under the state-ownership model the state owns the means of production, acting as an owner/operator of mining operations. In contrast, under the African Mining Vision and developmental state models, the state may or may not own the means of production. The mining industry is integrated into national development strategies through the cultivation of linkages between the mining sector and other sectors, aimed at diversifying the economy. The next section will examine the spectrum of the state-directed model of mining regulation, beginning with the state's ownership role in the mining sector, moving to the developmental state, and concluding with the African Mining Vision.

State Ownership

In the 1960s and 1970s state ownership was the dominant model of mining regulation, and there was significant growth in state ownership and control over production in the mining sector. Waves of nationalization occurred throughout the developing world in the 1960s, as many former colonies gained independence. Many newly independent African states adopted the state ownership model, and early African leaders advocated the policy of centralized management of the economy and seeking ownership of the means of production.

African economies were dominated by mineral exports at independence, and mining was often the largest source of public revenue. The mining sector was an externally orientated enclave, however, that had few links to the domestic economy. The tenuous links that did exist were mainly through the taxes paid to the state, and a small pool of low skilled African workers. Ownership and operation of the mines was foreign, and most minerals were exported raw or with only basic processing. Firms imported most inputs and repatriated profits, dominated by expatriate employees, and there existed a general lack of research and development (UNECA et al., 2011, p. 13-14).

A steep drop in investment by mining companies in exploration and development at existing mines, and large increases in repatriation by foreign shareholders, coincided with policies to gain greater control over the mineral sector. “For many governments, vesting minerals in the state, setting up state mining enterprises and taking substantial shares in existing mining companies were the principal instruments for enhancing their share of returns from the nation’s mineral resources” (Ibid., p. 14). State involvement was largely argued for in post independence Africa due to the lack of indigenous private entrepreneurs, and economic distortions created by colonialism. In the 1960s and the 1970s, most African states used generous flows of foreign aid, and the gains from favourable export trade towards the establishment of state-enterprises. The state undertook direct ownership and management of key sectors of the economy.

In the 1970s African economies experienced economic crisis, and the role of the state in the economy evolved to the market-directed approach in the 1980s. In the late 1970s export prices collapsed, which coincided with a worldwide energy crisis from the

quadrupling in price of crude in 1973-1974 by the Organization of the Petroleum Exporting Countries (OPEC). Oil prices were further increased in 1979.

Increased oil prices created inflationary pressures, prompting industrialized countries to respond with contractionary monetary policies, including increases in interest rates. The resulting recession weakened the demand for developing countries' exports, and in the 1980s there was a glut of base metals that reduced commodity prices, and subsequently state revenues from mining. This created deficits in the balance of payments in many developing countries, so that countries had to contend with the high cost of oil, and the higher interest rates on loans obtained from industrialized countries. In addition, reduced imports from industrialized countries translated into reductions in foreign exchange revenues, requiring more borrowing by developing countries to service debt.

By the 1980s, the system wide production crisis, negligible results in terms of development, and the looming fiscal crisis facilitated the emergence of a neoconservative ideology, and the state-ownership model was replaced with the market-directed model. The World Bank especially, emphasized the decline of state owned enterprises in the mining sector, arguing that those developing states that were experiencing economic growth had privatized the industry, or were engaging in joint ventures with the private sector (World Bank, 1992).

Indeed, there were many problems with state-owned and operated mining companies. Many were marked by inefficiency, and were not profitable. Mining exploration and mine development is an expensive activity, and most state mining companies were starved of investment in plant and machinery, and denuded of

exploration activities. They also suffered from a general lack of research and development to keep mining and processing operations competitive (Ibid., p. 14-15). Some scholars emphasize nationalization was responsible for the occurrence of the resource curse (see for example Ross, 1999). This is because foreign multinationals acted as a buffer to the volatility of the international commodity market, and nationalization exposed states to the boom and bust cycles of the commodity market, as was demonstrated by the debt crisis. State enterprises were also often used as vehicles for political patronage.

The market-directed model described in the section above replaced the state-ownership. As previously stated, neoliberalism identified the state as one of the main impediments to economic growth, and the contribution of mining to development. Under the market-directed model, state owned mining companies were privatized, and the role of the state was minimized. The state-directed model of regulation, however, is not limited to state ownership. Instead, the state has varying roles under this model, including that of the developmental state.

Developmental States

The neoliberal paradigm attributed the success of the Asian Tigers (or newly industrialized countries –NICs) to laissez-faire policies; the reliance on market forces; and the adoption of market-driven, export-oriented development strategies, which led to the efficient exploitation of the comparative advantage of cheap labour (Mkandwire, 2001, p. 291-292; see also Balassa, 1971; Little et al., 1970). In contrast, at the end of the

1970s the success of the East Asian states prompted the formulation of the developmental state theory, as the rapid economic growth rates and industrialization experienced by these states were attributed to state-led policies, and active state intervention.

The modern concept of the developmental state originates from Japan's phenomenal growth, and rapid industrialization after World War II. Central to Japan's economic growth was a planned rational state, a developmental state that was able to stimulate and proactively support and promote economic development (Johnson, 1982). The state was interventionist, through a planned process that established clear economic and social objectives, which influenced both the pace, and direction of economic development.

It is through these cases of the East Asian developmental states that the role of the state in the development process was examined, as well as the structural, and institutional underpinnings of state intervention. There were marked differences between the NICs, but common characteristics crucial to development were identified (UNCTAD, 1996). The first characteristic was institutional reforms and policy interventions centred on the profit-investment nexus and the growth process; the second concerned the close linkage with the export sector and export-investment; and the third revealed that the process of managing economic rents ensured their beneficial impact on the development process (Ibid.).

Building Domestic Industry

A key strategy of the developmental state is the building of domestic industries through rapid industrialization. Whereas neoliberal policies prescribe a predominant role for market-directed development, the developmental state does not leave industrialization up to the market. Instead it plays an important role in protecting infant domestic industries through the provision of export subsidies, high tariffs, and support provided by key state development institutions (Chang, 2003). “The development state tries to guide the private sector to make its decisions in a manner that accelerates growth by using a set of incentives and disincentives” (Zenawi, 2012, p. 168).

The industrial strategy of the developmental states of the NICs created industrial winners through the provision of fiscal incentives to facilitate enhanced productivity, and some form of protectionism that was critical for the growth of local manufacturing. State interventions included the redirection of resources away from old to new industries to alter their long-term development trajectory, and the mediation of government-business relations through institutions and policies. Crucial to the developmental state was an institutional and policy framework to support the strategic and systematic integration of the national economy into the global economy (Amsden, 1992; UNCTAD, 1996).

While the aim was to industrialize, the use of the export sector allowed for access to large markets where the returns to scale associated with industrialization pay off and competition in the international markets would make local industries competitive. This process was closely linked to a process of transformation of the entire economy, supported by a broad coalition between the private sector and state. These developmental

states partnered with the private sector, targeting infant industries key to economic development. The current concept of the developmental state thus pertains to state intervention in support of the private sector, and intervention is geared towards changing the structures of production to boost manufactured exports (Weiss, 2011, p. 179).

Institutional Capacity and Development

The East Asian developmental states were characterized by a capable and autonomous (embedded) bureaucracy (Evans, 1995); a political leadership orientated towards development (Fritz and Menocal, 2007; Musamba, 2010); a close and mutually beneficial relationship between state agencies and key actors in the private sector (Johnson, 1982); and policy interventions that promote economic growth (Beeson, 2004; Wade, 1990). The developmental states focused on the creation of a super ministry, or coordinating body, that had the responsibility of an explicit industrial policy, and coordinating with a ministry of education, to ensure there was a sufficient skilled labour force to support the growth of important sectors for industrialization.

Although the initial focus was on the development of labour intensive industries, companies were encouraged to employ more technical processes, and train a higher skilled workforce for the development of value added activities. The successful developmental states also invested heavily in science and technology, and vocational training. The tertiary sector was also supported to train a higher skilled workforce to support the development of high value technology exports. These policies were important to create a skilled workforce, and the necessary domestic capacity to support industrialization (UNCTAD, 2006).

The state is developmental through the creation and sustaining of a policy climate that promotes development by fostering productive investment, export growth and human welfare (Edigheji, 2005, p. 11). These definitions of a developmental state, however, narrowly define the developmental state by its objectives, while ignoring its institutional characteristics. The developmental state not only sets development objectives, but also establishes the necessary institutional structures to achieve those objectives. A developmental state is therefore not only defined by its ideological orientation, but also the state structure (referred to as the state-structure nexus) in which it utilizes to achieve development goals (Mkandawire, 2001). A developmental state is therefore “...one whose ideological underpinnings are developmental, and one that seriously attempts to construct, and deploy its administrative and political resources to the task of development” (Ibid., p. 3; see also Vu, 2007, p. 28).

Capacity is derived from the institutional, technical, administrative, organizational and political configurations of the state. The capacity of public institutions, especially the bureaucracy, is crucial to the economic performance of a developmental state. The bureaucracy is crucial because it advises the political executive, and formulates and implements public policies. If the bureaucracy does not have the capacity to implement policies, the developmental orientation of the state is irrelevant. State effectiveness is vital to the developmental state because it increases the capacity of bureaucrats to manage the economy, through selection of key industrial sectors to support, and the use of policy instruments (Leftwich, 2008; Mkwandwaire, 2001).

Bureaucratic autonomy is also a key element of an effective bureaucracy (Musamba, 2010; Mkwandwaire, 2001). The developmental state “...ought to be autonomous from the private sector”, where autonomy is defined by the state’s ability to effectively implement policy, regardless of the views of the private sector on the issue (Zenawi, 2012, p. 168).

The concept of the developmental state is often used to denote states which have achieved high economic growth rates with wide spread legitimacy (Leftwich, 2001, p. 166-167). Developmental states have generally been associated with significant increases in the standards of living of a large number of the population, accomplished through industrialization, and the subsequent increase in higher wage employment (Johnson, 1987, p. 143; Leftwich, 2008, p. 16). They derive their legitimacy from these improvements in development indicators across a broad cross section of society (Fritz and Menocal, 2007, p. 534; Lin and Monga, 2011, p. 278; Wade, 1990, p. 7).

The literature tends to idealize the developmental state, however, approaching the state tautologically because the existence of a developmental state is drawn deductively from the existence of high economic growth rates, and equates this growth to a strong state. This approach, incorrectly, discounts post-colonial African states as anti-developmental because of the crises of the 1970s (Mkwandwaire, 2001, p. 290-291). There has to be the possibility of the developmental state to fail to achieve economic growth due to unforeseen external shocks (Ibid.). Thus a developmental state must be defined by its ideology of development, rather than its achievement of economic growth (Woo-Cummings, 1999). As such, “recognition of episodes and possibilities of failure

leads us to a definition of a developmental state as one whose ideological underpinnings are developmental and one that seriously *attempts* to deploy its administrative and political resources to the task of economic development” (Ibid., p. 291).

The institutional and organizational attributes, and their relations to the social structures, are important in a developmental state, as it is the organizational and institutional structures that enable the state to promote and achieve better economic development (Edigheji, 2005; Mkandawire, 2001). A developmental state thus needs to engage with the development ideology and commitment, as well as the development structures. The development structures are the capacity of the state to be effective, but effectiveness does not translate into a developmental state without a development orientation. State effectiveness, however, is essential for a successful developmental state (Leftwich, 2008, p. 12).

The Potential for the Developmental State in Africa

The transferability of the East Asian developmental state model to other states is contested, especially with its relevance to the African context. For example, the ‘impossibility theorem’ argues against the ability of African states to become developmental (Musamba, 2010, p.30-31). A more nuanced assessment of the political and economic history of the African continent, however, illustrates a different view from that which insists on the impossibility of the existence of developmental states in Africa (Arrighi, 2002; Mkandawire, 2001).

Early post-colonial states in Africa were developmental (Gibbon, 1997; Mkandawire, 2001), and embarked on ambitious agendas of state-building with highly centralized governments and institutions. The state played a key role in the economy with a strategy of state intervention in the economy, accomplished through the adoption of mixed economy policies (ISI and the establishment of state companies and public utilities), or African socialism. Key sectors, such as the mining industry, were nationalized. Many African states sought to build the capacity of the state, through an indigenization policy in the state sector, and investment in training and human capacity in the state bureaucracy. Industrialization was a major goal, and the post-colonial African state pursued a strategy of import-substitution and investment in infrastructure.

The assumption that the developmental state is impossible in Africa led to the imposition of the structural adjustments programs (SAPs), which have undermined the capacity of the developmental state in Africa. SAPs limited the policy options available to the state, leading to the creation of ‘choiceless democracies’ (Ibid., 1999). They also reduced state apparatus and as such did not simply roll back the state, but undermined the state’s capacity to perform basic state functions. As discussed above, state capacity is crucial for the success of a developmental state (Mkandawire, 2001).

The case against the establishment of developmental states in Africa also emphasizes that African states are prone to capture by special interest groups; lack technical and analytical capacity; exist in a changed international environment that does not permit protectionist industrial policies (globalization); and have poor records of the past (Mkandawire, 2001, p.294). As previously discussed, resource abundant states are

prone to corruption and rent seeking, and this is one of the reasons that the possibility of a developmental state in Africa is often dismissed.

Most developmental states, though, have been authoritarian or a dominant party democratic system that have politically repressive regimes that excluded certain groups (Leftwich, 2001, 1995; Menocal and Fritz, 2006). In a developmental state, a development partnership between the state and the private sector exists to rapidly transform the economy. Some scholars thus emphasize the developmental state does not differ substantially from the neoliberal labour model of capitalist development (Chang, D.O., 2009). The East Asian developmental state model, for example, is characterized by a high savings rate, with low wages and an authoritarian approach to dissenting voices. Although the cohesion between the political and economic elite was beneficial for economic growth, it resulted in an absence of popular classes and redistribution programs (Waldner, 1999, p. 2).

A Democratic Developmental State

In contrast to the East Asian authoritarian model, a democratic developmental state is prescribed as a potential model for an African developmental state (Mkandawire, 2001). In the African context, a democratic developmental state of checks and balances can reduce the rent seeking behaviour of the state (Mkandawire, 2001). A democratic developmental state is based on broad-based state-society alliances and popular participation (Edigheji, 2005). It is not prone to corruption, a predatory government, or elite capture (Edigheji, 2006; Fritz and Menocal, 2006; Mkandawire, 2001). In a

democratic developmental state, active state intervention is geared towards economic growth, but also has defined socio-economic objectives (Edigheji, 2005, p. 10).

Crucial to the democratic developmental state is that the social pact distributes the benefits of economic growth across society. It is a state that not only embodies the principles of electoral democracy, but also ensures citizen participation in the development and governance process. The democratic developmental state is thus often viewed as key to addressing the exclusion of groups from the state, and subsequent development process (Edigheji, 2005, 2011; White, 1998). It retains the autonomous institutional attributes characteristic of the developmental state, but the emphasis is on an inclusive approach to public policy making, referred to as 'inclusive embeddedness' (Robinson and White, 1998).

The autonomy of the developmental state of East Asia was the ability to assert its will over society by suppressing civil society, and the strength of the state is partly derived from its autonomy from social forces that might potentially derail the development process. However, although a rationalized bureaucracy must exist to insulate the state from capture, the state must not be completely isolated from society, or else it risks becoming self-serving. These ties with society provide institutionalized channels for the negotiation, and renegotiation, of goal and policies (Evans, 1995). The democratic developmental state is offered as a more labour friendly alternative, because instead of the development process being derived from an alliance between the political and economic elite, development goals are derived from a broad-based social alliance.

Most conceptual frameworks limit state-society relations to an elite coalition between the government and business, to the exclusion of other sectors of society that are often marginalized, including labour and civil society (Hayashi, 2010; Leftwich, 2001; Vu, 2007). It is naïve to ignore the contradictions of the developmental state though. To achieve economic growth high rates of investment are required, which comes from either international or domestic savings. One of the key elements of the relationship between the state and industrialists was the capital (often in the form of credit) that the state had available to invest strategically in a capital scarce environment (Evans, 1995; Hayashi, 2010).

High savings rates have adverse consequences on the distribution of the social benefits of economic growth and industrialization through austerity measures of public services and limits on wages (Dansereau, 2012, p. 10). In the authoritarian model of the developmental state these high rates of investment are achieved through a low wage model, supported by an alliance between the political and economic elite. It is argued that the democratic developmental state rectifies this problem through participation, creating a social pact that can even replace real democracy (Gumede, 2009).

Powerful groups, however, often dominate the participatory model, crowding out the voices of those with less political, economic and social power – the voiceless (Cook and Kothari, 2001). This marginalizes a weak civil society and labour movement, excluding them from the development coalition. Although the democratic developmental state thus engages more sectors of the society in the development process, it can still be

as detrimental to labour as the low wage model that was pursued by the authoritarian NICs.

The experience of the NICs, and the emerging countries that have industrialized and transformed their economies, demonstrates the importance of the state, contrary to neoliberal policies that have heralded the retreat of the state in favour of market forces. A developmental state that has sufficient state capacity to be effective in the targeted areas, and has a development vision that utilizes the state's capacity to work towards development, can achieve economic growth and rapid industrialization. There are key problems to this model, however, as the developmental state is prone to elite capture, and its viability in the African context is thus often contested. It also is characterized by a low wage, and authoritarian model. The democratic developmental state is thus advocated to cultivate a social pact, based on broad based participation in the development process, to evenly distribute the gains of economic growth.

The African Mining Vision

The African Mining Vision (also known as AMV or the Vision) incorporates the democratic developmental state into a mining regime developed specifically for African states. It was drafted by a technical draft force established by the African Union and UNECA, and included representatives from the African Mining Partnership, the African Development Bank, the United Nations Conference on Trade and Development (UNCTD) and the United Nations Industrial Development Organization (UNIDO).

The AMV moves beyond the current dominant market-directed model focused on extracting minerals for export and sharing revenue, and instead aims to structurally transform African economies through an industrialization strategy that is based on natural resources (UNECA et al., 2011, p. 18). It emphasizes that this is crucial for the eradication of poverty and achievement of sustainable development on the African continent. It proposes a paradigm shift away from a model of extractive resource exploitation based on a high dependency on international export markets that has proven unable to bring socio-economic development to Africa (Ibid.).

The model described by the AMV reduces the dependency of African states on international export markets, and moves towards a development that brings the structural transformation of African economies through the use of natural resources to catalyze broad based and inclusive growth. It emphasizes the development of Africa's resource markets, and fostering of economic diversification (CCIC Africa-Canada Forum and the Canadian Network on Corporate Accountability, 2013, p. 2). The AMV considers how workers and communities can derive sustainable benefits, while simultaneously protecting the environment. Nationally, it focuses on how states can derive a fair share of resource revenues, and support local procurement through better negotiation of contracts with companies, and regionally it focuses on integrating industrial and trade policy (Ibid., p. 1-2).

Mining Revenues

Under the market-directed model of mining regulation, governments have the difficult task of providing sufficient incentives for FDI, while at the same time collecting an adequate share of revenue for socio-economic development. The majority of the mineral policy regimes instituted under neoliberalism distribute the tax burden over the useful life of the mining assets, so that little tax is paid until the invested capital has been recovered. This postpones tax payments, and results in the benefits of a boom period to accrue mostly to the investor, rather than the state (UNECA et al., 2011, p. 92).

In contrast to these mineral policy regimes, the AMV recognizes the need to reconcile the expectations of investors and governments. It emphasizes that the fiscal policy regime should be attractive for investors, as well as maximize the government's rent capture (Ibid., p. 99). As such, the fiscal regime proposed by the AMV is comprised of a variety of tax mechanisms, a mix of indirect and direct taxes. Direct taxes would include a corporate income tax, progressive profit taxes, resource rent taxes and windfall profit tax, while indirect tax instruments include import and export duties, value added/goods and services taxes and labour levies. Other instruments of a balanced fiscal regime under the AMV include competitive bonus biddings, surface and licence fees, production sharing contracts, and state equity participation.

Creating Linkages

The AMV's proposed fiscal regime goes beyond the collection of mining revenues to fund physical and social infrastructure, and emphasizes that a fiscal regime's development should be guided by national sustainable development objectives (Ibid.). Under the AMV, the role of the state is defined by strong public policies, particularly industrial policies. A strong developmental state is identified as a precondition towards promoting economic diversification, the creation of decent jobs, and wealth distribution (CCIC Africa Canada Forum and the Canadian Network on Corporate Accountability, 2013, p. 3). Policy reforms under the AMV seek to integrate mineral and development policy. As such, the AMV's mineral resource tax policy is not restricted to maximizing mining revenue to government, and proposes a series of taxes and tax incentives aimed at increasing the linkages of the mining sector with other areas of the economy. The AMV identifies industrialization as the key to economic development, and as such emphasizes Africa's mineral policy must be aimed at supporting the industrialization of the continent.

The AMV identifies economic diversification and industrialization as key to linking the mining sector to other areas of the economy, and preventing the mining sector from operating in an enclave. Under the AMV, the African mining sector would catalyze and contribute to broad based growth and development through integration into the broader market. The state would play a key role in creating policies that align mining companies' strategies with public economic policy and priorities for industrial and private sector development, investment promotion and competitiveness (UNECA et al., 2011, p. 123). The AMV argues that "the disadvantages of foreign capital can be

eliminated or mitigated through state strategies that oblige or incentivize trans-national corporations to realize local linkages” (Ibid., p. 107). Mineral beneficiation is thus a central component of a mineral policy prescribed under the AMV, as well as requirements on mineral companies to make their output available to local companies at free on board or export parity prices, or to sell a proportion of their production on national or regional markets (Ibid., p. 110).

Under neoliberalism, international trade and investment was liberalized, including the trade in goods and services, rules on investment and public procurement, and more stringent intellectual property protection (Ibid., p. 116). The mining codes for attracting FDI under the market-directed model involved a liberal approach to the sourcing of inputs of goods and services, including retaining large amounts of foreign exchange earnings outside of the producing country to cover imports, and other operational expenses. Trade liberalization also constrained the ability of states to use subsidies, taxes and other mechanisms to develop local production of new products. Constraints were placed on the ability of governments to place performance requirements for technology transfer and local procurement on foreign investors, and other key policies for creating linkages with the mining sector.

The AMV emphasizes that resource linkages should be geared at industrialization, transforming the economy from one based on primary resource extraction to one based on highly skilled and knowledge intensive manufacturing. The key drivers of linkages are a significant entrepreneurial base to service local, regional and export markets; competitive production (high productivity and low cost); craftsmanship and specific

skills; access to domestic and foreign markets; special economic zones; and research and development (Ibid., p. 113). As such, the AMV seeks to create policies that address these key drivers of linkages.

The AMV emphasizes that to build linkages policy reforms should create the business environment, and public sector institutions to foster growth. The AMV states that governments can build linkages by setting terms that control access to mineral resources by imposing linkage conditions on mineral rights holders, and providing incentives for investors to structure projects to deepen integration of mineral projects into the broader economy. To the AMV, this means including national local content and value addition milestones into the mineral regime. These terms include local procurement agreements and minimum levels of beneficiation in the mineral extraction agreement to promote beneficiation before export (Ibid.). Policies the AMV prescribes to governments to create linkages with the mining sector include the stipulation and enforcement of minimum local content requirements in mining contracts and licenses. Under the AMV, government policy should also develop upstream capital and service industries, which are critical for employment and generating new products and processes (Ibid.).

The AMV emphasizes that policy reforms should also target extending economic infrastructure, particularly power and transport, critical for mineral development. Infrastructure can be a detriment to industrialization, as it “directly affects the degree of agglomeration of upstream and downstream industries associated with a particular mining operation, while influencing the growth of other economic sectors with similar requirements” (Ibid., p. 109). Poor infrastructure development, therefore, is a key

deterrent to the realization of linkages, and as such the AMV recommends targeted government policies to improve sub-Saharan Africa's infrastructure deficit, and provide trunk infrastructure for the development of other economic sectors (Ibid.).

The AMV also emphasizes that policies should focus on developing human resources, and fostering innovation. It recommends directing mining policies towards expanding higher technical skills required by the minerals industry, including "selective actions by both the private and public sector to build sustainable capacity in geology, mining, minerals processing and extractive metallurgy – to help to localize the industry" and develop linkages (Ibid., p. 110). These policies would include tax incentives for local research and development, and technical resource development, as well as the allocation of resource rents to developing technological linkages (Ibid.).

The AMV also emphasizes a mining framework that employs a multi-stakeholder approach, with "multiple government departments and agencies needed to play constructive roles, nationally and regionally" (Ibid., p. 114). The AMV emphasizes "transforming the mining enclave into part of a dynamic resources-based industrial economy will require proactive and deliberate actions from key stakeholders, particularly governments" (as cited in UNECA et al., 2011, p. 115). This requires a multi-stakeholder approach (labour, business and government), but also requires multiple government departments and agencies to work together, nationally and regionally.

Corporate Social Responsibility and the State

CSR also has its place in the African Mining Vision's mining regulatory framework, which gives it an important role in development, but emphasizes that CSR should complement, rather than be a substitute for the states' own responsibilities to provide basic infrastructure, and other public goods and services to its citizens. The AMV's notion of CSR focuses on enhancing the capacity of states to fulfil their own development priorities, and social and economic responsibilities. To achieve these development plans, "companies are expected to contribute by fulfilling their tax obligations in a fair, transparent way and by paying equitable royalties" (CCIC Africa Canada Forum and the Canadian Network on Corporate Accountability, 2013, p. 3).

A broad range of development issues are covered by CSR initiatives, and the CSR programs of many mining firms covers issues of governance, employment, occupational health and safety, community and environment. A sampling of African states, however, shows a preponderant focus of the state, civil society and the public on community and environment issues (UNECA et al., 2011, p. 87). Yet, as already stated previously in this literature review, employment is one of the key factors for the contribution of mining to development. The AMV argues that it is to the detriment of CSR programs that they do not focus more on employment issues, especially with the widespread casualization of work and the employment of contract labour in African mine's that has occurred under neoliberalism (Ibid.).

CSR risks blurring the lines of responsibility between the mining company, civil society organizations, and the local, regional and national governments (Ibid., p.88). As such, the AMV emphasizes that CSR frameworks should clearly outline the responsibilities of each stakeholder, and should not replace governmental responsibilities, but rather complement government development initiatives through local government institutions and authorities (Ibid.). The AMV emphasizes that a CSR framework should include indicators for assessing the impact of CSR projects, and focus on the participation of stakeholders, allowing for a review of obligations and commitments. Reporting requirements should also be a part of the CSR framework. The CSR framework under the AMV thus incorporates the participatory model of the democratic developmental state. Under the mining regulatory framework prescribed by the AMV, CSR, and the private sector are not the main agents of development, but rather work in conjunction with a strong democratic developmental state to drive industrialization, and hence development.

Thesis Statement

Natural resources are not always the golden ticket to development, as argued by neoclassical economics. Instead, through a variety of avenues manifested in the resource curse, natural resource abundance can impede development. In resource abundant developing countries suffering from the resource curse economic growth is negatively impacted by Dutch disease, declining terms of trade, deindustrialization, and the price volatility of commodities that render government spending unsustainable during downturns in commodity prices. Natural resources can also encourage a rentier state, and

conflict that weakens institutions key to development. As a result, developing countries that are rich in natural resources can also be characterized by government underinvestment in health and education, depriving the country of the necessary human capital to support the economy. This impedes economic growth and diversification, and as such keeps the country dependent on natural resources.

Yet, the natural resource curse is not inevitable, and can be mitigated through state involvement. Mining can contribute to development when a state implements a semi-directed mining model of mining regulation, which integrates the mining sector into national development plans. Whereas the market-directed model leaves development to market mechanisms, the semi-directed model of mining regulation affords the state the regulatory role to actively intervene in the support of development. It rejects neoliberalism's demonization of the state that has resulted in policies that have undermined the state's institutional and regulatory capacity to actively intervene in support of development, and replaced state intervention with self-regulation and CSR.

This thesis identifies a semi-directed model of mining regulation as crucial to the mitigation of the resource curse, and the contribution of mining to development in Botswana. The semi-directed model stems from Botswana's orientation as a democratic developmental state. It implements a fiscal policy framework that maximizes rent capture for the government, while simultaneously attracting foreign investment. A transparent and accountable government invests mining revenue in support of the development objectives it sets through six-year national development plans. The national development plans identify economic diversification, and employment creation as key to development

in Botswana. Thus, acting as a democratic developmental state, the Botswana government uses its regulatory role to drive economic diversification and the subsequent employment it creates, through the creation of linkages with the mining sector. This is achieved through the establishment of the necessary institutional support structures, and by controlling access to diamonds through the imposition of conditions in the issuing of mining licenses that require a minimum level of beneficiation. Furthermore, under the semi-directed model of mining regulation CSR works in conjunction with a strong democratic developmental state to drive development.

Under Botswana's semi-directed model of mining regulation the private sector engages in production, while the state plays an important regulatory role tying the private sector into national development plans. Through the mining joint venture with De Beers in Debswana, whose existence is possible because of the country's semi-directed model of mining regulation, the Botswana government has captured a substantial percentage of the resource rents as a shareholder in the country's largest mining company. As a result of a transparent and accountable governance structure, the government has subsequently invested this mining revenue into social spending to contribute to development. This investment, and the integration of aspects of Debswana's Corporate Social Investment Programmes into national development plans, created a highly skilled and healthy workforce, and the physical infrastructure necessary to localize the mining sector.

Using a semi-directed model of mining regulation, the state has also used its regulatory role in the issuing of mining licenses to Debswana to integrate the mining sector into key national development plans, such as economic diversification and

employment creation. This has led to the relocation of the diamond sales and aggregation activities of De Beers from London to Botswana, and the creation of a cutting and polishing industry in the country.

This thesis will argue that Botswana's semi-directed model of mining regulation has been crucial to mitigating the resource curse, and ensuring mining's contribution to development. While the private sector has engaged in production, the semi-directed model of mining regulation has allowed the state to use its regulatory role to integrate Debswana's operations into national development plans.

Methodology

A qualitative, case study approach was used by this thesis in order to understand Botswana's model of mining regulation, and its role in limiting the resource curse and mining's contribution to development. A case study of the mining joint venture of Debswana in Botswana was chosen. This thesis chose to research the role of Botswana's semi-directed model of mining regulation as the country has been a highly resource dependent state since independence in 1966, praised by scholars for its successful development based on diamond-mining. Debswana was chosen as the mining company of focus for a number of reasons. It is the largest mining company in Botswana, and clearly illustrates the semi-directed model of mining regulation, as the Botswana government plays an active role in the company as a joint-partner with the De Beers Group of Companies.

Researchers have previously studied Botswana's resource-based development, and a vast literature exists on natural resources and development. While there is extensive literature on the joint venture in Debswana itself, there is a lack of research on the regulatory framework that governs it. This research is necessary to help determine whether a semi-directed model of mining regulation mitigates the resource curse, and ensures mining's contribution to development.

Data Needs and Collection Techniques

The research for this project was carried out between the fall of 2011, and the fall of 2014. First, starting in September of 2011 and lasting until January 2013, background information on mining and development, and Botswana was gathered in Halifax, Canada using primary and secondary document searches through Saint Mary's University Patrick Power Library. Fieldwork in Botswana was then conducted during the month of February 2013, taking place in a variety of environments from government, Debswana and mining industry offices in Gaborone, to the Botswana Mining Workers' Union offices in Selebi-Phikwe.

Semi-structured interviews were the main technique employed in the field, and were chosen because they were loosely structured, non-directive, in depth interviews, which provided a 'rough guide', while allowing for richness in the findings. Interviewees were able to elaborate on their answers because the questions were open-ended, and not coded. Under this technique interviewees were active participants, and "...their insights, feelings, and cooperation [were] essential parts of a discussion process that reveal

subjective meanings” (Neuman and Robson, 2008, p. 251). This technique allowed myself the flexibility to probe interviewees’ responses, and ask the ‘how’ and ‘why’. The technique was extremely useful in following lines of inquiry based on a participant’s response.

In the field, primary quantitative and qualitative data was gathered through semi-structured interviews conducted with Botswana government, Debswana, mining industry, and Botswana Mine Workers Union (BMWU) officials. Semi-structured interviews were conducted with government officials from the Ministry of Minerals, Energy and Water Resources (MMEWR), the Ministry of Education and Skills Development, and the Ministry of Finance and Development Planning – all located in Gaborone.

I identified interviewees for the government, and Debswana by contacting the ministries or organization directly. Prior to departing for fieldwork I made initial contact via e-mail to introduce myself, and my research project. All interviewees signed an Informed Consent Form. Officials from Debswana, and the government officials asked for their job titles to not be revealed, as it could easily reveal their identities. Data gathered from interviews are referenced by their interview number, for example Interview #1, Interview # 2 etc. (see Appendix 1).

Semi-structured interviews were used to gather qualitative data on government policies pertaining to the diamond sector, and explored their contribution to mitigating the resource curse. The data obtained from these interviews is used in this thesis to illustrate the government’s mining regulatory framework, national development plans (Vision 2016 and National Development Plan 10), and beneficiation policies.

Quantitative data obtained from these interviews included mining revenues accumulated by the government, and their expenditure, as well as employment and education and skills training statistics.

A semi-structured interview was also conducted with an official from Debswana. This contact was identified through contacting Debswana directly prior to departure for fieldwork, contact information was gathered from Debswana's website. Qualitative data obtained from this interview pertained to Debswana's CSR programs, including the objectives of the programs and their outcomes, and how these programs line up with the Botswana government's national development plans. The interview also gathered quantitative data on employment in the mining company (e.g. number of local Batswana employed, remuneration, training programs), and economic diversification through the creation of a diamond cutting and polishing industry in Botswana.

A semi-structured interview was also conducted with a senior official from the BMWU, which I reached out to prior to departing for fieldwork. This interview was used to triangulate the quantitative data obtained from documentary searches, and interviews with the government and Debswana regarding employment with the mining company. The BMWU interview was also used to gather qualitative and quantitative data on the impact of Debswana's CSR programs (education and skills training and health care), and the government's employment (creating linkages in the economy; education and skills training), and development strategies on diamond mineworkers and the surrounding mining communities.

The data needs of this thesis were focused around identifying the mining regulatory framework that governs the mining joint venture in Debswana. As such, I obtained copies of the three mining regulatory acts that have been passed in Botswana since independence in 1966- these are the Mines and Minerals Act of 1967, 1976 and 1999. These regulatory acts provided the data on the regulatory framework that governs the diamond-mining sector in Botswana.

As it is was identified in the literature review that the resource curse manifests in part through mining revenues, data was required to illustrate the semi-directed regulatory role of the government in mitigating this aspect of the resource curse. This thesis thus required data to identify the amount of mining revenues the Botswana government receives from Debswana, and how they are invested.

Data regarding the fiscal regime under which Debswana operates was obtained through the Mines and Minerals Act of 1999, and the Income Tax Act that I obtained from the Botswana government's website. A documentary analysis of these regulatory acts illustrated the government's regulatory role in the taxation of the mining sector, but quantitative data was also required to determine the amount of mining revenue that accrues to the government. Section 51 of the Mines and Minerals Act, 1999 states that mining licenses for diamond mines are subject to negotiation. As the exact agreement between De Beers and the Botswana government is classified, I also used other documents and techniques to approximate the mining revenues that Debswana provides to the government. These included government budget documents, and semi-structured interviews with Debswana and government officials who provided me with approximate

numbers. I also used secondary research on Debswana to obtain this data.

As cited in the above literature review, the resource curse can be mitigated through the investment of mining revenues into human capital and physical infrastructure. Qualitative and quantitative data was thus gathered on how mining revenues are invested in Botswana. This data was gathered using semi-structured interviews, and document analysis. A semi-structured interview with an official from the Ministry of Finance and Development Planning discussed government spending priorities, and an interview with an official with the Ministry of Education and Skills Development provided data on the government's education system and internship programs. This data was collaborated with budget information gathered from Botswana's Central Statistics Office, and policy documents from the Ministry of Finance and Development Planning, and Ministry of Education and Skills Development websites, as well as secondary research.

The literature review also identified Dutch disease, deindustrialization, and the problematic enclave nature of the mining sector as contributing to the resource curse. As part of mitigating the resource curse, and ensuring mining's contribution to development, the Botswana government has focused its economic diversification efforts regarding the mining sector on the establishment of a cutting and polishing industry. This thesis, therefore, required qualitative data on the state's beneficiation policies to highlight the role of the semi-directed model of mining regulation in mitigating this aspect of the resource curse.

Qualitative data regarding the government's beneficiation policies was gathered through semi-structured interviews with an official from the Ministry of Minerals, Energy and Water Resources; an official from the Ministry of Finance and Development Planning; as well as through government policy documents such as the National Development Plans. The criteria to obtain a Sightholder license, necessary to operate a cutting and polishing factory in Botswana, was readily listed on the website of the Diamond Trading Company of Botswana (DTC Botswana).

The qualitative data on the state's regulatory role in beneficiation also illustrated the importance of the mining joint venture between De Beers and the Botswana government to beneficiation. Data was therefore also required on Debswana's CSR programs, and their relationship with the government's national development plans (Vision 2016 and NDP 10), and beneficiation policies. This data was gathered from a semi-structured interview with an official from Debswana, and Debswana's annual CSI reports and website.

Employment is an important avenue through which mining contributes to development. As such, I also gathered quantitative data on employment statistics for Debswana, identifying the number of Botswana employed in the mining company, and the skill level of these jobs. Data was also required on the impact of beneficiation policies on economic diversification, and employment. Quantitative data on employment in the cutting and polishing factories was obtained through secondary research, and data gathered from semi-structured interviews with government officials.

Limitations to the Scope of the Study

The research faced some limitations regarding the availability of interview participants. As I was only conducting fieldwork for 4 weeks, I was unable to conduct every interview I had planned prior to my departure. Other methods of data collection were employed to mitigate this though, and semi-structured interviews are supported by documentary analysis and secondary documents. Much of the qualitative and quantitative data in this thesis was gathered from documentary analysis, including various government documents, such as the mining acts and National Development Plans. Qualitative and quantitative data was also gathered from various World Bank, Organization for Economic Cooperation and Development (OECD), and Debswana reports.

Through the use of multiple techniques to gather quantitative and qualitative the research validates the data gathered. The data gathered from fieldwork in Botswana, combined with data in the academic literature, were able to answer the research question. The case study of Botswana's semi-directed model of mining regulation, and the joint venture Debswana, examines the role of the state in mitigating the resource curse, and ensuring mining's contribution to development. It is important to note, however, that each state has a different political, social and economic milieu that affects the role of the state, and the contribution of mining to development. This case study focused on Botswana, a state that did not experience formal colonialism, and has had a stable political system since independence in 1966. This has led to unique political, economic

and social conditions in Botswana, which may not apply to other resource rich developing states.

It is also important to note that Botswana has a unique position as a major supplier to the De Beers Group of Companies, and as such the case study may not be applicable to other countries mining other commodities, as these countries will not share Botswana's negotiating powers with the private sector.

Some general conclusions regarding the mining regulation governing the diamond sector in developing states can be concluded though. Following the compilation, and thorough analysis of primary and secondary data gathered through documentary searches and fieldwork, a number of conclusions were drawn concerning the role of a semi-directed model of mining regulation in mitigating the resource curse in Botswana, and ensuring mining's contribution to development, which will be explored in the following chapters.

Chapter 2

Botswana's Model of Mining Regulation

Introduction

Botswana is a landlocked and arid country in Sub-Saharan Africa, sharing a border to the south with South Africa, Zambia to the north, Zimbabwe in the northeast and Namibia to the west. The country is sparsely populated with a small population of approximately 2 million (World Bank, 2014). Botswana's population is young, with 32.6 per cent below the age of 15 in 2012, 63.4 per cent between the ages of 15 and 65, and 4 per cent over the age of 65 (United Nations Department of Economic and Social Affairs, 2013). Most of the population lives in the arid south of the country, including the 11 per cent of the population that lives in and around the capital of Gaborone (Central Statistics Office of Botswana, 2011). This is representative of the general urbanization trend that is occurring in the country. Botswana is one of the most sparsely populated countries in the world, however, and there are pockets of isolated rural residents, especially in the north and Kalahari Desert (United Nations Department of Economic and Social Affairs, 2013). This represents a particular challenge to the government in development, which must provide services over a vast arid, and sparsely populated territory.

The country was never officially colonized, but rather was the British protectorate of Bechuanaland from March 31, 1885 until it gained independence on September 30, 1966. At independence Botswana's economy was dependent on cattle exports, and remittances from workers in South African mines. It was one of the ten least developed countries globally, with almost no infrastructure or human capital. There were only 12

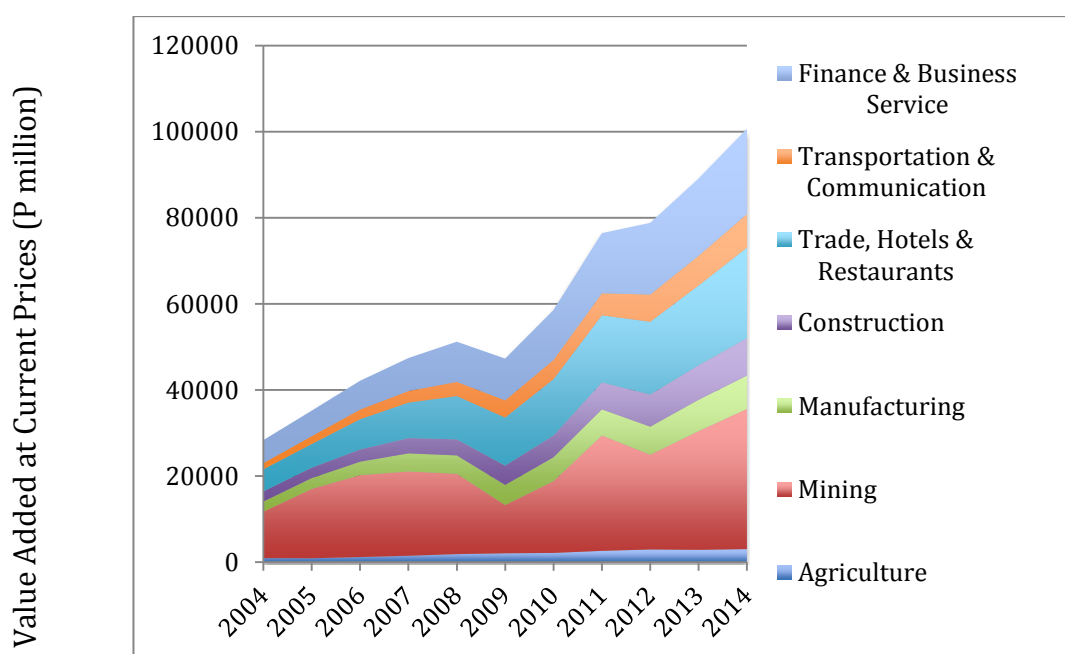
km of tarred road, few public services, and only 100 secondary school and 22 university graduates (Acemoglu et al., 2003, p.80). In 1994 Botswana became one of only three countries to graduate from the United Nations Least Developed List, and today is an upper middle-income country with an annual GDP of USD \$14.79 billion (World Bank, 2014). Real GDP growth averaged 16 per cent between 1970 and 1974, and sustained high growth until 1989. Poverty rates have plummeted from 59 per cent in 1986 to 19.3 per cent, and the GNI per capita is USD \$7,730, up from \$516 in 1994 (Ibid). Gross primary school enrollment is at 106 per cent, and Botswana also scores well in health indicators, as 95 per cent of the population has access to clean drinking water and there are high rates of immunization, and widespread access to primary health care (Ibid.).

At independence the mining sector in Botswana contributed approximately 1 per cent of the GDP (P 32 million)¹, less than 1 per cent of exports, and only about 3 per cent of formal employment, but that changed with the discovery of major diamond deposits (Criscuolo, 2008, p. 10). Diamonds were discovered in Botswana in 1967, just one year after independence, with production beginning in 1971. The country was transformed from an agricultural economy into a major global producer of diamonds, which currently produces approximately 25 to 30 per cent of the world's gem quality diamonds (Korinek, 2013, p. 15). The largest diamond mining company in the country is Debswana, a joint venture between the Botswana government and the De Beers Group of Companies, which operates four open pit diamonds mines and one coal mine. Since the discovery of diamonds Botswana has maintained one of the highest economic growth rates in the

¹ 1 USD = 9.66772 BWP as of Feb. 15, 2015. Retrieved from <http://www.xe.com/currencyconverter/convert/?From=BWP&To=USD>

world averaging 7 per cent annually, and the diamond sector accounts for 33 per cent of the GDP (Debswana, 2014a). Figure 1 below illustrates the importance of the mining sector to Botswana's economy. The mining sector is the largest contributor to the country's GDP, followed by the services sector, and then the government. As such, the mining is crucial to Botswana's economy.

Figure 1. GDP by Sector 2004 to 2014



Source: Compiled by author using data from the Central Statistics Office of Botswana, 2015 (http://www.cso.gov.bw/images/gdp_q4.pdf)

There have been three Mines and Minerals Acts passed since independence to regulate the sector. These were the Mines and Minerals Act of 1967, 1977 and 1999. Since the first Mines and Minerals Act of 1967, Botswana has had a semi-directed model of mining regulation, most clearly illustrated through the mining joint venture with De Beers in Debswana, and the development and economic diversification policies that

leverage this joint venture to create employment opportunities for local citizens. The government has implemented numerous policies to diversify the economy and lessen the country's dependence on diamonds, complemented by development policies aimed primarily at health, education and physical infrastructure. The private sector is afforded a prominent role within this regulatory framework, and the joint venture in Debswana has an important role to play as the mining company engages with the government to integrate its operations with the state's development plans.

The following chapter explores Botswana's semi-directed model of mining regulation. It will commence by examining Botswana's colonial inheritance, and the evolution of the mining regulatory framework in Botswana culminating in the current semi-directed model of mining regulation that is in place. The chapter will then move to the mining joint venture between the Botswana government and De Beers in Debswana, outlining the evolution of the relationship since independence to present. Finally, the chapter will conclude by illustrating the changes that have occurred in the diamond-mining sector in recent years, as smaller diamond companies begin operations in Botswana. The data for this chapter was gathered through documentary analysis, secondary research, and semi-structured interviews with Botswana government and Debswana officials, and the BMWU.

Botswana's Colonial Inheritance

Botswana was the British protectorate of Bechuanaland from 1885 to independence in 1966. The protectorate era is often described as either a time of 'benign neglect' (Dale, 1995) or one of 'light rule' (Acemoglu et al., 2001), as 75 per cent of the colonial expenditures went towards administrative costs, with minimal investment in infrastructure or economic development (Parson, 1984, p.22). Colonialism, however, still had an important impact on the protectorate, and subsequent post-independence state. During the Protectorate era elite politics were imbedded as Tswana chiefs worked with colonial district commissioners as intermediaries between the colonial administration, and the local population. Tswana tribal chiefs were responsible for collecting taxes for the colonial administration when in 1899 a hut tax of one-pound, payable in money, was introduced. Tax collection also shaped the protectorate as it introduced a cash-based economy, and forced the local African population into the labour market, resulting in a massive migration of mostly male Batswana to the mines in South Africa (Arrighi, 1973).

Tswana chiefs were the political and economic elite as cattle owners during the Protectorate era and early independence, and formed a large portion of the constituency base for the Botswana Democratic Party (BDP) that was elected to govern in the first elections held in 1965. As the Protectorate moved towards independence it was imperative that colonial institutions transform, and during this era a tribal council system was established, which began to gradually shift authority away from the tribal chiefs to a centralized authority (Picard, 1984, p.93).

Britain's minimal investment in infrastructure and economic development in Bechuanaland also began to increase after 1948 when a succession crisis in the Bamangwato chiefdom, and uncertain political relations with South Africa, made the intended amalgamation of the protectorate with South Africa less feasible. From 1948 to independence in 1966, the British provided Bechuanaland with 44 million Rand in budgetary grant aids, which was 22 times greater than the total aid received by the protectorate in the previous 58 years (Hermans, 1974, p.113).

Post-independence Botswana, thus, faced many of the same challenges that other newly independent colonies did, despite the 'light rule' or 'benign neglect'. There was a political elite embedded in the Tswana chiefs who formed the BDP, weak governing institutions, and a lack of infrastructure and economic development. Botswana gained independence from Britain through a peaceful negotiation process, holding its first elections in 1965, and gaining independence on September 30, 1966. The momentum of the rapid expansion of the state administration that occurred after 1948 continued throughout the post-independence era, carried out by competent bureaucrats, who were either expatriate staff or Botswana civil servants educated in either London or South Africa. This is in contrast to the Africanization of the bureaucracy that was dominant throughout Africa during the post-independence era. In 1964, expatriates filled 75 per cent of all senior and middle management in public services in Botswana. This share was still at 33 per cent in 1977 (Parson, 1984, p.41-42).

The transformation of colonial institutions, and slow indigenization of the bureaucracy built up Botswana's institutional capacity. As discussed in the resource curse literature, institutional capacity is an important aspect of mitigating the resource curse, and ensuring mining's contribution to development. It was especially imperative to nurture the emergence of the mining industry in Botswana, whose economic impact prior to independence was minimal.

Evolution of Botswana's Mining Regulatory Framework

There was no large-scale mining in Botswana during the protectorate years. The landlocked, arid country was seen by British colonial administrators to be lacking in natural resources. The little mining activity that did occur was small-scale, and tribal authorities owned the land and mineral rights (Amegashie and Kamara, 2008). This meant that mining companies were required to negotiate contracts with individual Tswana tribes, with mining revenue accruing to individual tribes rather than a central colonial authority. In the early 1960s most of the known mineral deposits were located in the Tswana tribal territory of Bamangwato, the tribe of the country's first president Sir Sereste Khama. Some mineral rights had already been ceded to private companies in parts of the country though. Mining was thus not a major economic activity during this era. Instead, the economy was dependent on cattle exports and remittances from migrant workers in the South African mines. As such, at independence the Botswana government faced the challenges of becoming independent of British budgetary subsidies, and building a market economy that could compete with neighbouring South Africa.

During the protectorate years there had been little investment in then Bechuanaland as a source of minerals. At independence the government recognized that it did not have the financial resources, or expertise, to embark on mineral development on its own. Instead, the Botswana government chose to pursue FDI during the early post independence years. The Botswana government's strategic decision was for the international private sector to lead the exploration, development, and operations of mines. An effective mining sector industrial policy was identified as a key contributor to development to attract FDI (Criscuolo, 2008, p.3). The government focused on reforming property rights and the legal framework for mining; building effective institutional governance of mining; and streamlining regulations and public-private governance of the mining sector.

Shortly after independence, but before the discovery of diamonds, Botswana passed the Mines and Minerals Act of 1967. This was the first step in reforming the property rights, and legal framework to attract FDI to mining. The Mines and Minerals Act of 1967 was an important piece of legislation transferring mineral rights to the central government (Criscuolo, 2008; "Mines and Minerals Act", 1967). This allowed the central government to leverage the mining sector for the benefit of the entire country, rather than keeping it isolated with individual tribes, and disintegrated from the national economy and development plans. Leaving mineral rights vested in tribal authorities and private companies was critical as it would result in uneven growth of the national economy, as well as deprive the central government of an important source of revenue (Criscuolo, 2008, p. 2).

The Mines and Minerals Act of 1967 also simplified the procedure for obtaining prospecting and mining licenses. With mineral rights vested in the central government, mining companies were no longer required to negotiate with several authorities and tribes to obtain licenses, which could be a complicated and time consuming endeavor. This simplifying of the licensing process supported the government creating a stable, and conducive business environment to attract foreign private investment (Ibid., p. 3).

It is important to note that while the vesting of mineral rights in the central government was conducive to attracting FDI, it has proved problematic for the San people of the Central Kalahari Game Reserve (CKGR). With the discovery of diamonds in the CKGR in the early 1980s, the San tribe has been persecuted by the Botswana government, and forcibly relocated off their land. While the government has denied that this is because of the discovery of diamonds, many international NGOs have maintained otherwise (see for example Survival International). In the case of the San, and diamonds in the CKGR, the tribal people are finding themselves in conflict with government owned mineral rights. While this thesis does not deal with the problematic relationship between the San people, the Botswana government and diamonds, it is important to highlight that this conflict is occurring.

In addition to the transfer of mineral rights, the government also focused on building effective institutional governance of the mining sector. As such, several key government departments were established in the post-independence years. For example, the Department of Geological Survey was established to support market development. To attract foreign investment in the mining sector the Botswana government used

development assistance funds to collect good quality, detailed geographical surveys to obtain a comprehensive view of the country's resources. In 1993 a further study was undertaken to provide more detailed information, and geo-chemical maps. Currently, Botswana is ranked second highest among non-OECD countries in the quality of geological information (Wilson, McMahon & Cervantes, 2013, p. 17). The government also established the Department of Mines, which was in charge of promoting mineral investments, evaluating mining lease applications, and monitoring of operations. The department also played a pivotal role in providing professional and technical support to Botswana's Minerals Policy Committee, and directors serving on mining company's boards.

During the post-independence years, the Botswana government also improved and streamlined the legislation and regulations governing mineral development to encourage exploration, and guarantee an appropriate rate of return to mineral investors, while providing mineral revenue to the government to finance national development strategies (Criscuolo, 2008, p. 12). The government maintained a fiscal policy towards mineral development consisting of taxation, royalties, and equity participation. Mineral projects were subject to a 40 per cent taxation rate, the same rate as all other commercial enterprises. Royalty rates were tax deductible, and varied according to the mineral (Ibid.). The government also sought equity participation through the establishment of joint ventures in the mining sector.

Equity participation, through the establishment of joint ventures, was an important component of Botswana's early model of mining regulation, and the government has pursued equity participation in major mining operations since the post-independence years. Equity participation was possible because of the Mines and Minerals Act, 1967, which enabled the government to obtain up to 15 per cent free equity participation in mining operations ("Mines and Minerals Act", 1967). Equity participation was achieved through negotiations between the government and the mining company that occurred during the licensing process.

One of the most important institutional governance structures established in the early post-independence years in regards to integrating mining with national development was the Minerals Policy Committee. The Minerals Policy Committee set the taxation and revenue framework for the mining sector, and took a lead role in negotiations with mining firms. The Minerals Policy Committee played an important role in promoting mineral development in Botswana by negotiating special arrangements with multinational mining corporations. It was this committee that negotiated the lucrative partnership that was established in Debswana between the government and the De Beers Group of Companies in the late 1960s. The committee used Botswana's position as a major diamond producer to leverage concessions from De Beers that have resulted in a favourable revenue sharing formula, and would later support economic diversification plans.

In an interview with the Ministry of Minerals, Energy and Water Resources (MMEWR), an official identified that equity participation allowed the Botswana government to promote local ownership of mines. They emphasized that even where such mining companies were publicly listed, the shares acquired by local investors were negligible in terms of influencing decisions, and that an equity stake was an alternative method of promoting local ownership, and integrating mining operations into national development strategies (Interview #1; see also Criscuolo, 2008). The official emphasized that equity participation facilitated a constant dialogue between mining companies, and the government because government was represented on the Board of mining companies. This dialogue helped align mining company strategies with national development plans, and enabled the private sector to discuss with the government regulatory or policy issues that would impact the development of the mining sector (Ibid.).

The role of mining in Botswana's development has grown since independence in 1966, and there have been two revisions to the Mines and Minerals Act since it was first passed in 1967. These revisions occurred in 1977 and 1999. Equity participation has remained an important pillar in the mining regulatory framework though. While Botswana has never had any prohibitions on foreign ownership of companies, Section 40 of the Mines and Minerals Act 1999 still provides measures for active government participation in the mining sector ("Mines and Minerals Act", 1999).

Through the equity participation provision the government is able to acquire a minority stake in all mining projects as a partner, and seek participation by having representation on the boards of mining companies through appointing up to two directors.

While the government has always been able to acquire a participatory stake in mining operations since the passing of the first Mines and Minerals Act in 1967, revisions to the Mines and Minerals Act in 1999 continued to allow the option of the government to obtain up to 15 per cent shareholding, but now it was to be obtained on mutually agreed commercial terms (Ibid.).

Under the current Mines and Minerals Act of 1999, when issuing the mining licence, the government is required to inform the applicant as to whether or not it is exercising its option, and of the percentage of working interest it wishes to obtain. The government can obtain this working interest in mining operations through two different manners. First, upon exercise of its option the government shall be issued a single P 1.00 special share at par, which shall carry the right to appoint up to two directors, with alternates, and to receive all dividends or other distributions in respect of its working interest percentage (“Mines and Minerals Act”, 1999, A133). Alternatively, the Botswana government can contribute its working interest percentage through assuming all audit arms-length expenditure incurred by the company to which the licence was issued that is directly attributable to the acquisition of the licence, including relevant prospecting expenditure, and all expenditure on the mine incurred subsequent to the issue of the mining licence (Ibid.).

Section 40, however, does not pertain to diamond mining operations as there is a special section regarding the regulation of diamonds in Botswana, which is Section 51 of the Mines and Minerals Act, 1999 outlining negotiations over mining licenses for diamonds. Under Section 51, the government requires that any application for issue,

renewal, transfer or amendment of a licence to mine diamonds initiates a negotiating process, in good faith, between government and the applicant covering all technical, financial and commercial aspects of the proposed project including government participation (“Mines and Minerals Act”, 1999, A138). If an agreement is not reached within six months, or an extended period allowed by the MMEWR, the application will fail. Upon successful conclusion of the negotiations, the Minister issues a licence reflecting the agreed terms and conditions. As a shareholder, the Botswana government is obliged to provide its relevant share of future capital expenditure requirements for mine development (Ibid.).

Although provisions regarding equity participation in mining operations have remained constant in Botswana’s regulation of the mining sector, there have been other changes to the original Mines and Minerals Act of 1967. The Mines and Minerals Act, 1999 amended the Mines and Minerals Act, 1977 to remove uncertainty regarding some provisions, including explicitly stating in the Act licensing conditions. The new Act also introduced a retention license designed to protect the security of tenure of explorers who, after discovery, cannot immediately mine economically. Under the Mines and Minerals Act, 1977 such right holders would have lost their entitlement to location if they were unable to bring the resource to production (“Mines and Minerals Act”, 1977; “Mines and Minerals Act”, 1999). This amendment has been important to the smaller diamond mining companies who have invested in Botswana in recent years, but have held off on production due to the economic recession of 2008, and its negative impact on the diamond industry.

The Mines and Minerals Act, 1999 still vests all rights of ownership in minerals in the Republic, subject to the provisions of mineral rights in the Tribal Territories Act. The management of the extractive sector in Botswana is handled through the Ministry of Minerals, Energy and Water Resources (MMEWR), which has the portfolio responsibility to coordinate development and operational activities in the energy, water and minerals sectors. The MMEWR regulates all mining, prospecting and exploration activities as well as mineral processing activities; collects and disseminates geological information and is responsible for all financial, commercial and administrative issues of mining sector companies in which the government is a shareholder. The Ministry consists of four departments – Geological Survey, Mines, Energy Affairs and Water Resources. Within the Ministry resides the still existing Minerals Policy Committee established just after independence, which is responsible for overall policy direction, and takes the lead in mining negotiations, including those with De Beers under Section 51.

According to the MMEWR there are five main policy objectives to Botswana's current mining regulatory framework, the first of which is to maximize the economic benefits of mining for the nation, while enabling private investors to earn competitive returns (Mmolawa, 2009). This objective is reflected in the partnership between De Beers and the Botswana government in Debswana, and the subsequent economic benefits this joint venture brings to the country and De Beers that will be discussed further below. The second objective is to create a competitive environment to stimulate private sector investment in mineral exploration and exploitation. The third objective of the policy framework is to encourage linkages with the rest of the economy to expand value added

activities, tying into the fourth objective to generate employment and training for Botswana's citizens. The policy framework's fifth objective is to safeguard the environment (Ibid).

The MMEWR also emphasizes that the pillars of the current mining policy framework include the protection of private property rights, and accepting foreign investors as an integral part of the business community, as well as their entitlement to make and repatriate profits (Melaetsa, 2012; see also "Mines and Minerals Act", 1999). As such, Botswana does not have exchange controls, and has a low level of taxation coupled with prudent economic management (Ibid.) Another pillar of the policy framework is the formation of joint ventures with private enterprises that are providers of technical, commercial and financial capabilities, most clearly manifested in Debswana (Ibid.). Other pillars of the framework are the adoption of commercial principles in the planning and operations of mines; security of tenure that allows for automatic progression from exploration to mining; and clear and streamlined licensing procedures. A final pillar of Botswana's mining policy framework is environmental obligations that relate to international best practices (Ibid.).

The fiscal component of Botswana's current mining regulatory framework is set to attract private sector investment, while also maximizing government revenues from mining. There are numerous mineral taxes that contribute to the revenue a state accrues from the mining sector, and include a mix of direct and indirect taxes, and other imposts. Direct taxes consist of corporate income taxes, resource rent taxes, windfall profit tax and progressive profit taxes. Indirect tax instruments include royalties, import duties, export

taxes, value-added and goods and services taxes, and labour levies, while other imposts can consist of competitive bonus bidding, surface and licence fees, production sharing contracts and state equity participation. For its mining tax regime Botswana has adopted a mixture of revenue generating mechanisms, designed to offset the price volatility of commodities including profit taxes, royalty rates and acquiring equity in companies (“Income Tax Act (Amendment)”, 2011; “Mines and Minerals Act”, 1999).

The tax policy for mining firms is subject to negotiation (“Mines and Minerals Act”, 1999, A138), but according to industry experts, in practice, a similar rate and tax base is used in the diamond industry as in the rest of the sector (Korinek, 2013). The mining sector in Botswana is taxed through corporate profit taxes, withholding taxes on dividends, and royalties. Botswana has a general corporate tax rate of 22 per cent, but mining companies are subjected to mining profit tax calculated to a formula of $70-1500/x$, where x is the ratio of taxable income to gross income, subject to a minimum of the general corporate tax rate. Mining firms may deduct capital expenditures made in the year in which the expenditure was incurred, with unlimited carry forward of losses. This formula creates a variable rate income tax, with the tax rate increasing with the profitability of the mining company, thus capturing greater amounts of mineral rents. Investors also pay a 7.5 per cent withholding tax on the value of dividends (“Income Tax Act (Amendment)”, 2011). Royalties are calculated on the gross market value of minerals as they leave the ‘mine gate’, and there are different royalty rates for different minerals. Precious metals are subject to a 5 per cent royalty rate, and all other metals at 3 per cent, whereas diamonds and other precious stones are subject to a 10 per cent royalty rate

(“Mines and Minerals Act”, 1999, A146).

While Botswana’s mining regulatory framework seeks to attract foreign investment and engage the private sector in production, it allows for state involvement. The policy objectives and pillars of the framework illustrate that under the semi-directed model of mining regulation the state has the regulatory role to integrate the mining sector into national development plans such as Vision 2016 and National Development Plan 10, which will be explored in the following chapter.

This regulatory role for the state includes the two key objectives of the mining policy framework, which are to create linkages with the rest of the economy, and generate employment and training for citizens through mining activities. Key to this integration, and the regulatory role of the state, is Section 51 of the Mines and Minerals Act, 1999. This section allows the Botswana state to negotiate revenue sharing agreements that are equitable to both the private sector and the government, and support national development plans through including beneficiation provisions in licensing agreements. It allows for the equity participation of the state in joint venture mining companies such as Debswana.

It is under this semi-directed mining regulatory framework that the joint venture Debswana operates. The partnership between the Botswana government and De Beers was first made possible by the first Mines and Minerals Act, 1967, and has been maintained throughout the two subsequent revisions of the mining regulatory framework. Just as Botswana’s mining policy has evolved since independence, so has its relationship with De Beers. Whereas initially the government had a small ownership role in

Debswana, today the government and De Beers operate as a 50/50 partnership, which has been instrumental to development in Botswana.

Debswana: A 50/50 Partnership

Debswana is a 50/50 mining joint venture between the Botswana government and De Beers. The joint venture is the largest mining company and diamond miner in Botswana, as well as the largest private sector employer, and the second largest employer behind the government. De Beers first began prospecting for diamonds in Botswana in 1955 after the discovery of diamonds in the Motloutse River, and 12 years later in 1967, just after independence, De Beers geologists discovered the Orapa kimberlite. Based on this discovery on June 23, 1969 the De Beers Botswana Mining Company was formed, with the government's initial shareholding in the mining company (which would later be renamed Debswana Diamond Company in 1991) limited to a 15 per cent. At the time the government did not seek a greater equity share in the mining operations as they were preoccupied with the development of the copper-nickel deposits in Selebi-Phikwe, and the Orapa pipeline, although large, was not considered particularly valuable.

Over the next few years the diamond sector in Botswana continued to grow as construction of the Orapa mine began in 1969, with operations commencing in 1971. Further diamond discoveries were made in the area by De Beers, which led to the doubling of production at Orapa and the opening of the Letlhakane mine nearby. With the discovery at Letlhakane, De Beers Botswana sought a mining license to open a second mine, and the government used this opportunity to negotiate an agreement in 1974 with

De Beers Botswana that increased its share of mining revenue from 50 to approximately 75 per cent (Jefferis, 1998, p. 304). These new discoveries also opened up the opportunity for the government to renegotiate its shares in De Beers Botswana under the Mines and Minerals Act, 1967, increasing its shareholding from the original 15 per cent to 50 per cent (Good, 2008, p.22). In 1976 De Beers Botswana announced the discovery of another major diamond pipe at Jwaneng, and in May 1978 De Beers and the Botswana government signed an agreement to establish Jwaneng Mine, the world's richest diamond mine by value contributing 60 to 70 per cent of Debswana's revenue (Debswana, 2014d). The De Beers Botswana Mining Company would go on to establish four diamond mines, and a coal mine in Botswana.

Debswana's importance to Botswana has grown substantially since the first discovery of diamonds in the Motluse River in 1958, and it is estimated that the company mined 22,000 carats in 2014 (Benza, 2014b). Debswana is the leading producer of gem diamonds, contributing 30 per cent of global output by value from its four mines (Debswana, 2012). Jwaneng is the richest diamond mine in value globally, while Orapa is the second richest by value, and the largest open pit diamond mine in the world that can produce up to 9 million carats annually (Debswana, 2014a). The Minister of Mines, Energy and Water Resources estimates that diamond production will remain at a stable production of 22 million carats annually until 2050 (Krawitz, 2014).

Debswana is also significant to Botswana's economy as the second largest employer behind the government, and the largest employer in the private sector. With approximately 4000 employees, and 5000 fixed term contractors, Debswana represents

2.3 per cent of the formal labour force.² Consumption linkages created through the employment of local citizens in Debswana is an important part of the Botswana's mining development framework, and enables local citizens to earn a salary, as well as fund their children's education through subsidized school fees, and obtain health care and a pension plan. Debswana employees also create indirect employment through the spending of their wages, expanding employment opportunities beyond the mining operations in surrounding communities.

The Botswana government pursued a private-public partnership with De Beers in part because of a lack of financial and technical resources at independence in 1966 to pursue mining projects that were solely state-owned and directed. A joint venture allowed the government to engage with international mining companies to take the lead in prospecting, development and operation of the mines. Instead of outright ownership by the Botswana government, as is the case in some state-directed models, Botswana's mineral policy "aimed to engage the private sector as the main driving force in exploiting the country's mineral resources, in a constructive partnership with the Government" (Jefferis, 2009, p. 78).

As a joint venture, the government and De Beers both have representatives on Debswana's Board of Directors. The Debswana Board consists of 12 members, six directors nominated from the Botswana government and six nominated from De Beers, with the Managing Director of Debswana acting as an ex-officio member.

Representatives of the government on the Board include the Permanent Secretary of

² Based on author's calculations using data from the Central Statistics Office of Botswana. *Stats Update, No 2014/3* (<http://www.cso.gov.bw/images/statsupdate.pdf>).

Ministry of Finance and Development Planning; the Permanent Secretary of the Ministry of Minerals, Energy and Water Resources; the Governor of the Bank of Botswana; and the Attorney General.

The Board's membership reflects the integration of the Debswana into the country's development plans, with key government officials responsible for economic and social development as members. For example, the Permanent Secretary of the Ministry of Finance and Development Planning sits on the Board as a representative of the department responsible for collecting mining revenues and developing, implementing and monitoring Botswana's National Development Plans. This allows the government department responsible for development planning access to high-level information regarding a company that contributes a significant share to the GDP, is the largest private sector employer in the country, and constitutes a significant percentage of government revenue through mining revenues. Through exercising the provisions for equity shares in the Mines and Minerals Acts, the Botswana government thus has cultivated a close relationship with a mining company that has a significant impact on the country's economy and development.

Botswana's relationship with De Beers is not limited to its joint venture in Debswana though, as the Botswana government also owns stock in the De Beers Group of Companies. In the 1980s the international diamond market was weak, and De Beers Botswana was unable to sell all of the diamonds it was producing. As a result, it accumulated a significant stockpile of unsold rough diamonds. When the market recovered in 1986, De Beers Botswana negotiated the sale of the stockpile to De Beers,

and was paid partially in cash, but also in shares of De Beers itself. As a result of this sale, De Beers Botswana gained a 15 per cent ownership stake, and the right to appoint directors to the main board of the De Beers Group of Companies. This was a significant development for the role of the state in the diamond-mining sector, as the Botswana government now had access to not only Debswana's operations, but also high-level information regarding the operation of the highly secretive international diamond market. In 2001 De Beers, which had been a publically traded company, restructured and became privately owned. As a result of this re-structuring, ownership was divided between Anglo American PLC Group (at 85 per cent) and the Government of Botswana (at 15 per cent).

New Players in the Diamond Sector

Since production began at Orapa in 1971, Debswana has been the largest diamond mining company in the country, although there are no legislated restrictions prohibiting other companies from mining and marketing diamonds in Botswana. This has changed recently, however, as smaller companies have become more prominent and have been revisiting mineral deposits that Debswana prospected, but did not consider viable. In these new firms that are prospecting and mining diamonds, however, the government has not exercised the practice of obtaining up to 15 per cent shareholding. This is largely because recently licensed mining operations have been relatively small, and the government considers that the existing tax system is efficient at capturing the mineral revenues rather than pursuing an equity partnership (Korinek, 2013, p. 19). Mining licenses granted to these smaller companies, however, seek to contribute to beneficiation

by including a condition that requires them to market their diamonds in Botswana. The mining license granted to Boteti Mining Company is such an example, and although the company currently conducts rough diamond viewings in both Gaborone and Antwerp, they are expected to fully migrate viewings to Botswana by 2015 (Ibid., p. 39).

Botswana's semi-directed model of mining regulation has enabled the government to obtain an equity partnership in mining operations, which the government used to form its 50/50 partnership with De Beers in Debswana. Botswana has strategically managed its relationship in Debswana to mitigate the resource curse, and ensure mining contributes to development. It has focused on obtaining a greater share of mining revenue in the early days of diamond production in the 1970s and 1980s, and then in the late 1980s and 1990s leveraging the partnership to increase management capacity by obtaining shares in De Beers and six Board of Directors seats. Since the late 1990s Botswana has been leveraging the relationship to diversify the economy by positioning Botswana as diamond hub. The next chapter will explore how Botswana has leveraged its regulatory role, and the joint venture in Debswana to mitigate the resource curse, and ensure mining contributes to development through integrating the mining sector into national development plans for economic diversification, and employment creation.

Chapter 3

Diamonds and Development

Introduction

Natural resources can have a detrimental impact on the development of a country. Many developing countries that are rich in natural resources suffer from the resource curse, performing lower on development indicators than states that are resource poor. The natural resource curse, however, is not an inevitable consequence of resource wealth, and mining has the potential to contribute to development. The mining sector can contribute revenue to government coffers to be used to finance social spending, such as investments in health, education and physical infrastructure. It can also create employment opportunities for the local population, and be used to diversify the economy.

When diamonds were first discovered in the early years of independence, Botswana was one of the ten least developed countries in the world according to the U.N., but in 1994 it became the first country to graduate from lower developing country to upper middle income. Prior to independence there were only 3 secondary schools in the country, today there is more than 300, and primary school enrolment has increased from less than 25 per cent in 1966 to a gross enrolment rate of 106 per cent. Adult literacy rates were an estimated 10 per cent in 1966, and presently stand at 87 per cent. In addition to education, diamond revenues were also heavily invested in physical infrastructure and nearly 10,000 km of roads now exist, compared to the 12 km in 1966 before diamonds were discovered (World Bank, 2014).

Debswana is crucial to development in Botswana, as it provides the government with substantial mining revenues to support social spending, creates employment opportunities for local citizens, and linkages with other sectors of the economy. Botswana is dependent on diamonds, as it is this commodity that underpins the national economy, contributing significantly to the GDP, and responsible for the majority of the country's economic growth since production began at Orapa. Yet, there are limited opportunities for local employment in the diamond sector, and the Botswana government precariously depends on diamond revenues as a source of government revenue.

This chapter will explore how Botswana's semi-directed model of mining regulation has integrated Debswana's operations into national development plans, and the contribution of mining to development in the country. It will commence by examining the mining revenues the Botswana government collects from Debswana, and how these revenues are used to support social spending through Botswana's National Development Plans, guided by Vision 2016. It will then examine how aspects of Debswana's Corporate Social Investment Programme work in partnership with Vision 2016. The chapter will illustrate how the government has used its regulatory role in the mining sector to facilitate beneficiation, and create employment opportunities for local citizens. The data for the following chapter was gathered through documentary analysis, secondary research, and semi-structured interviews with Botswana government and Debswana officials, and the BMWU.

Social Development

Mining Revenues

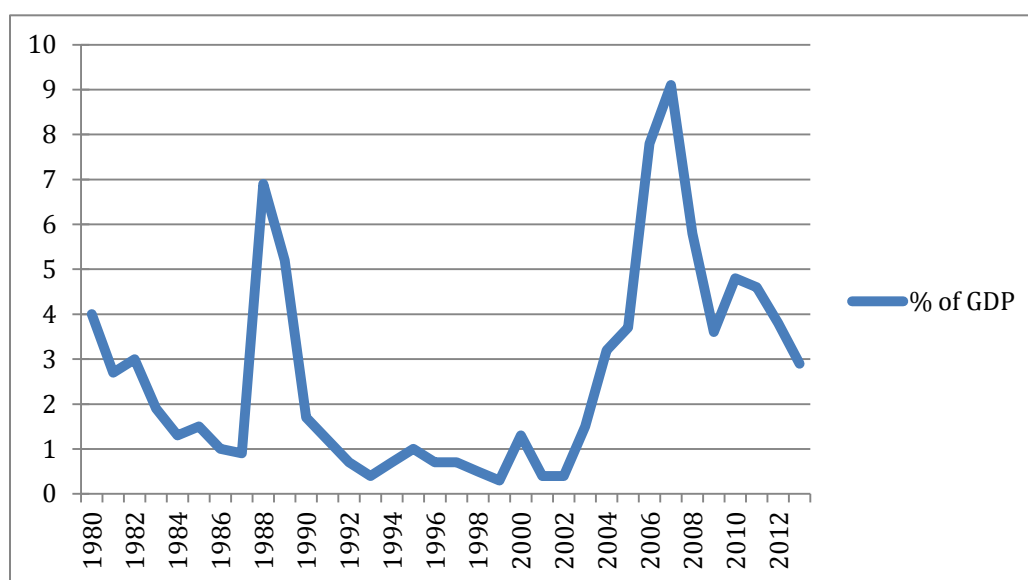
One aspect of the resource curse that affects naturally resource rich states is the impact of mining revenues on government policies, and spending. The resource curse manifests itself through price volatility that can render government spending unsustainable during price commodity downturns, where commodity prices drop, and subsequently mining revenues decrease. Meanwhile, states rich in natural resources suffering from the resource curse also have lower development indicators, and invest less in health and education. As the largest mining company in Botswana, Debswana plays an important role in the development of the country through the mining revenues it contributes to government coffers.

Royalties are important for a state to obtain value from mining activities, and as discussed previously, under the Mines and Minerals Act of 1999 diamonds are subjected to a 10 per cent of gross market value royalty tax rate in Botswana (“Mines and Minerals Act”, 1999, A146). The Botswana government recognized the instability of mineral prices, and rather than relying on a high fixed royalty rate to obtain a significant share of mining profits, instead sought to acquire equity in mining companies. The exact revenue agreement between De Beers and the Botswana government is confidential, but it is estimated that the government receives between 80 and 82 per cent of revenue after cost (including capital expenditure) of Debswana (Korinek, 2013, p. 24; De Beers and Debswana, 2009, p. 4). It is the variable dividend that the government collects as a shareholder in Debswana that enables the Botswana government to earn 4 Pula on every

5 Pula earned by Debswana’s mining operations, in what is commonly known as ‘the 80 per cent solution’. The amount of the dividend is calculated to bring the government’s aggregate revenue up to a contractually agreed share of positive net cash flow, and the dividend paid to the private shareholder De Beers consists of whatever cash remains after the government has received the amount due to it.

Mining revenues are crucial to Botswana. In 2012 De Beers provided the Botswana government with USD \$701 million through taxes, royalties and charges, and this was down from USD \$1,078 million in 2011 (De Beers, 2012, Fig.6 p. 21). It is estimated diamond revenues will contribute approximately 15 billion Pula to the 2014/2015 national budget revenue target of 50 billion Pula, representing approximately 30 per cent of the national budget (Benza, 2014, October 28). Figure 2 below illustrates the importance of mining rents, measured as a percentage of the GDP.

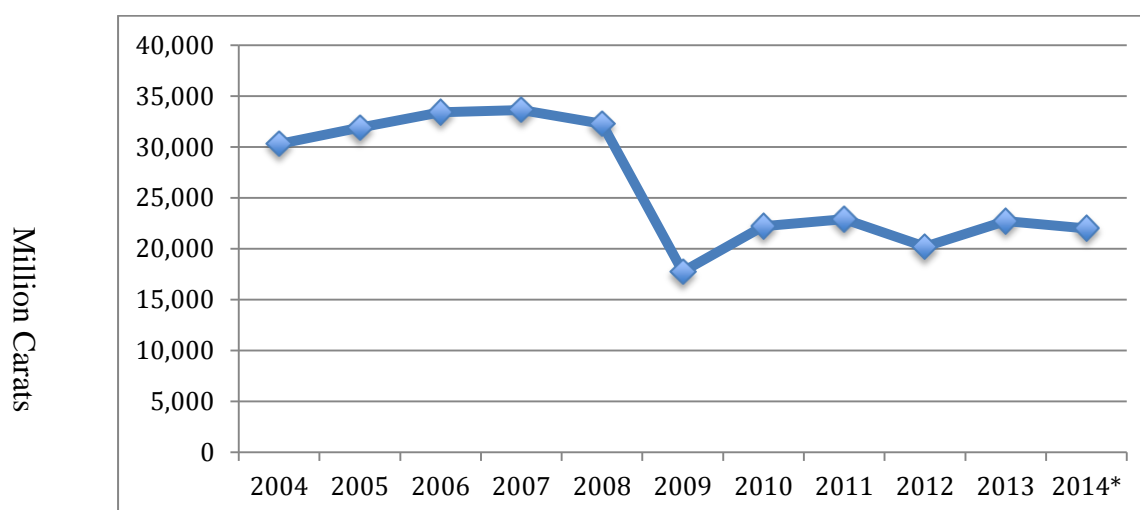
Figure 2. Total Natural Resource Rents as Percentage of GDP



Source: Compiled by author using data from the World Bank, 2015
(<http://data.worldbank.org/indicator/NY.GDP.TOTL.RT.ZS>)

With mining revenues from Debswana constituting a significant portion of government revenue, Botswana is vulnerable to shifts in the global diamond market. Diamond prices are relatively stable, as a result of De Beers controlling global diamond prices through the control of the supply of diamonds. When demand for diamonds is low, however, to maintain diamond prices De Beers limits the supply by slowing down, or ceasing production at its mines. This occurred in 2009, as Debswana ceased operations at its Damtshaa mine, and slowed production down at its remaining 3 mines in response to the global economic crash. Debswana's production was cut to half, as noted in Figure 3 below. The impact of the recession was further compounded in June 2012 by a slope failure at Jwaneng that ceased production at the largest producer in Debswana's family of operations.

Figure 3. Debswana Production Carats 2004 to 2014



* **Note:** Estimated production carats for 2014 (Benza, 2014, October 28)

Source: Compiled by author using production carat figures from De Beers and Debswana's Annual Reports 2004-2013

One of the mechanisms the government of Botswana employs to mitigate the negative impacts from the price volatility of the commodities market is the Pula Fund. The Pula Fund was established in 1994, and is a UDS \$6.9 billion sovereign wealth fund (Treverton, 2014, p.103), that primarily has been generated through the husbanding of foreign reserves from diamond and mineral exports, and the investment of mining revenues collected by the government that are not invested in social spending. It consists of the Government Investment Account, belonging to the Botswana government, and foreign reserves, which belong to the Bank of Botswana. Foreign exchange reserves in excess of the amount required for daily foreign transactions are transferred to the Bank of Botswana's portion of the Pula Fund. The government's portion consists of any fiscal surpluses.

Disbursements from the fund are generally done in coordination with the five year National Development Plans (NDPs), which outline government spending. Spending Pula Fund money on development projects is conditional on the project being able to recover long-term operating costs, and generate returns on par with alternative investment opportunities (Ibid.). The Pula Fund has also been instrumental in insulating the country from fluctuations in the diamond market, as government has been able to drawdown on the fund to make up for revenue shortfalls caused by commodity downturns. The Pula Fund, therefore, was crucial for enabling the state to maintain a relatively consistent level of service delivery despite the sudden decline in diamond revenues that occurred in 2009 and onward as the result of the economic recession (De Beers and Debswana, 2009, p.8; Interview #4).

The mining revenues that the Botswana government collects have been instrumental in conferring the fiscal capacity of the state to drive the development process, and implement national development plans such as Vision 2016. Mining revenues gave the government the financial resources to abolish aid dependency in the government's recurrent expenditures by 1972, and introduce budget surpluses by 1983. This was despite an 11 per cent per year increase in government spending between 1970 and 1995 (Good, 2008, p. 10). In contrast to many other resource rich developing states that are beholden to their foreign debt, mining revenue has ensured that Botswana has no significant foreign debt.

Mining revenues are not institutionally segregated in the national budget, but rather are included in the general revenue pool. While there is no statutory requirement governing the government's investment of mining revenues, since 1994 the Botswana government has followed a non-statutory principle, the Sustainable Business Index (SBI), of investing or saving revenues derived from the mining sector. The SBI is defined as the ratio of non-investment spending to recurrent revenues (non-mineral), and a value of more than one means that non-investment spending is being financed from mineral, or non-recurrent, revenue. A value of less than 1 means mineral/non-recurrent revenues are not being used to finance recurrent revenues, and instead are being publically invested or saved (Korinek, 2013, p. 27).

In an interview with an official from the Ministry of Finance and Development Planning (MFDP), it was emphasized that the government strives for an SBI rating of less than 1 in the annual budget, and that the SBI thus emphasizes that mining revenues are

derived from the sale of national assets and should be invested in other assets., Botswana has been successful in obtaining a SBI value of less than 1, except for the period of 2001 to 2005, and again in 2009 when mining revenues were adversely impacted by the recession.

It is important to note that Botswana's high degree of political stability since independence was an important factor in mitigating the resource curse, and mining's contribution to development. Political stability was crucial to the attracting foreign investment to the mining sector, and for the formation of the joint venture between the government and De Beers in the Debswana. It also ensured that mining revenues were invested into social spending, such as health and education, to achieve positive development outcomes. According to the resource curse, the ease of which mineral revenues are collected can lead to a lack of transparency and accountability by the government. Rent seeking and corruption often characterize governments of developing states rich in natural resources suffering from the resource curse (Reno, 1998; Ross, 2004 and 1999; World Bank, 2003).

Botswana has had stable governance since its independence in 1966. The country has maintained a parliamentary democracy, and elections are free and fair. Botswana's leadership has designed and fostered conditions that have provided stability, and economic and social development. The government has established respect for property rights and the rule of law (Lewin, 2011; Sebudubudu, 2010). There also exists a broad framework of third generation watchdog institutions, such as the anti-corruption body, the ombudsman, the independent electoral commission, and a free and independent media

(Sebudubudu, 2010).

Government spending is closely monitored in Botswana. The constitution empowers the auditor general, accountant general, and parliamentary committees to monitor the state, and its use of public accounts in all government departments, and parastatal organizations and joint ventures, including Debswana (Ibid). Government spending is managed through the MFDP, which “acts to ensure that public finances are properly accounted for and utilised for the purposes authorized” (Republic of Botswana, 1991, p. 482).

A high degree of transparency, reinforced by continuing the Tswana tribal of tradition of consultation, has also been maintained throughout the governance structure. Known as kgotla these consultative institutions “[create] a degree of trust in the government – the sense that government exists to serve the people and promote development and is not the instrument of one group or individuals for the purpose of getting hold of the wealth” (Lewin, 2011, p. 82). In 2011 Botswana was ranked as the country perceived to be the least corrupt in Africa, according to the Transparency International Corruption Perception Index, and ranked 33rd globally (Transparency International, 2011).

The existence of transparent and accountable governance structures in Botswana ensures that mining revenues are either invested in social spending to build the country’s assets, or saved through the Pula Fund to insulate the country from commodity price downturns. This ensures that rather than contributing to rent seeking and conflict, mining revenues work to mitigate the resource curse. On average, approximately 30 per cent of

the annual capital budget is allocated to basic infrastructure such as water, electricity, roads, communication and transportation; 20 per cent to education, and 30 per cent to health to create a healthy and skilled workforce (Lewin, 2011, p. 86). This spending is managed through the country's National Development Plans.

Vision 2016 & Debswana's Corporate Social Investment Programme

The resource curse literature emphasizes that mining's contribution to development is partly determined by how governments use mining rents. An important institutional mechanism for the management of Botswana's mining revenues is the National Development Plan (NDP) process, which articulates Botswana's development strategies in six-year increments. Public funds cannot be spent on projects unless they are included in the NDP, which is approved by Parliament, and include all public investment. The NDPs establish general policy objectives, and since first implemented in 1966, the two main objectives have been achieving sustainable economic growth and diversification away from mineral and government-led economic development (Akinkugbe and Makepe, 2006, p. 66).

The current development plan is NDP 10, covering the period from 2010 to 2015. All NDPs are directed by Vision 2016, which outlines the guiding vision "...to propel [Botswana's] socio-economic and political development into a competitive, winning and prosperous nation" (Botswana Vision Council 2016, 2011). Vision 2016 has 7 pillars, which are *Vision Pillar 1: an educated, informed nation; Vision Pillar 2: a prosperous, productive and innovative nation; Vision Pillar 3: a compassionate, just and caring*

nation; Vision Pillar 4: a safe and secure nation; Vision Pillar 5: an open, democratic and accountable nation; Vision Pillar 6: a moral and tolerant nation; and Vision Pillar 7: a united and proud nation (Ibid.).

Vision 2016 guides the development spending of the Botswana government, which is financed partially through the mining rent that accrues to the state. Mining's contribution to development, however, is not limited to the revenue it provides governments. Most mining companies also deliver CSR programs. These are often focused on education and health, and engage in workforce training. CSR programs, however, are limited in their contribution to mitigating the resource curse, and contributing to development.

Often the CSR programs of mining companies work in isolation of the government's development plans. An important component of Botswana's semi-directed model of mining regulation, therefore, is the integration of the mining sector into national development plans. While mining has allowed the government to finance investments in social spending, some of Botswana's corporate social investment programs have also been integrated with the NDPs, which will be explored in the next section.

Education and Skills Training

When Botswana attained independence in 1966 a lack of skilled and educated Botswana was a major constraint on development, and as such the government has sought to develop a skilled workforce to support the localization of the mining industry. Botswana's educational policy at independence focused on rapidly increasing, and sustaining the base of primary school attainment to 100 per cent. To obtain high rates of

educational enrolment the Botswana government sought to make education affordable, and guaranteed all students 10 years of basic education, leading to a Junior Certificate qualification. Completing the Junior Certificate program led to admission to the senior secondary school program, but only those pupils whose grades were high enough on the Junior Certificate Examination were admitted. Secondary education was not compulsory in Botswana, and even today only approximately half of the school population attends a further two years of secondary schooling leading to a Botswana General Certificate of Secondary Education (UNICEF, 2014).

In January 2006, the government announced the reintroduction of school fees after two decades of free state education. They argue that this was a government cost recovery strategy in the face of falling revenue, and describe the fees as a ‘pittance’ at P 194 (USD \$36) per year for primary and P 452 (USD \$84) per year of senior secondary school, although family means would be tested and exemptions would be made for the poorest citizens (BBC News, 2006, January 11).

For tertiary education, the Department of Student Placement and Welfare, under the Ministry of Education and Skills Development, administers the Grant-Loan Scheme. The grants versus loans ratio is based on the human resource needs of the different sectors of the economy, and is aimed at providing incentives to students to pursue studies in areas that are considered scarce resources. Students in public and private institutions are eligible, and the scheme covers the cost of tuition fees, and maintenance costs. It is awarded based on national priority accorded to the course of study. Loans are interest free, and there is a three-month grace repayment period after obtaining employment. The

amount that needs to be repaid is based on what the student studies, with the government ranking subjects by five categories, shown in Figure 4 below (Ministry of Education and Skills Development, 1995; Pillay, 2008, p. 146-147).

Figure 4. Categories of the Grant-Loan Scheme

Category	Grant/Loan Repayment
Category 1: Sciences, Medicine and Engineering, among other disciplines	Offered 100% grant
Category 2: Includes subjects such as economics, town planning and agricultural science	100% grant on tuition, and 50% loan on maintenance
Category 3: Includes subjects such as law, journalism, social work and psychology	100% grant on tuition and 100% loan maintenance
Category 4: Fields of lower priority, such as sociology, philosophy and physical education	50% loan on tuition and 100% loan on maintenance
Category 5: 'Marginal' careers such as cosmetology, photography and performing arts	100% repayment on loans for both tuition and maintenance

Source: Compiled by author based on data from Pillay, 2008, p. 146

Vision 2016 guides the policies and programs of the government, regarding educational and vocational training to support the localization of the mining industry, and economic diversification. As such, *Vision Pillar 1* focuses on universal, continuing, and quality education, and creating an informed and information technology literate society. In keeping with this pillar, the Botswana government has made considerable investments in education. A number of government ministries are responsible for education and skills development in Botswana, including the Ministry of Education and Skills Development, and the Ministry of Labour and Home Affairs. The Ministry of Education and Skills Development's National Human Resources Development Strategy (NHRD) has strategic oversight over the Human Resources Development Council under which there is three

sectorial committees – Skills & Training; Tertiary Education and Human Resources Planning. This structure is designed to support the NHRD, which outlines the government's approach to education and skills development in the country, including building system level strategic capacity, and engaging in sector driven planning. Key structural changes that are identified by the government for the success of the NHRD are the alignment of human resource development with national economic and societal goals, and the integration of human resource development with the economic diversification agenda. The NHRD emphasizes that this requires high quality programming and service delivery, and strong linkages between government, business, labour and civil society to be successful (Ministry of Education and Skills Development, 2009).

The Botswana Core Welfare Indicators Poverty Survey of 2009/2010 illustrates that many Botswana graduates are unemployed representing 35 per cent of the 17.8 per cent national unemployment rate, an estimated 3000 graduates (Central Statistics Office, 2011, p. 12). According to an official from the Ministry of Education and Skills Development, one of the problems facing skills development in Botswana is the mismatch of vocational training and tertiary education to the requirements of the private sector, leaving many graduates without employment opportunities (Interview #5).

One of the main strategies of the NHRD is the integration of post secondary and labour sector markets to ensure the right match up of the skills of Botswana graduates with employment opportunities. This requires the creation of human resource development plans for key sectors, and partnerships that bring leadership from other sectors. Debswana is one partner that has worked with the government to provide

Batswana citizens access to education and skills training programs that are required by the mining sector. The company manages these initiatives through its Corporate Social Investment (CSI) Programme.

Debswana states that it will always distinguish between the government and company's responsibilities, and will not attempt to fulfill government responsibilities. Debswana, however, emphasizes that Vision 2016 provides a useful framework for supporting the government in the achievement of its development strategy. As such, the mining joint venture aligns aspects of its CSI Programme with the Vision 2016 objectives of economic diversification, and employment creation (Debswana, n.d).

Debswana states that its CSI Programme gives precedence to programs that encourage self-sufficiency after mine closure through the building of local capacity and skills development, with a particular focus on business and entrepreneurial skills. Aspects of the CSI Programme are designed to help with economic development by removing barriers to economic participation through a focus on health and education. As such, the CSI Programme focuses on primary and secondary school education; the environment, particularly environmental education; small business development and business skills training; arts and culture development; health including, HIV/AIDS support to communities; and sports development (Ibid., p.6).

Debswana has increased access, retention and quality in primary education in the mining communities through its CSI Programme, and to the nation through the mining revenue it contributes to the government, which is invested in education. In 1979 Debswana established the Acacia Primary School in Jwaneng, which obtained a 98 per

cent pass rate for the Primary School Leaving Examination (PSLE) results for seven consecutive years (De Beers and Debswana, 2009, p.28). Early on, Debswana built and ran private primary schools at its Orapa and Jwaneng mines, targeting children of employees whose tuition fees are highly subsidized. As Debswana's operations in Botswana expanded, the mining company also established secondary schools in the mining communities (Ibid.).

Debswana has integrated aspects of the CSI Programme with Vision 2016 to benefit government run schools in mining communities. As such, in 2002 Jwaneng Mine established the Debswana Government Schools Development Programme, aimed at developing existing government schools in Jwaneng with an annual investment of approximately P 612,000 (De Beers and Debswana, 2009, p. 26). The program aims to promote quality teaching in Science, Maths, and English Studies (Diplomat Africa, 2013, p. 50). Debswana also supports education in mining communities by contributing computers, and other educational equipment and supplies to government schools, to help them bridge the technology gap.

Thus, in addition to building and operating company schools, Debswana has supported the educational component of the government's national development plans through providing equipment, infrastructure, and training to government schools in mining communities. The benefits of the primary and secondary educational component of the CSI Programme are limited to the enclave of the mining communities though, and Debswana's impact on education at the national level is mainly through the mining revenues it provides to the government.

Debswana also invests in tertiary education and skills training, in addition to its investments in primary and secondary education though. Since 1969 Debswana has been sponsoring Botswana citizens to attend tertiary institutions to meet its workforce needs. Under the Scholarship Programme students are fully funded to attend the University of Botswana, and other international institutions. A Debswana official stated that some of the top members of Debswana's management team, as well as other professionals in the country, established themselves via this route (Interview #3). The Scholarship Programme has supported more than 1000 students between 1992 and 2009, and provided P 243 million (USD \$35 million) in scholarships (De Beers and Debswana, 2009, p. 11). In collaboration with the Ministry of Education and Skills Development, who sponsors the program, Debswana offered a variety of scholarships in mining related subjects, including ore processing, mining engineering, geology, and civil and structural engineering (Ibid.).

Employment in the Mining Sector

Debswana's programs to localize its operations support *Vision Pillar 2: A Prosperous, Productive and Innovative Nation*, with a focus on economic growth and diversification, sustainable development and employment. Debswana is significant to Botswana's economy, not only for the mining revenues that it contributes to the government coffers and its CSI Programme, but also as the second largest employer after the government and the largest employer in the private sector. With 9000 workers, Debswana employs 2.3 per cent of the formal workforce.³ Consumption linkages created

³ Based on author's calculations using data from Central Statistics Office of Botswana. *Stats Update, No 2014/3*.

through the employment of local citizens in Debswana is an important part of the Botswana's mining development framework. Employment opportunities with Debswana enable local citizens to earn a salary, as well as fund their children's education through subsidized school fees, and obtain health care and a pension plan. Debswana employees also create indirect employment through the spending of their wages, expanding employment opportunities beyond the mining operations in surrounding communities.

The monthly average cash earnings for male workers in the mining and quarrying sector is P 9977 and for females P 11,568 (Central Statistics Office, 2011, p. 11). There is a significant difference between the monthly earnings of citizens and non-citizens, however, with expatriate males earning P 40,048 and females P 26, 924 on average in the sector (Ibid., p. 9). This earning discrepancy is the result of expatriates filling the high management positions within Debswana, and other mining companies. The Botswana Mine Workers Union (BMWU) protects 88 per cent of Debswana's permanent employees, who are compensated on an A-C salary scale (De Beers, 2012, p. 30). There is a significant difference in the compensation of these pay bands with the lowest band being A1-2 band with a compensation of P 2714 to 3392 per month; B1 – B4 pay is compensated at a rate of P 3100-8200 per month; and C1 – C4 is P 7900 to 19,900 per month (Koyi, 2012, p. 16).

Debswana employees also receive production and annual bonuses, and housing allowances as part of their compensation package. Housing available to employees differs among the four diamond mines in the country. For example, Orapa is a closed mining town, and workers live on company property in houses owned by Debswana, whereas

Jwaneng is an open mining town that offers a mix of company-owned housing, and barracks (mostly for contract workers). However, commonly mineworkers live in privately owned accommodations, rather than those provided by Debswana. Company-owned housing provided for employees is free, and are typically semi-detached houses with electricity, water borne sewage in house water taps, and gas (Mukwakwami, 2013,p. 20).

Permanent employees also receive subsidies for utilities, school fees, and paid medical benefits, and access to free anti-retroviral treatment for HIV/AIDS (Debswana, 2014e). Medical benefits cover 70 to 80 per cent of costs (Mukwakwami, 2013, p. 19). Debswana permanent employees have a defined contribution pension fund, the Debswana Pension Fund, established in 1984. Debswana contributes 20 per cent of each employee's monthly salary per month (Debswana, 2014f), and the Fund is the second largest in the country with over 10,000 participating members including pensioners, active and deferred members (Debswana Pension Fund, 2014).

Debswana is a local employer, with 96.6 per cent of all staff positions filled by citizens. Local Batswana employees are well represented in management at Debswana, with Batswana representing 87 per cent of those in management and key roles (De Beers, 2013, p. 41). Women also constitute approximately 23 per cent of the workforce, and 22 per cent of management (De Beers and Debswana, 2009, p. 29). Foreign workers, however, fill the top management positions, such as the Managing Director.

Debswana and the government demonstrated their close partnership through collaboration in education and skills development to support the Vision 2016 objectives of economic diversification, and employment creation. For example, with the launch of the Cut 8 Project to extend the life of Jwaneng Mine, Debswana partnered with the National Internship Programme to provide on-the-job training for Batswana graduates. The National Internship Programme, run by the Ministry of Labour and Home Affairs, is aimed at providing skills transfer to Batswana graduates with degree qualifications. An internship is for 2 years, and candidates for the program must be a holder of diploma qualification classified as scarce labour under the Department of Public Service Management. Since its inception in August 2008, 6708 graduates have enrolled in the National Internship Programme, and 2327 of these interns have been able to secure employment. Based on exit interviews of interns from July 2012 to September 2012, 63 per cent of program participants were able to gain employment, or entry into further studies as a result of their internships (Powell and Short, 2013, p. 18).

As a result of the program's partnership in the Cut 8 project with Debswana, 39 Batswana graduates participated in the program aimed at giving Batswana skills training to ensure the indigenization of the mining sector in Botswana. Some of the apprenticeship positions offered included Maintenance Industrial Electrician, Heavy Plant Mechanic, Maintenance Fitting and Machining, Fabrication and Welding, and Rigging (Debswana, 2012, p. 9). At least eight interns have been offered permanent employment with some of the contractors for the Cut 8 project (Ibid.).

Debswana is thus involved in educational and skills training from the primary to tertiary level in support of the Vision 2016 objectives of economic diversification, and employment creation. Through its CSI educational programs Debswana works to increase the skills base of Botswana's workforce. These programs complement, and work in partnership with the education pillar of Vision 2016, providing Botswana with the required skills to localize the mining industry.

Health and HIV/AIDS

Debswana also has extensive support for health care in its mining communities, addressing health as a major barrier to economic participation, both as an employee of Debswana, and in the wider economy. The focus of Debswana's CSI on health is in line with *Vision Pillar 3 – A Compassionate, Just and Caring Nation*, which focuses on poverty and income distribution, quantity and quality of health services and combating HIV/AIDS.

The impact of HIV/AIDS needs to be stressed when examining Botswana's health indicators, as the country has been hard hit by the epidemic. Although there has been progress in combating HIV/AIDS in some demographic groups, such as pregnant women, and those aged 15 to 49, the incidence of infection is still very high, and there has been little to no progress for other demographic groups (Botswana Vision Council 2016, 2011). The government emphasizes that the impact of HIV/AIDS is felt across all of the Vision Pillars, as HIV/AIDS creates major social and economic problems, such as the breakdown of the family structure, low or no population growth, and the loss of human resources and skills, absenteeism, and lost income (Ibid.).

Botswana has one of the highest infection rates of HIV/AIDS in the world with an 18.5 per cent prevalence rate for the general population (National AIDS Coordinating Agency, 2014, p.11). The HIV/AIDS pandemic has a profound impact on Botswana's small workforce, with an estimated 34 per cent of the workforce living with HIV (Mmegionline, 2012). In a 2007 Prevalence Study, Debswana found that 21 per cent of its permanent employees, and 22.6 per cent of contract employees were HIV positive (Debswana, 2014c).

Debswana works in a multi-stakeholder environment in response to the HIV/AIDS epidemic. The Botswana government's National Policy on HIV/AIDS provides for a multi-sectorial response, under which individual private and public agencies are expected to make their contribution to the collective effort. The Ministry of Health is required to lead the development and refinement of strategies for prevention and care, involving other government agencies, NGOs, and the private sector. The Ministry of Health also provides technical support to other ministries and sectors, as they develop and implement their own HIV/AIDS prevention and care activities.

Under the National Development Strategy, private sector firms are expected to develop HIV/AIDS programs for their staff, in line with the National Policy; mobilize private sector resources for HIV/AIDS; and integrate HIV/AIDS into their training programs (NSF II, 2009, p. 33). Debswana's HIV/AIDS education and awareness program started in 1988/89 in response to the first HIV/AIDS cases seen at Jwaneng Mine Hospital in 1987, and at the Orapa Mine hospital in 1989. The education initiatives were initially carried out by a team of medical doctors and nurses on a part-time basis,

and were primarily aimed at other health-care workers. In 1991 a major education and awareness campaign was launched that included the use of posters, distribution of pamphlets, use of videos, motivational talks by people living with HIV/AIDS, and seminars and workshops. The education and awareness program was furthered in 1991 through 1992 when full-time AIDS Programme Coordinators were appointed at the Jwaneng, Orapa and Lethakane mines to formalize the education program, and disseminate information on the national education and preventative initiatives (Debswana, 2014c).

In 1995 Debswana developed a HIV/AIDS Management Policy that articulated its position and practices regarding infected employees, and developed a basis for an education program and related activities. The De Beers Disease Management Program provides employees with access to health programs that address physical and psychological well-being, and includes wellness advice, access to physicians, voluntary counselling and testing, prophylaxis, nutritional supplements, and anti-retroviral treatment (ART) when clinically required (Ibid.).

Debswana management emphasizes that the provision of ART is a business imperative because it results in healthier individuals, who are able to remain productive for longer, and support their families. Management states that ART results in a decrease in absenteeism/sick leave, a decrease in hospitalization and the attendant costs, and a reduction in rehiring/replacement and retraining costs, as well as a reduction in group life and disability costs (UNAIDS, 2002, p. 35). Since 2001 Debswana has provided ART free to HIV infected employees and their spouse, and children of company employees,

where it could be provided in a responsible and sustainable manner. The ART programs are externally coordinated by Aid for AIDS (AfA) via a network of accredited service providers.

Debswana also fully funds the Jwaneng Mine Hospital for P 64 million annually, and the hospital acts both as a mine hospital, and a district referral hospital for a radius of 200 km. The hospital has 55 beds, and consults approximately 8100 public patients and 34,000 private patients annually (Diplomat Africa, 2013, p. 50). The Orapa Hospital is also fully funded by Debswana, and provides a similar service accommodating the greater Boteti catchment area with a population of 54,000 people at a cost of P 48 million (Ibid.). The hospitals serve employees and communities around Debswana mines. Non-employees of Debswana, however, pay a nominal fee, although the hospitals sometimes provide free health care to members of the community in emergency cases (Muranda, 2014, p.120).

One of the strategic focus areas of Debswana's HIV/AIDS program is community partnership as a way of extending Debswana's response strategy to surrounding communities (Debswana, 2014c). The mine hospitals became more accessible to non-employees of Debswana when in April 2013 Debswana partnered with the Ministry of Health to establish the Infectious Disease Care Clinic, which provides free anti-retroviral therapy to community members (Diplomat Africa, 2013, p.50). At the time the National ART Programme of the Ministry of Health, MASA, was unavailable in the mining communities. The partnership between the Ministry of Health and Debswana increased access to MASA, specifically for non-Debswana employees. It called for a scale up of

MASA in the mine areas, using existing Debswana infrastructure, including company health facilities, and healthcare professionals.

The ultimate objective of the partnership between the Ministry of Health and Debswana is to ensure that every person living in the local community have access to HIV treatment and care, regardless of employment status and affiliation with Debswana. According to a Debswana official, since existing company resources were leveraged there are no additional infrastructural or staff costs to the government for this scale-up (Interview #3). This partnership has increased access to ART to 100,000 HIV/AIDS positive Batswana living around mine communities (Muranda, 2014, p.120). In an interview with a Debswana official, it was stated that for as long as the MASA program continues to run, Debswana has undertaken to bear the cost of health personnel, as well as the infrastructure required for the program, while the government has committed to providing drugs, laboratory services and staff training.

Corporate Social Investment and Development

Debswana's partnership with the Botswana government, therefore, has contributed to Vision 2016 by increasing the quality and quantity of health care provision, and working to combat HIV/AIDS. The CSI Programme has also supported Vision 2016 through partnering with the government to provide education and skills training. This is not the only CSI funding that Debswana engages in though, as CSI investment is also made in sports development, and arts and cultural development. For example, CSI funding outside of the partnerships with the government includes sponsoring sports teams, such as the Botswana Olympic team that competed in the 2012

Olympics. Other projects include electrification of health clinics in communities surrounding the mines, funding for agricultural fairs and support of local NGOs.

Debswana's CSI spending, like most mining companies, is related to supporting its mining operations. For example, HIV/AIDS is costly to Debswana in terms of impact on its workforce, therefore its prevention and treatment reduces employment costs for the mining company (see van Wyk, 2009, p.44). Most mining companies also engage in some kind of education and skills training to support its operations. Other Debswana CSI spend, such as investment in sport development does little to diversify the national economy and create employment. In this way, Debswana's CSI Programme is not unique from those of other mining companies, which operate in the enclave of the mining community, and fail to address the structural impediments to development.

The ability of Debswana's CSI Programme to contribute to development beyond the enclave of the mining communities in Botswana is through partnerships with the government, which integrate aspects of the CSI Programme with national development plans. The partnership with the government increases access to hospitals and ART treatment to non-Debswana employees, ensuring a healthy workforce for other sectors of the economy. Debswana's CSI Programme also partners with government scholarship and internship programs to provide skills training to Botswana graduates from across the country. This ties normally isolated CSR programs into national development objectives as outlined in Vision 2016.

CSR is criticized for its inability to change the structural impediments to development, however, the aspects of Debswana's CSI Programme that focus on health and HIV/AIDS, and education and skills training, have worked in partnership with the Botswana government's national development plans. The Botswana government has accrued substantial mining revenues as the result of its mining joint venture with De Beers in Debswana, as a result of collecting dividends as a shareholder, in addition to taxes and royalties. In turn the government has used these mining revenues to make substantial investments in human capital, physical infrastructure and health that are complimentary to the country's economic diversification plans and employment creation.

Debswana's role in mitigating the resource curse, and ensuring mining's contribution to development in Botswana has thus been instrumental both in the provision of substantial mining revenues that have given the country the financial capacity to implement its development plans, but also through aspects of its CSI Programme that have worked in partnership with government programs. This development of human capital and physical infrastructure is critical for economic development, and leveraging Botswana's position in the diamond pipeline to create employment. The following section will examine how Botswana's semi-directed model of mining regulation has allowed the country to leverage its position in the diamond pipeline in support of economic diversification schemes through the creation of value added activities.

Economic Diversification

Beneficiation: Establishing a Cutting and Polishing Industry in Botswana

Economic diversification is important for resource dependent countries given the volatility of commodity prices, and the tendency towards Dutch disease, deindustrialization, and declining terms of trades. Botswana's dependence on the mining sector was highlighted during the economic recession in 2009. With the resulting decrease in demand for diamonds as a result of the recession, Debswana responded by slowing production. For Botswana, this translated into a 4.6 per cent decline in real GDP (Republic of Botswana, 2010). Approximately 600 workers were retrenched as a result of the 40 per cent reduction in production that Debswana instituted as a result of the recession (De Beers and Debswana, 2009, p. 2; Van Wyk, 2009, p. 40).

The unequal distribution of the benefits of the diamond sector is reflected in a closer examination of Botswana's development indicators. Despite maintaining high economic growth rates, according to the most recent available figures in 2009, 32.9 per cent of the population lives below the national poverty line, and half of the country's income is concentrated in the wealthiest 10 per cent (Smillie, 2010, p. 152). On the Gini Index, which measures inequality, Botswana scores a dismal 0.61 which reflects the unequal distribution of the benefits of the country's high economic growth rate (World Bank, 2014).

The poor development indicators illustrate that the vast majority of the population have not benefitted from Botswana's diamond-led economic growth. According to a Gallup Survey of 148 countries, Botswana has one of the highest unemployment rates in

the world with more than 35 per cent of Batswana either unemployed or underemployed, and less than 20 per cent working full time for an employer (Gallup, 2013).

Although the largest private sector employer in the country, and a significant contributor to Botswana's GDP, Debswana only employs approximately 2.3 per cent of the formal workforce.⁴ Permanent positions, that include benefits, are limited. Debswana relies heavily on contract workers to fulfil its workplace needs. Contract workers represent over half of Debswana's workforce as there are 4000 permanent employees, but 5000 fixed term contractors (Ibid.) Fixed term contractors do not have access to medical benefits, nor participate in the pension plan.

Diamond mining in Botswana accounts for 33 per cent of the GDP (Debswana, 2014a), yet direct employment with Debswana is limited. As a small, landlocked country with a population of only approximately 2 million (World Bank, 2014), Botswana faces structural impediments to economic diversification. Although the government has implemented numerous policies to diversify the economy, Botswana remains highly dependent on the diamond sector.

One of these failed policies was the Financial Assistance Policy (FAP) implemented in 1982. The FAP was an investment initiative that was part of the country's industrial development policy. FAP was supposed to create sustained employment for unskilled workers, diversify the economy to lessen the dependence on mining and agriculture, ensure gender equality in industry, upgrade citizens' skills through training, and promote active citizen ownership of enterprises (Akinkugebe and

⁴ Based on author's calculations using data from Central Statistics Office of Botswana. *Stats Update, No 2014/3* (<http://www.cso.gov.bw/images/statsupdate.pdf>).

Makepe, 2006). FAP was supposed to support private sector enterprises to create sustainable employment, and under the FAP the government has invested heavily in industrial development (Ibid.).

A 2000 review of the FAP identified many implementation problems. It was identified that many small-scale FAP-assisted projects had failed, and that a number of the medium and large-scale companies supported by FAP were unable to sustain themselves beyond the five-year assistance period (Ibid.). The program was abolished in 2001, and replaced by the Citizen Entrepreneurial Development Agency (CEDA), which provides financing to citizen businesses in all sectors of the economy in the form of subsidized loans and risk sharing, as opposed to the outright grants that were given out under the FAP (Ibid.).

Beneficiation in the diamond sector presents an opportunity for the government to diversify the economy. The Botswana government has identified the establishment of a cutting and polishing industry, and the eventual establishment of jewelry manufacturing as a priority for the development of the diamond sector (Botswana Vision Council 2016, 2011). The government has used its regulatory role to capitalize on Botswana's position in the diamond pipeline to establish value added linkages to create more employment opportunities. There is a particular emphasis on beneficiation, and the government has focused on building downstream industries in sales and aggregation, cutting and polishing, and jewellery manufacturing. The government and De Beers emphasize that the establishment of this downstream diamond industry will generate new local employment, develop local skills and capabilities, and act as a catalyst for a range of

related secondary and tertiary enterprises. The beneficiation program has two key elements, transferring the majority of De Beers' sorting, valuing and aggregation activities from the Central Selling Office (CSO) in London to Gaborone, and assisting in the development of a local diamond cutting and polishing industry in Botswana.

It is expected that Debswana's mining operations will decrease in the next two decades, unless new major deposits are discovered. The Botswana government aims to use the cutting and polishing industry to create downstream competencies that can continue to benefit the country when Botswana's diamond reserves are exhausted. Given the significant importance of diamond mining to the national economy and government revenues, it is crucial that the Botswana government focus on the creation of industries that will support the economy, and sustain government revenues after the cessation of mining in the country. With beneficiation Debswana's impact on the mining revenue the government accrues from diamonds is not limited to Debswana's operations at its four diamond mines, as revenue is collected from the sale and aggregation of Debswana's rough diamonds, and the establishment of a cutting and polishing industry, and eventually jewellery manufacturing industry.

The beneficiation policy for the diamond industry is outlined in Botswana's 10th National Development Plan, which outlines the Mineral Development Policy. The Mineral Development Policy emphasizes the importance of economic diversification through the promotion of local beneficiation and value addition (Ministry of Finance and Development Planning, 2010). The beneficiation policy for the diamond industry is laid out in Section 9.209 of NDP 10, which states, "local value addition to diamonds will be

pursued through the activities of the Diamond Hub. The volume of diamonds will be increased to over \$1 billion per annum” (Ibid., p. 179). This objective is likely to be achieved in 2015, as polished diamond exports are forecasted to top \$1 billion (Weldon and Shor, 2014).

The most recent mining license granted to Debswana in 2005 reflects the government’s beneficiation policy. When Debswana’s mining licenses came up for renegotiation, the government made the renewal of the licenses contingent on the company assisting in the creation of a viable cutting and polishing industry in Botswana. This negotiation was possible under Section 51 of the Mines and Minerals Act, which allowed the government to create a regulatory environment supportive of economic diversification. As a result of these negotiations, Debswana’s mining license required the company to engage in beneficiation.

The first step in creating downstream industries in Botswana’s diamond sector, was the relocation of De Beers sales and aggregation activities, and this has been accomplished through the Botswana government exerting its regulatory role to support the growth of the sector. As part of a 10 year-sales agreement between the government and De Beers, signed in September 2011, the Central Selling Office (CSO) was relocated from London to Botswana’s capital of Gaborone at the end of 2013.

The Diamond Trading Company of Botswana (DTC Botswana) sorts and values Debswana’s production, and is responsible for the local sales and marketing of diamonds to Sightholders. DTC Botswana, like Debswana, is a 50/50 joint partnership between the Botswana government and De Beers. Through the new sales agreement DTC

International through DTC Botswana sells rough diamonds to the Sightholders.

Debswana sells its production to DTC International at a 10 per cent discount, which DTC Botswana then purchases back from DTC International at SSV minus 5 per cent (Mbyai, 2011, p. 38). The new sales agreement requires DTC Botswana's rough diamond sales to the local manufacturing industry to be a minimum of USD \$500 million a year, with a penalty clause for non-performance in the area of beneficiation for De Beers, giving De Beers a vested financial interest in making beneficiation a success (Fasih et al., 2014 p. 3).

As part of transforming Botswana into a leading diamond centre, De Beers held its first sales meetings for international buyers in Botswana on November 11, 2013, in which approximately 200 representatives of the world's leading diamond buyers attended the sights. With the establishment of DTC Botswana, in addition to the importance of its own diamond resources, Botswana became a key centre for the sorting and selling of diamonds in the De Beers global network. It is hoped that this will support the emergence of a larger diamond cutting and polishing industry in the country with approximately 30 to 35 per cent of the world's rough diamonds sold in Gaborone (Korinek, 2013, p. 42).

To support the establishment of a cutting and polishing industry, the government set out to transform the capital city of Gaborone into a diamond centre, building and supporting institutions for the industry. As such, the Botswana government set up two supporting institutions: the Diamond Office and the Diamond Hub. The Diamond Office and the Diamond Hub are both under the responsibility of the Ministry of Minerals, Energy and Water Resources, and oversee the implementation of the mineral

beneficiation policy.

The Diamond Office aims at building strategic alliances, developing infrastructure, and enabling a favourable fiscal regime in order to support diversification in the diamond industry. It is responsible for inspecting diamond exports, issuing Kimberley Process certificates, and for monitoring the activities of companies by completing six monthly audits in partnership with DTC Botswana. It is tasked with facilitating the establishment of the industry by providing stakeholders with a one-stop service administrating activities in rough and polished diamond trading, the cutting and polishing industry, jewellery manufacturing, and secondary trading of rough and polished diamonds. This includes housing ancillary businesses, including banks, logistics, gemmology, and security and brokerage firms.

The Diamond Hub is part of the Botswana government's economic hub initiative, and was established to coordinate economic activity in the diamond sector. It is responsible for developing programs that implement the government's vision to create a downstream industry, and is designed to be the driving force behind the creation of downstream linkages. The Diamond Hub is also tasked with the responsibility of attracting, and assisting suppliers that provide the industry goods and services to Botswana. To this end, it has a number of programs in place to provide a favourable business environment with respect to tax regime, work permits, training programs and accreditation.

Skills are a major factor in determining the breadth and depth of linkages in the cutting and polishing industry, thus skills creation is critical to the success of the government's plan to transform Botswana into a global diamond centre. The cutting and polishing of a diamond is a time consuming and exact process. First, a rough diamond is examined to determine the best shape and size. The diamond is then marked and cut using either a saw or laser machine. The diamond then goes through the bruiting processing, whereby two diamonds are rubbed together. The final step in the process is the polishing and finishing of the diamonds.

After the sales agreement was signed, the De Beers and the Botswana government invited cutting and polishing firms to establish factories in Botswana, known as Sightholders. For Sightholders to obtain a license to buy rough diamond allocations from DTC Botswana they are required to hire and train locals, engaging in knowledge and technology transfer (Diamond Trading Company Botswana, 2014). At the end of 2013 there were 24 cutting and polishing firms operating in Botswana, with 21 of them receiving rough allocations from Debswana through local sights (Weldon and Shor, 2014). The percentage of locals employed with these firms ranges from 80 to 95 per cent (Mbayi, 2011, p. 33-34). The available positions are technical, skilled and professional jobs. Local citizens are training for technical and skilled positions, which include markers, bruters, sawyers and diamond polishers, computer programmers, and laser operators. These jobs are involved directly in the production of polished diamonds in the factory, and represent the majority of employment in the industry.

Firm-specific skills in the technical and skilled positions are being created through a combination of on-the-job training, and apprenticeships in the firm's operations in other countries. Prior to starting their operations in Botswana, the cutting and polishing firms recruited workers, and sent them for training in their other factories for up to one year. Apprentices who were sent to other cutting and polishing centres such as Antwerp, India and China, formed the initial core group of local workers, combined with highly skilled expatriates. As locals become more experienced, it is planned that local employment will increase by recruiting more Botswana who would train on the job for approximately four to six months (Ibid., p. 54).

Locals recruited for technical and skilled jobs in the cutting and polishing industry require a low level of education (Form 3), good English communication skills, good eyesight and dexterity, and a basic knowledge of mathematics, physics and computers. Experienced expatriates perform on-the-job training with locals on a segment of the cutting and polishing process. The technical expertise for cutting and polishing specific types of diamonds is the company's most important source of competitive advantage, and is guarded closely. Locals are mostly trained to specialize in a section of the manufacturing process, in order to protect the firms' competitive command over the whole process (Ibid., p. 34).

Professional jobs in the cutting and polishing factories are in top and middle management level, but there is a significant shortfall of local representation at the management level as all cutting and polishing firms have foreign management (Managing Directors), although recently one of the firms appointed a local managing director. The

Botswana government exempts work permits for critical roles like the Managing Directors, Chief Financial Officers, Head of Marketing, Head of Operations and Quality Assurance on the basis that these are highly skilled jobs critical to the firm's operations.

The Diamond Hub also assists in fast-tracking work permits for the firms to bring in skilled labour to train locals. Managers and supervisors tend to be expatriates responsible for overseeing local people working in technical, skilled, administrative, and entry-level positions. These experienced expatriates have previously worked in various positions in the cutting and polishing industry in other diamond centres around the world. Other positions in the cutting and polishing factories are for workers in support services (accountants, human resources and office administrators). Smaller factories tend to have one person in charge of a number of roles within support services, while bigger firms have a number of individuals assigned to different roles within support services (Ibid., p. 54).

Debswana states that the relocation of the Diamond Trading Company (formerly known as the Central Selling Office), and establishment of a cutting and polishing industry in Botswana has created 3000 new jobs, and provided USD \$366 million supply to local cutting and polishing firms (De Beers and Debswana, 2009, p. 9). The majority of available positions in the cutting and polishing factories are in low-skilled positions as 91 per cent of workers are low skilled factory workers, with 7 per cent in middle management, and 2 per cent in top management. Botswana fill the majority of low skilled positions with 96 per cent of factory worker positions held by locals. That percentage plummets for middle management though, with only 4 per cent and a non-existent 0 per

cent of top management filled with local workers (Mbayi, 2011, p. 35).

The average local factory worker earns approximately P 1200 or USD \$200 per month, while an expatriate factory worker earns P 10,000 or USD \$1667/month. Even when local citizens fill a middle management position, they are compensated at a lower rate than an expatriate worker filling the same position. The wage bill for a local middle manager is P 7000 or USD \$1167, compared to P 30,000 or USD \$5000 for an expatriate middle manager (Ibid., p. 35-36). In addition to their wages, DTC Botswana also covers 60 per cent of employees' mortgages, both local and expatriate (Korinek, 2013, p. 38).

There is a significant difference in the wage bill between local workers and expatriates, which undermines the consumption linkage for locals from direct employment in the cutting and polishing firms. The cutting and polishing industry employs approximately 3000 with an annual wage bill of P 135,758,384 or US \$22,628,064. The portion of the wage bill accruing to an expatriate worker is more than double that for a local employee, and with only 250 expatriates employed in the sector, expatriates earn 65 per cent of the wage bill (Mbayi, 2011, p. 36). This difference occurs because expatriates fill highly skilled roles, while training programs have been focused on the localization of lower skilled positions within the sector.

When first pursuing the establishment of the cutting and polishing industry, the government supported the training of locals in cutting and polishing firms by exempting them from paying the training levy to the Botswana Training Authority. Cutting and polishing firms received a rebate on training expenses if the training authority accredited the programs. Recently, the government has proposed that cutting and polishing

companies pay 0.2 per cent of their turnover through the Human Resource Development Council (Benza, 2014, November 28). In addition to training, to encourage the processing of diamonds within Botswana, the also government exempts firms from paying taxes on polished diamonds, and only requires them to pay taxes if they export rough or partly polished diamonds. Firms also do not have to pay import duties on their technology imports (Mbayi, 2011, p. 58).

The establishment of a cutting and polishing industry has contributed to economic diversification in the country as it has created demand in industries like financial services, transport (e.g. flights to Gaborone, transportation for the diamonds), and hospitality and tourism. For example, one cutting and polishing firm said it brought 3 expatriates to the country for five nights during each sight week, and estimated that the industry results in about 1000 nights a year in hotel occupancy in Gaborone (Mbayi, 2011, p. 41). Transport services to the cutting and polishing firms include the local transportation of diamonds, as well as the exporting of diamonds. The providers of transport services need to have high-security vehicles, and knowledge in the export of diamonds (like customs procedures in different countries), and international offices as the diamonds can often pass through a number of countries before reaching their final destination. Two companies, Brinks and Malca-Amit, provide transport services to the industry. Macla-Amit was established in 2007, and has eight local clients and currently employs seven people, of which five are Batswana. The cutting and polishing industry has also directly benefited the financial services sector, and the goods and services sector. For example, two locally owned insurance companies provide insurance for the cutting and polishing industry (Ibid., p.

40-41). According to the World Bank, the supply linkages into the cutting and polishing industry have the potential to create 6000 across all sectors of the economy. Skilled manual workers would benefit most from job creation with the creation of approximately 2577 jobs (Fasih et al., 2014, p. 5).

Sustainability of the Cutting and Polishing Industry in Botswana

Although the cutting and polishing firms provide local Botswana with employment opportunities, and benefit other areas of the economy such as construction, hospitality and the financial services sector, all of the cutting and polishing firms are foreign-owned. Only 2 firms operating in Botswana have local shareholders, and all are subsidiaries of foreign companies, in which the parents companies provided the initial capital investment used to start their factories in Botswana (Mbayi, 2011, p. 34). As a result of the dominance of foreign ownership, most of the profit made by the industry is repatriated to the company's country of origin, rather than accrued to the Botswana government through revenue. In addition, the Citizen Entrepreneurship Development Agency has stated that the capital required to fund local entrepreneurs in cutting and polishing firms is too high, and as such will not provide loans for the establishment of domestically owned cutting and polishing firms (Ibid.).

Economic diversification based on the establishment of a cutting and polishing industry is challenging in Botswana. The cutting and polishing industry is experiencing trouble being globally competitive in a saturated diamond manufacturing market, and high labour costs in Botswana are threatening the expansion of the sector. It is estimated

that cutting and polishing in Botswana costs approximately USD \$60 to \$65 per carat, compared to USD \$12 to \$25 per carat in India, and USD \$20 to \$30 in China (Benza, 2014, July 4). Part of the competitive advantage of the cutting and polishing industry in Botswana is the ready supply of Debswana's rough diamond production. Yet, Jwaneng Mine is scheduled to be redeveloped into an underground mine in 2027 producing a smaller volume of rough diamond production at a higher cost (Weldon and Shor, 2014).

Due to these higher costs in comparison with other cutting and polishing centres, local firms can only viably cut larger stones, which are in limited supply in Botswana. Although these high costs mean that there are significant challenges to transforming Botswana into a major cutting centre, according to an official from the MMEWR there is a potential to create a niche market for producing higher quality branded diamonds (Interview #1).

The government has identified 2027, the year of Jwaneng Mine's redevelopment, as the benchmark for developing a cutting and polishing industry that is independent of domestic rough supply (Weldon and Shor, 2014). De Beers has been the traditional sole buyer of rough diamonds mined in Botswana. The Botswana government reached an agreement with De Beers in September 2011 to obtain a progressive allotment, up to 15 per cent, to sell through its own channels. As a result, the Okavango Diamond Company (ODC) was established in 2012 as wholly owned by the Botswana government. The ODC sales have much lower purchase requirements than De Beers' sights, and simple application process. It is hoped that this will attract smaller rough traders, and cutting and polishing industries to set up in Botswana. The government and diamond community

anticipate that the ODC will stimulate manufacturing, and build the country's trading base by lowering costs, and providing greater access to rough diamond supplies (Weldon and Shor, 2014).

The beneficiation policy also does not require any form of local content from suppliers, and opportunities for local companies to enter into the cutting and industry's supply chain are limited. Suppliers of knowledge-intensive services to the diamond industry are mainly multinationals with prior existing relationships with Sightholders in other cutting and polishing centres (Fasih et al., 2014, p. 6). Although, ten companies supply various knowledge services to the industry, and have opened offices in Botswana, a recent World Bank study identified that locals do not possess the skills required by these companies (Ibid.)

The Botswana government, therefore, faces challenges in its beneficiation policy for the diamond sector. Although the beneficiation policy requires cutting and polishing firms to hire local citizens in order to buy diamonds from DTC Botswana, these positions have been mostly in low skilled. Cutting and polishing firms are also foreign owned, as are suppliers for the industry. Currently, the cutting and polishing industry is also dependent on Debswana's operations, which has limited its contribution to economic diversification. However, approximately 3000 positions have been created in the low skilled positions, while another approximately 2500 positions created in supplying industry. For a country with Botswana's small population and high unemployment rate, the creation of approximately 5500 jobs is significant.

The government is addressing the continued dependence of the cutting and polishing industry on De Beers and Debswana through the establishment of the ODC. The government's diamond beneficiation policy aims to foster economic diversification through the development of downstream linkages in the wider diamond processing industry. The development of these downstream linkages from the extractive industry will diversify the economy, and spur economic growth, absorbing the impact of volatile commodity prices and lessening the effect of the resource curse. Cutting and polishing of diamonds ensures that a greater proportion of the value derived from diamond mining will be localized, and benefit local communities through increasing skills and employment.

The government's beneficiation policy aims to leverage Botswana's dominant position in the diamond pipeline to establish downstream linkages that will sustain the national economy once Botswana's diamond reserves are exhausted. The government has been successful in using its considerable negotiating power as a major supplier of De Beers to renegotiate favourable terms in the renewal of Debswana's mining license that support beneficiation through the relocation of De Beers sales and aggregation activities to Botswana, and the establishment of a cutting and polishing industry. By assuming an active policy role, the government set out stipulations in its beneficiation policy to localize the cutting and polishing industry, and put in place the institutions and services to support the development of the sector. Although local participation in the cutting and polishing industry has been limited to low skilled positions, the industry is young.

Chapter 4

Conclusions

Natural resources, while seen as a source of wealth creation, can have a detrimental impact on the development of a country. Many developing countries that are rich in natural resources suffer from the resource curse, and an absence development. The natural resource curse, however, is not an inevitable consequence of resource wealth, and mining has the potential to contribute to development. For example, the mining sector can contribute mining revenue to government coffers to be used to finance social spending such as investments in health, education and physical infrastructure. The mining sector can also create employment opportunities for the local population, and be used to diversify the economy.

There are different models of mining regulation employed by states to mitigate the resource curse. These models vary in the role of the state and market in the mining sector, ranging on a spectrum from state ownership of the means of production to a market-directed model. This thesis identified a semi-directed model, stemming from a democratic developmental state, as key to mitigating aspects of the resource curse, and ensuring mining's contribution to development in Botswana. Under Botswana's semi-directed model of mining regulation the private sector engages in production, while the state plays an important regulatory role integrating the mining sector into national development plans.

Botswana's semi-directed model of mining regulation stems from its orientation as a democratic developmental state. Reflecting Botswana's developmental orientation, the semi-directed model implements a fiscal policy framework that maximizes rent capture for the government, while attracting foreign investment. A transparent and accountable government invests mining revenue in support of the development objectives it sets in its six-year national development plans. The national development plans identify economic diversification, and employment creation as key to development in Botswana. Thus, acting as a democratic developmental state, the Botswana government uses its regulatory role to drive economic diversification and the subsequent employment it creates, through the creation of linkages with the mining sector. This is achieved through the establishment of the necessary institutional support structures, and by controlling access to diamonds through the imposition of conditions in the issuing of mining licenses that require a minimum level of beneficiation. Furthermore, under the semi-directed model of mining regulation CSR works in conjunction with a strong democratic developmental state to drive development.

Botswana has utilized its regulatory role to become a major shareholder both in Debswana and the De Beers Group of Companies. The Mines and Minerals Act of 1967 first enabled the government to obtain equity in mining operations, which it used to gain a modest share in then De Beers Botswana. As Debswana's importance to the national economy increased, the Botswana government used its regulatory role in subsequent mining license negotiations to increase its shares in the mining company, eventually obtaining 50 per cent ownership in the company in 1974.

This thesis demonstrates the importance of having a Minerals Act that enables the government the flexibility to negotiate favourable terms for major mining operations in the country, as Botswana has with its Section 40 and 51 of the Mines and Minerals Act of 1967, 1977 and 1999. The equity the Botswana government has obtained as a result of its regulatory role has enabled the government to continue to increase its share in Debswana's operations, and collect substantial mining revenues as a shareholder. For the Botswana government this translates into roughly P 347.1 billion in mining revenues that have been collected by the government between 1983 to 2013 (Korinek, 2013, p. 31).

Collecting mining revenues, however, does not automatically translate into development. Government spending in resource rich developing states is often unsustainable due to the price volatility of commodities, which can render government spending unsustainable during price downturns (Blattman, Hwang and Williamson, 2007; Deaton, 1999). Rent seeking and conflict also characterize developing countries rich in natural resources (Reno, 1998; Ross, 2004 and 1999; World Bank, 2003). Developing countries rich in natural resources also often under invest in health and education (Cockx and Francken, 2014; Birdsall et al., 2000).

Botswana has mitigated many of these aspects of the resource curse, and ensured mining contributed to development. The country has had a high degree of political stability, and has used a semi-directed model to manage the spending of mining revenues through its six-year NDPs. From 1983 to 2013 a total of P 365.6 billion was invested in social spending by the government (Korinek, 2013, p. 31). This investment has resulted

in a significant improvement in development indicators since independence, with Botswana graduating off the U.N.'s least developed list.

Mining's contribution to development is not limited to the revenue it provides governments though. Most mining companies also deliver CSR programs focused on education and health, and engage in workforce training. CSR programs, however, are limited in mitigating the resource curse, and their contribution to development. This thesis found that CSR programs could be effective when the state uses its semi-directed regulatory role to integrate them into national development plans. Rather than operating in isolation, under the semi-directed model of mining regulation, CSR programs are integrated, and work in partnership with government initiatives. This is imperative for the sustainability of programs, and to integrate them into national economic growth and development.

Aspects of Debswana's CSI Programme focused on health and education have been integrated with government initiatives, which are laid out in the NDPs. The Botswana government has used its mining revenues to expand education and health care in the country. Debswana, meanwhile, has worked in partnership with the government in the health sector, and supported government education initiatives from the primary to tertiary level. They have also partnered with the government in skills training programs for employment creation.

Education to build local capacity in the workforce, and the provision of health care to ensure a healthy workforce has been essential to mitigate the resource curse in Botswana, and mining's contribution to development. Localization of the mining sector

creates employment linkages, however, the local population must possess the skills required by the mining company for this to occur. This can be done in a partnership between the mining company, and the state. The state can utilize mining revenues, such as was done by the Botswana government, to support the education and skills development of its population. It can also engage with the private sector to provide opportunities for on the job skills training, and to match education and skills development training with industry needs. In Botswana, this was illustrated through the integration of Debswana's CSI Programme with the Ministry of Labour and Home Affairs' National Internship Programme and National Scholarship Programme.

The integration of Debswana's HIV/AIDS programs with the government's health care initiatives is of particular importance to mitigating the resource curse in Botswana, and mining's contribution to development, as the epidemic has had a profound impact on the local workforce. While Debswana has provided access to prevention and treatment programs to its employees and their families, the government and Debswana have worked in partnership to provide access to free ART treatment to the broader community through the mine hospitals. This has been instrumental in increasing the accessibility of treatment to the general population surrounding the mine communities, and is in addition to the mining revenues invested in the health sector by the government.

Partnerships between the private and public sector have contributed to education and skills training in Botswana, which have helped to localize the mining sector. In Botswana, the semi-directed model of mining regulation has thus worked to mitigate the resource curse, and have mining contribute to development, by increasing the skills level

of the local Botswana workforce, and working to combat the HIV/AIDS epidemic to ensure the existence of a healthy workforce.

There have been some key challenges in the mitigating of the resource curse in Botswana though, as the country remains dependent on the mining sector. With mining revenues from Debswana a significant portion of government revenue, Botswana is vulnerable to shifts in the global diamond market. Diamond prices are relatively stable, as a result of De Beers controlling global diamond prices through the control of the supply of diamonds. When demand for diamonds is low, however, to maintain diamond prices De Beers limits the supply by slowing down, or ceasing production at its mines. This occurred in 2009 as Debswana ceased operations at its Damtshaa mine, and slowed production down at its remaining 3 mines in response to the global economic crash. Debswana's production was cut to half, and workers were retrenched. The impact of the recession was further compounded in June 2012 by a slope failure at Jwaneng that ceased production at the largest producer in Debswana's family of operations. As it is expected that Debswana will decrease production in the next two decades, it is imperative that Botswana focus on diversifying its economy.

The Debswana case study illustrated that although the diamond sector has contributed significantly to Botswana's economy, resulting in a high economic growth rate, the country is still highly dependent on the mining sector, and has had challenges diversifying the economy. As such, the Botswana government has focused on using its semi-directed model of mining regulation to encourage beneficiation in the diamond

sector to drive economic diversification, and create more employment opportunities for Botswana.

States suffering from the resource curse are often characterized by undiversified economies (Sachs and Warner, 2001). Botswana has used its dominant role in the global diamond pipeline to negotiate favourable contracts that have relocated the sales and aggregation activities of the De Beers Group of Companies, and established a cutting and polishing industry in the country. Using its semi-directed model of mining regulation, Botswana required cutting and polishing firms to train locals for positions in the sector in order to obtain a license to become a Sightholder. This has integrated the mining sector into the country's national development plan, Vision 2016, which identifies economic diversification and employment creation as key to development in Botswana. The industry is relatively new, and it has yet to be seen if this will lessen Botswana's dependence on diamond mining.

This thesis concludes that Botswana's semi-directed model of mining regulation has mitigated the resource curse, and contributed to development to a certain extent in Botswana. While significant challenges still exist in regards to the unemployment rate and economic diversification, the country has made significant progress in development outcomes since its independence in 1966. Botswana, and the semi-directed model of mining regulation in which it operates, has been instrumental in mining's contribution to development. Through its semi-directed model the government has integrated the mining sector into national development plans.

The semi-directed model of mining regulation mitigates key aspects of the resource curse, and ensures mining's contribution to development. The contribution of the mining sector to development is often impeded by the volatility of the international commodity markets, which is characterized by boom and bust cycles. Mining revenues are also often used to support a rentier state, and are often not invested in social spending, such as health and education.

The semi-directed model of mining regulation ensures that governments collect sufficient mining revenues to invest in social spending, through allowing the government the regulatory option to acquire equity shares in mining operations, and thus collect dividends in addition to taxes and royalties. To ensure that mining revenues do not finance conflict and a rentier state, it is imperative that the semi-directed model of mining regulation be supported by a high degree of political stability, transparency and accountability. Thus, through limiting the spending of mining revenues to ensure that they finance social spending, a developing state can minimize the impact of price volatility, while investing in development.

Other key aspects of the resource curse include Dutch disease, deindustrialization, and the declining terms of trade. The semi-directed model of mining regulation mitigates these aspects of the resource curse, and ensures mining contributes to development by integrating the mining sector into national development plans. Under this model the state uses its regulatory role to encourage the development of linkages between the mining sector and other sectors of the economy. This is important to achieve economic diversification, which supports development through the creation of employment

opportunities for the local population, as well as the increased revenues that the new economic activity generates for the state. This also decreases the impact of price volatility on the government, as it diversifies its sources of revenue, which lessens its dependence on volatile commodity prices.

This semi-directed model of mining regulation may not be able to be replicated throughout Africa, however. It is important to note that the case study dealt with a country that has minimal foreign debt, and as such has not been subjected to the structural adjustment programs of the World Bank and International Monetary Fund. The semi-directed model of mining regulation also requires a state with a high degree of political stability that is able to attract foreign investment, and encourage private companies to enter into partnerships with the government. It requires a state that is transparent and accountable so that mining revenues are invested in social spending instead of supporting a rentier state. It is also important to note that Botswana is in a unique position with its diamond reserves as a major supplier to the De Beers Group of Companies. As such, other countries mining other commodities may not have the negotiating power that Botswana has been able to use with De Beers.

The semi-directed mode of mining regulation, however, could be a potential model for developing countries that have a high degree of political stability that could potentially attract the private sector to engage in a partnership with the government. This thesis concludes that the resource curse is not an inevitable consequence of resource wealth in developing countries, and that mining can contribute to development when a

state employs a semi-directed model of mining regulation.

References

- Acemogul, D., Johnson, S. and Robinson, J. (2003). An African success story: Botswana. In D. Rodrik (Ed.), *In search of prosperity: Analytic narratives on economic growth* (pp.80-119). Princeton, NJ: Princeton University Press.
- Ahmad, E. & Singh, R. (2003). *Political economy of oil-revenue sharing in a developing country: Illustrations from Nigeria* (IMF Working Paper 16). Retrieved March 27, 2015 from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=879091
- Akinkugbe, O., & Makepe, P. (2006). Botswana: An examination of recent economic redirection strategies. In K. Wohlmuth, P. Burger, A. Gutowski, M.N. Hussain, T. Knedlik, & M. Meyn (Eds.), *African development perspectives yearbook 2005/06: Africa - escaping the primary commodities dilemma* (pp.59-87). New Brunswick, USA: Transaction Publishers.
- de Alcántara, C.H.(1998). Uses and abuses of the concept of governance. *International Social Science Journal*, 50(155), 105-113.
- Amegashie, J.A., and Kamara, I. (2008, November). *The exceptionalism of Botswana: Economics, politics and challenges* (Working Paper 2). African Center for Economic Transformation. Retrieved March 28, 2015 from <http://www.eisourcebook.org/cms/Dec 2012/Botswana, Exceptionality - Economics, Politics & Challenges.pdf>
- Amsden, A. (1992). *Asia's next giant: South Korea and late industrialization*. New York: Oxford University Press.
- Arrighi, G. (2002). The African crisis: World systemic and regional aspects. *New Left Review*, 15, 5-36.
- Auty, R.M.(1993). *Sustaining development in mineral economies: The resource curse thesis*. New York: Oxford University Press.
- _____. (2001). The political state and the management of mineral rents in capital- surplus economies: Botswana and Saudi Arabia. *Resource Policy*, 77-86.
- Auty, R.M., & Gelb, A. (2001). Political economy of resource abundant-states. In R.M. Auty (Ed.), *Resource abundance and economic development* (pp.126-146). New York: Oxford University Press.
- Balassa, B. (1971). Trade policies in developing countries. *American Economic Review*, 61(2), 178-187.

- Bannon, I., & Collier, P. (2004). Natural resources and conflict: What can we do. In I. Bannon and P. Collier (Eds.), *Natural resources and violent conflict: Options and actions* (pp.1-16). Washington, DC: The World Bank.
- Bayart, J.F., Ellis, S., & Hibou, B. (1999). From kleptocracy to the felonious state?. In J.F. Bayart, S. Ellis & B. Hibou (Eds.), *The criminalization of the state in Africa* (pp.1 -31). Bloomington: Indiana University Press.
- BBC News. (2006, January 11). Botswana brings back school fees, *BBC News*. Retrieved August 30, 2014 from <http://news.bbc.co.uk/1/hi/world/africa/4601360.stm>
- Beeson, M. (2004). The rise and fall(?) of the developmental state: The vicissitudes and implications of East Asian interventionism. In L. Low (Ed.), *Developmental states relevancy, redundancy and reconfiguration* (pp.29-40). New York: Nova Science Publishers.
- Benza, B. (2014, July 4). Diamond manufacturing reaches saturation, *Mmegionline*. Retrieved August 16, 2014 from <http://mmegi.bw/index.php?aid=44171>
- _____.(2014, October 28). Debswana production jumps 14%, *Mmegionline*, Retrieved December 6, 2014 from <http://www.mmegi.bw/index.php?aid=46956>
- _____.(2014, November 28). Diamond manufactures in turmoil, *Mmegionline*, Retrieved December 14, 2014 from <http://www.mmegi.bw/index.php?aid=47715>
- Birdsall, N., Pinckney, T., and Sabot, R. (2001). Natural resources, human capital, and growth. In R. Auty (Ed.), *Resource, abundance and economic development* (pp.57-75). Oxford: Oxford University Press.
- Blattman, C.J., Hwang, J. and Williamson, J.G. (2007). Winners and losers in the commodity lottery: The impact of terms of trade growth and volatility in the Periphery 1870-1939. *Journal of Development Economics*, 82, 156-179.
- Blowfield, M., & Frynas, J.G. (2005). Setting new agendas: Critical perspectives on social responsibility in the developing world. *International Affairs*, 81(2), 499-513.
- Boschini, A.D, Pettersson, J., & Roine, J. (2007). Resource curse or not: A question of appropriability. *Scandinavian Journal of Economics*, 109(3), 593-617.
- Botswana Vision Council 2016. (2011). A long term vision for Botswana. *Vision 2016 Booklet*. Retrieved January 10, 2015 from <http://www.vision2016.co.bw>

- Brereton, D. (2002). *The role of self-regulation in improving corporate social performance: The case of the mining industry, Current issues in regulation: Enforcement and compliance*. Paper presented at the Australian Institute of Criminology Conference, September, 2002, Melbourne, Australia. Retrieved March 27, 2015 from http://www.csr.uq.edu.au/docs/brereton_2002_1.pdf
- Campbell, B. (2010). Revisiting the reform process of African mining regimes. *Canadian Journal of Development Studies*, 30(1-2), 197-217.
- CCIC Africa-Canada Forum and the Canadian Network on Corporate Accountability. (2013). *The African Mining Vision: A Transformative Agenda for Development Backgrounder*. Retrieved March 27, 2015 from http://www.ccic.ca/_files/en/working_groups/2013-04-02-AMV_backgrounder_EN.pdf
- Central Statistics Office of Botswana. (2011). *2011 population & housing census: Preliminary results brief*. Retrieved April 4, 2015 from [http://ecastats.uneca.org/aicmd/Portals/0/Census 2011 Preliminary Brief Sept 29 2011.pdf](http://ecastats.uneca.org/aicmd/Portals/0/Census%202011%20Preliminary%20Brief%20Sept%2029%202011.pdf)
- _____. (2011). *Botswana – Core welfare indicators survey 2009-2010, poverty survey*. Retrieved December 7, 2014 from <http://catalog.ihns.org/index.php/catalog/2044>
- _____. (2014). *Stats Update, No 2014/3*. Retrieved April 10, 2015 from <http://www.cso.gov.bw/images/statsupdate.pdf>
- _____. (2015). *Gross Domestic Product: Fourth Quarter of 2014, No. 2015/1*. Retrieved from April 26, 2015 from http://www.cso.gov.bw/images/gdp_q4.pdf
- Chang, D.O. (2009). *Capitalist development in Korea: Labour, capital and the myth of the developmental state*. London: Routledge.
- Chang, H.J. (2003). *Kicking away the ladder: Development strategy in historical perspective*. London: Anthem Press.
- Cockx, L. and Francken, N. (2014). *Extending the concept of the resource curse: Natural resources and public spending on health* (IOB Working Paper No. 2014.1). Leuven, Belgium: Universiteit Antwerpen, Institute of Development Policy and Management. Retrieved March 1, 2015 <http://econpapers.repec.org/RePEc:iob:wpaper:201401>
- Collier, P. (2007). *Managing commodity booms: Lessons of international experience*. (African Economic Research Consortium). Retrieved December 6, 2012 from <http://users.ox.ac.uk/~econpco/research/pdfs/ManagingCommodityBooms.pdf>

- Collier, P., Van Der Ploeg, R., Spence, M., and Venables, A.J. (2010). *Managing resource revenues in developing economies*. *IMF Staff Papers*, 57(1), 84-118
- Cook, B., & Kothari, U. (2001). *Participation: The new tyranny?*. London: Zed Books.
- Corden, W.M., & Neary, J.P. (1982). Booming sector and de-industrialization in a small open economy. *The Economic Journal*, 92, 825-848.
- Crawford, G. (2006). The World Bank and good governance: Rethinking the state or consolidating neo-liberalism?. In A. Paloni, & M. Zanardi (Eds.), *The IMF, World Bank and Policy Reform* (pp.115-141). New York: Routledge.
- Criscuolo, A. (2008). *Briefing note: Botswana*. Retrieved January 10, 2015 from http://siteresources.worldbank.org/INTEXPCOMNET/Resources/Briefing_Note_-_Botswana.doc
- Dale, R. (1995). *Botswana's search for autonomy in Southern Africa*. Westport, CT: Greenwood Press.
- Dansereau, S. (2005). Win-win or new imperialism? Public-private partnerships in Africa mining. *Review of African Political Economy*, 32(103), 47-62.
- _____. (2012). *Decent work agenda and the developmental state: An automatic fit?*. Paper presented at the ZCTU General Council and Heads of Departments Workshop on the Decent Work Agenda, Masvingo, Zimbabwe, July 10th-13th, 2012.
- _____. (2010). Comparing dueling approaches to the transformation of South African mining: Corporate social responsibility or labour restructuring?. *Labour, Capital and Society*, 43(1), 63-98.
- _____. (2009, August 10). Mining and development: analysis of different models, *Report to the Centre for Sustainability in Mining and Industry*. Paper presented at Witwatersrand University, Johannesburg, South Africa.
- Davis, G.A. & Tilton, J.E. (2005). The resource curse. *Natural Resources Forum*, 29, 233-242.
- Deaton, A. (1999). Commodity prices and growth in Africa. *Journal of Economic Perspectives*, 13(3), 23-40.
- Debswana Diamond Company. (n.d.). *Corporate Social Investment Programme*. Gaborone: Debswana Diamond Company. Retrieved April 15, 2015 from <http://www.debswana.com/People/Pages/CSI.aspx>
- _____. (2004). *Annual review 2004*. Gaborone: Debswana Diamond Company.

- _____. (2005). *Moving forward* (Debswana's Annual Review 2005). Gaborone: Debswana Diamond Company. Retrieved March 28, 2015 from [http://www.debswana.com/About Debswana/Pages/Reports.aspx](http://www.debswana.com/About%20Debswana/Pages/Reports.aspx)
- _____. (2006). *An emerging constellation: Debswana's business sustainability* (Debswana's Annual Review 2006). Gaborone: Debswana Diamond Company. Retrieved March 28, 2015 from [http://www.debswana.com/About Debswana/Pages/Reports.aspx](http://www.debswana.com/About%20Debswana/Pages/Reports.aspx)
- _____. (2007). *Pulling together towards organizational excellence* (Debswana's Annual Review 2007). Gaborone: Debswana Diamond Company. Retrieved March 28, 2015 from [http://www.debswana.com/About Debswana/Pages/Reports.aspx](http://www.debswana.com/About%20Debswana/Pages/Reports.aspx)
- _____. (2009). *Annual Review* (Debswana Annual Review 2009). Gaborone: Debswana Diamond Company. Retrieved March 28, 2015 from [http://www.debswana.com/About Debswana/Pages/Reports.aspx](http://www.debswana.com/About%20Debswana/Pages/Reports.aspx)
- _____. (2011). *Shaping the future for sustainable development* (Report to Stakeholders 2010-2011). Gaborone: Debswana Diamond Company. Retrieved March 28, 2015 from [http://www.debswana.com/About Debswana/Pages/Reports.aspx](http://www.debswana.com/About%20Debswana/Pages/Reports.aspx)
- _____. (2012, February). Cut 8 invests in training in Botswana. *Teemane Newsletter*, 1(2). Retrieved March 27, 2015 from <http://www.debswana.com/Documents/Teemane%20News%20May.pdf>
- _____. (2014a). *About Debswana*. Retrieved November 24, 2014 from [http://www.debswana.com/About Debswana/Pages/Introduction.aspx](http://www.debswana.com/About%20Debswana/Pages/Introduction.aspx)
- _____. (2014b). *CSI Programme*. Retrieved August 31, 2014 from <http://www.debswana.com/Sustainability/Pages/CSI.aspx>
- _____. (2014c). *HIV/AIDS Programme Milestones*. Retrieved December 24, 2014 from <http://www.debswana.com/People/Pages/Wellness.aspx>
- _____. (2014d). *Jwaneng*. Retrieved November 18, 2014 from <http://www.debswana.com/Operations/Pages/Jwaneng.aspx>
- _____. (2014e). *People*. Retrieved from August 30, 2014 m <http://www.debswana.com/People/Pages/Introduction.aspx>
- _____. (2014f). *Pension Fund*. Retrieved August 24, 2014 from, <http://www.debswana.com/People/Pages/Pension%20Fund.aspx>

- DeBeers. (2008). *Living up to diamonds: From natural resources to shared national wealth* (Operating and Financial Review 2008). London: De Beers Group of Companies. Retrieved March 1, 2015 from <http://www.debeersgroup.com/en/sustainability/case-studies-and-reports.html>
- _____. (2012). *2012 assurance, risk and compliance supplement: Report to society*. London: De Beers Group of Companies. Retrieved March 28, 2015 from <http://www.debeersgroup.com/en/sustainability/case-studies-and-reports.html>
- _____. (2013). *Living up to diamonds: Report to society 2013*. London: De Beers Group of Companies. Retrieved March 28, 2015 from <http://www.debeersgroup.com/en/sustainability/case-studies-and-reports.html>
- De Beers and Debswana (2009). *Commentary on the Bench Mark foundations report: 'Corporate social responsibility in the diamond mining industry in Botswana De Beers, Botswana and the control of country*. Retrieved June 15, 2014 from <http://www.diamondintelligence.com/download/files/Bench%20Marks%20Study%20de%20beers%20response.doc>
- Delgado-Wise, R., & Foladori, G. (2011). Contemporary capitalism: Development in an era of globalization. In H. Veltmeyer (Ed.), *Critical Development Studies Handbook* (pp.48-51). Halifax: Fernwood Publishing.
- Denzin, N.K., & Lincoln, Y.S. (1998). Introduction: Entering the field of qualitative research. In N.K Denzin & Y.S Lincoln (Eds.), *Collecting and interpreting qualitative materials* (pp.1-34). Thousand Oaks, Ca.: Sage Publications.
- Diamond Trading Company Botswana. (2014). *Sales agreement*. Retrieved December 14, 2014 from http://www.dtcbotswana.com/sales_agreement.php
- Diplomat Africa. (2012). Debswana Jwaneng mine: 30 years of sustainable partnership. *Diplomat Africa, 4*. Gaborone: GVPedia Publishing (Pty) Ltd.
- Economist. (2004, July). The cartel isn't forever. *Economist*. Retrieved April 15, 2015 from <http://www.economist.com/node/2921462>
- Edigheji, O.(2005). *A democratic developmental state in Africa? A concept paper*. (Centre for Policy Studies Research Report 105). Retrieved December 22, 2012 from <http://www.rrojasdatabank.info/devstate/edigheji.pdf>
- _____.(2011). *Constructing a democratic developmental state in South Africa: Potentials and challenges*. Cape Town: Human Sciences Research Council.

- Engerman, S.L., & Sokoloff, K.L. (2002). *Factor endowments, inequality, and paths of development among new world economics* (NBER Working Paper No.9259). Retrieved December 13, 2012 from <http://www.nber.org/papers/w9259>
- Evans, P.B. (1995). *Embedded autonomy: States and industrial transformation*. Princeton: Princeton University Press.
- Fasih, T., Ballai, S., Macdonald, K., Mbaya, L., Mupimpila, C., Okurut, N., ... Siphambe, H. (2014). *Skills implications of Botswana's diamond beneficiation strategy* (World Bank Working Paper 93049). Retrieved March 27, 2015 from <https://openknowledge.worldbank.org/handle/10986/21082>
- Fox, T., Ward, H., & Howard, B. (2002). *Public sector roles in strengthening corporate social responsibility: A baseline study*. Washington, DC: The World Bank.
- Fritz, M., & Menocal, A.R. (2006). *(Re)building developmental states: From theory to practice* (Overseas Development Institute Working Paper 274). Retrieved March 27, 2015 from <http://www.odi.org/publications/1568-rebuilding-developmental-states-theory-practice>
- _____. (2007). Developmental states in the new millennium: Concepts and challenges for a new aid agenda. *Development Policy Review*, 25(5), 531-553.
- Frynas, J.G. (2005). The false development promise of corporate social responsibility: Evidence from multinational oil companies. *International Affairs*, 81(3), 581-598.
- Gallup. (2013). *Gallup Global Employment Tracking*. Retrieved August 5, 2014 from <http://www.gallup.com/poll/145487/Gallup-Global-Employment-Tracking.aspx>
- Gibbon, P. (1997). Civil society, politics, democracy on developmentalist states. In S. Lindberg & A. Sverrisson (Eds.), *Social movements in development: The challenge of globalization and democratization* (pp.78-98). London: Macmillan.
- Girvan, N. (1976). *Corporation imperialism: Conflict and expropriation*. New York: Monthly Review Press.
- Gylfason, T. (2000). *Natural resources, education and economic development* (Discussion Paper No. 2594). Retrieved March 27, 2015 from <https://notendur.hi.is/gylfason/pdf/dp2594.pdf>
- Good, K. (2008). *Diamonds, dispossession and democracy in Botswana*. New York: Boydell & Brewer Inc.

- Gumede, W. (2009). *Delivering the democratic developmental state in South Africa* (Development Planning Division Working Paper Series No.9). Midrand, South Africa: Development Bank of Southern Africa. Retrieved March 27, 2015 from <http://ibrarian.net/navon/page.jsp?paperid=15736943&searchTerm=jakarta+asean+secretariat>
- Gunderson, G. (1970). *Nation-building and the administrative state: The case of Botswana*. Berkeley: University of California, Berkeley.
- Hamann, R., & Acutt, N. (2003). How should civil society (and the government) respond to 'corporate social responsibility'? A critique of business motivations and the potential for partnerships. *Development Southern Africa*, 20(2), 255-270.
- Hammad, L., & Morton, B. (2011, October). *Greater influence, greater responsibility: are INGO's self-regulatory accountability standards effective?* (Working Paper The North South Institute). Retrieved March 27, 2015 from <http://cso-effectiveness.org/IMG/pdf/ingofinal.pdf>
- Harvo, G., & Santiso, J. (2011, January). *Benefiting the resource rich: How can international development policy help tame the resource curse?* (IDS Working Paper 355). Retrieved March 27, 2015 from <http://opendocs.ids.ac.uk/opendocs/handle/123456789/893#.VRbCJZN4rB4>
- Hayashi, S. (2010). The developmental state in the era of globalization: Beyond the Northeast Asian model of political economy. *The Pacific Review*, 23(1), 45-69.
- Hellman, J.S., Jones, G., Kaufmann, D., & Schankerman, M. (2000). *Measuring governance, corruption, and state capture* (Policy Research Working Paper 2444). Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=236214
- Hermans, Q. (1974). Towards budgetary independence: A review of Botswana's financial history, 1900-1973. *Botswana notes and records*, 6: 89-115.
- Hopkins, M. (2007). *Corporate social responsibility and international development: IS business the solution?*. Sterling, VA: Earthscan.
- International Council on Mining and Metals. (2003). *Sustainable Development Framework: 10 principles*. Retrieved March 27, 2015 from <https://www.icmm.com/our-work/sustainable-development-framework/10-principles>
- Income Tax (Amendment) Act, *Chapter 52:01*. (2011).

- Isham, J., Woolcrook, M., Pritchett, L., & Busby, G. (2005). The varieties of resource experience: Natural resource export structures and the political economy of economic growth. *World Bank Economic Review*, 19(2), 141-174.
- Jefferis, K. (1998). Botswana and diamond-dependent development. In W.A Edge and M.H. Lekorwe (Eds.), *Botswana: Politics and society* (pp.300-318). Pretoria, South Africa: J.L. van Schaik Publishers.
- _____. (2009). The role of TNCs in the extractive industry of Botswana. *Transnational Corporations*, 18(1), 61-92.
- Jenkins, R. (2005). Globalization, corporate social responsibility and poverty. *International Affairs*, 81(3), 525-540.
- Johnson, C. (1982). *MITI and the Japanese miracle: The growth of industrial policy, 1925-1975*. Stanford: Stanford University Press.
- _____.(1987). Political institutions and economic performance: The government-business relationship in Japan, South Korea, and Taiwan. In F. Deyo (Ed.), *The political economy of New Asian Industrialism* (pp.136-156). Ithaca, NY: Cornell University Press.
- Kemp, D. (2001). *Corporate social responsibility in Indonesia: Quixotic Dream or confident expectation*. Geneva: UNRISD. Retrieved March 27, 2015 from [http://www.unrisd.org/80256B3C005BCCF9/\(httpAuxPages\)/EF8F86E50D18E6D480256B61005AE53A/\\$file/kemp.pdf](http://www.unrisd.org/80256B3C005BCCF9/(httpAuxPages)/EF8F86E50D18E6D480256B61005AE53A/$file/kemp.pdf)
- _____.(2009). Mining and community development: problems and possibilities of local-level practice. *Community Development Journal*, 45(2), 198-218.
- Khan, M.H. (2005). *Review of DFID's governance target strategy paper* (Commissioned Paper for DFID). London: Department for International Development. Retrieved March 27, 2015 from <http://core.ac.uk/download/pdf/2792185.pdf>
- Korinek, J. (2013). *Export restrictions on raw materials: Experience with alternative policies in Botswana* (OECD Trade Policy Paper No. 163). OECD. Retrieved November 16, 2014 from [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/TC/WP\(2013\)17/FINAL&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/TC/WP(2013)17/FINAL&docLanguage=En)

- Koyi, G. (2012). Foreign direct investment in extractive industries in Sub-Saharan Africa: A real hope or a mirage?. Johannesburg: FES Trade Union Competence for Sub Sahara Africa. Retrieved January 10, 2015 from <http://www.fes-southafrica.org/media/FDI%20in%20Extractive%20Industries%20in%20SSA%20%28%20FES%20Study%29final%20version%20docx%2005%2011%2012.pdf>
- Krawitz, A. (Interviewer) & Mokaila, O.K. (2014, September 21). Botswana's real diamond story starts now: Q&A with Onkokame Kitso Mokaila, Botswana's Ministry of Minerals, Energy and Water Resources. *Rapaport*. Retrieved January 10, 2015 from <http://www.diamonds.net/News/NewsItem.aspx?ArticleID=48077&ArticleTitle=Botswana's+Real+Diamond+Story+Starts+Now+>
- Kuper, A. (2004). Harnessing corporate power: Lessons from the UN Global Compact. *Development*, 47(3), 9-19.
- Lambrechts, K. (Ed.). (2009). *Breaking the resource curse: How transparent taxation and fair taxes can turn Africa's mineral wealth into development*. Retrieved March 10, 2015 from <https://commdev.org/breaking-curse-how-transparent-taxation-and-fair-taxes-can-turn-africas-mineral-wealth-development>
- Lange, M. (2013). Structural holes and structural synergies: A comparative-historical analysis of state-society relations and development in colonial Sierra Leone and Mauritius. *Social Science History*, 27(3): 397-423.
- Leftwich, A. (1995). Brining politics back in: Towards a model of the developmental state. *Journal of Development Studies*, 31(3), 400-427.
- _____. (2001). *States of development: On the primacy of politics in development*. Cambridge: Polity Press.
- _____. (2008). *Developmental states, effective states and poverty reduction: The primacy of politics* (UNRISD Project on Poverty Reduction and Policy Regimes). Geneva: UNRISD. Retrieved January 1, 2013 from <http://www.unrisd.org/80256B3C005BCCF9/search/EE2D4DF653F6077BC1257A5D004C7E5E?OpenDocument>
- Leite, C. & Weidmann, J. (1999). *Does mother nature corrupt: Natural resources, corruption, and economic growth* (IMF Working Paper 99/85). Washington, DC: International Monetary Fund.
- Lewin, M. (2011). Chapter 4: Botswana's success: Good governance, good policies and good luck. In P. Chuhan-Pole and M. Angwafo (Eds.), *Yes Africa can: Success stories from a dynamic continent* (pp.81-80). Washington: The World Bank.

- Lin, J. & Monga, C. (2011). Growth identification and facilitation: The role of state in dynamics of structural change. *Development Policy Review*, 29(3), 264-290.
- Little, I., Scitovsky, T., & Scott, M. (1970). *Industry and trade in some developing countries: A comparative study*. London: Oxford University Press.
- Masire, M. (2014). Journey to a world diamond centre: Investment opportunities. *Ministry of Minerals, Energy and Water Affairs: Diamond Hub Office*. Gaborone: Government of Botswana. Retrieved December 14, 2014 from <http://www.bitc.co.bw/sites/default/files/Botswana World Diamond Centre Investment Opportunities.pdf>
- Mbayi, L. (2011, March). *Linkages in Botswana's diamond cutting and polishing Industry* (MMCP Discussion Paper No. 6). Retrieved March 22, 2012 from http://www.prism.uct.ac.za/Papers/MMCP Paper 6_0.pdf
- McMahon, G. and Remy, F. (2001). Key observations and recommendations: A synthesis of case studies. In G. McMahon and F. Remy (Eds.), *Large Mines and the Community: Socioeconomic and Environmental Effects in Latin American, Canada and Spain* (pp. 1-38). Ottawa: International Development Research Centre.
- Mehlum, H., Moene, K., & Torvik, R. (2006). Institutions and the resource curse. *The Economic Journal*, 116, 1-20.
- Melaetsa, O. (2012). *Is taxation of minerals in Botswana a success story – and what can other countries learn from this?* [PowerPoint Slides]. Building the domestic revenue base: Natural resource taxation and tax morale in Mozambique, Tanzania and Zambia. Lusaka, Zambia. 18-19 April 2012. Retrieved March 1, 2015 from <http://www.norad.no/sok/?q=Is+taxation+of+minerals+in+Botswana+a+success+story+%E2%80%93+and+what+can+%09other+countries+learn+from+this%3F>
- Mines and Minerals Act, *Supplement A – Government Gazette*, No.17. 1999. Retrieved December 14, 2014 from the Ministry of Minerals, Energy and Water Resources website from <http://www.mines.gov.bw/mines%20and%20minerals%20%20Act.pdf>
- Ministry of Education and Skills Development. (1995), *The grant loan scheme*. Gaborone: Government of Botswana, Ministry of Education and Skills Development.

- _____. (September 2009), *National human resource development strategy: Realising our potentials*. Retrieved January 10, 2015 from the Ministry of Education and Skills Development website from <http://www.bota.org.bw/sites/default/files/Final Macro Strategy doc.pdf>
- Ministry of Finance and Development Planning. *The national development plan 10.* , Gaborone: Government of Botswana. Retrieved December 14, 2014 from http://www.nationalplanningcycles.org/sites/default/files/country_docs/Botswana/n dp_botswana.pdf
- Ministry of Labour and Home Affairs. (2014). *Adjustment of minimum wage*. Retrieved August 27, 2014 from the Ministry of Labour and Home Affairs from <http://www.gov.bw/en/Ministries--Authorities/Ministries/Ministry-of-Labour--Home-Affairs-MLHA/Ministers-Speeches/ADJUSTMENT-OF-MINIMUM-WAGES-FOR-20142015/>
- Mkandawire, T. (1999). Crisis management and the making of ‘choiceless democracies’. In Africa. In R. Joseph (Ed.), *The state, conflict and democracy in Africa* (pp.119-136). Boulder, CO: Lynne Rienner.
- _____. (2001). Thinking about development states in Africa. *Cambridge Journal of Economics*, 25(3), 289-313.
- Mmegionline. (2012). BONELA gets private sector funding. *Mmegionline*, 29(55). Retrieved March 5, 2013 from <http://www.mmegi.bw/index.php?sid=1&aid=202&dir=2012/April/Friday13>
- Mmolawa, N. (2009). *The future of mining developments in Botswana* . Mining and tunneling conference. Gaborone, Botswana. 26 May 2009. Retrieved from http://www.mmewr.gov.bw/downloads/download.php?download_id=7
- Moody, R. (2007). *Rocks and hard places: The globalization of mining*. Black Point, Nova Scotia: Fernwood Publishing.
- Morris, M., Kaplinsky, R., & Kaplan, D. (2011, October). ‘One thing leads to another’ – *commodities, linkages and industrial development: A conceptual overview*’ (MMCP Discussion Paper No 12). Retrieved March 28, 2015 from http://www.open.ac.uk/about/international-development-home/sites/www.open.ac.uk.about.international-development-home/files/file/IDO%20documents/MMCP_Paper_12.pdf

- Mukwakwami, N. (2013). *A tale of two countries: A comparison of Botswana and Zimbabwe's diamond industries* (Centre for Natural Resource Governance). Retrieved December 22, 2014 from <http://www.ddiglobal.org/login/resources/a-comparison-of-botswana-and-zimbabwe-diamond-sectors.pdf>
- Muranda, Z. (2014). The diamond-shaped socio-economic development of Botswana. In A.S. Kasum, S.O. Idowu and A.Y. Mermud (Eds.), *People, planet and profit: Socio-economic perspectives of CSR* (pp.109-125). Burlington, VT: Gower Publishing Company.
- Musamba, C. (2010). The developmental state concept and its relevance for Africa. In P. Meyns and C. Musamba (Eds.), *The developmental state in Africa: Problems and prospects* (pp.11-41). Duisburg, Germany: Institute for Development and Peace, University of Duisburg-Essen.
- National AIDS Coordinating Agency. (2014). *Progress report of the national response to the 2011 declaration of commitment on HIV and AIDS* (Botswana 2013 Global AIDS Response Report). Gaborone: National AIDS Coordinating Agency. Retrieved January 10, 2015 from http://www.unaids.org/sites/default/files/country/documents/BWA_narrative_report_2014.pdf
- NSF II. (2009). *The Second National Strategic Framework for HIV and AIDS: 2010-2006. The National AIDS Coordinating Agency and Ministry of State President*. Gaborone: Government of Botswana.
- Neuman, L., & Robson, K. (2008). *Basics of social research: Qualitative and quantitative approaches*. Toronto: Pearson Canada.
- Oshionebo, E. (2009). *Regulating transnational corporations in domestic and international regimes: An African case study*. Toronto: University of Toronto Press.
- Parson, J. (1984). *Botswana: Liberal democracy and the labour reserve in Southern Africa*. Boulder: Westview Press.
- Pillay, P. (2008). Chapter 3: Higher education funding frameworks in SADC. In P. Kotecha (Ed.), *Towards a common future: Higher education in the SADC region* (pp.127-196). Wits, South Africa: South African Regional Universities Association.

- Powell, M. and Short, P. (2013). A consultation paper providing a review and background of the National Internship Program. Centre for Employment Initiatives. Retrieved March 1, 2015 from <http://www.bota.org.bw/?q=node/185>
- Rapley, (2007). *Understanding development: Theory and practice in the Third World* (3rd edition). Boulder, Colorado: Lynne Rienner Publishers.
- Reno, W. (1998). *Warlord politics and African states*. Boulder, Colorado: Lynne Rienner Publishers.
- Republic of Botswana. (1991). *National Development Plan 7: 1991 – 1997*. Gaborone: Government Printer.
- _____. (2010). *2010 Budget Speech*. Retrieved March 1, 2015 from <http://www.gov.bw/Global/PO/2010%20Budget%20Speech.pdf>
Gaborone: Botswana.
- Robinson, M., & White, G. (Eds.). (1998). *The democratic developmental state: Politics and institutional design*. Oxford: Oxford University Press.
- Ross, M. (1999). The political economy of the resource curse. *World Politics*, (51)2, 297-322.
- _____.(2001). Does oil hinder democracy?. *World Politics*, 53(3), 325-361.
- _____.(2004). The natural resource curse: How wealth can make you poor. In I. Bannon and P. Collier (Eds.), *Natural resources and violent conflict: Options and actions* (pp.17-42). Washington, DC: The World Bank.
- Rostow, W. (1962). *The stages of economic growth: A non-communist manifesto*. Cambridge, UK: Cambridge University Press.
- Sachs, J., & Warner, A. (1995). *Natural resource abundance and economic growth* (National Bureau of Economic Research Working Paper 5398). Cambridge, MA: National Bureau of Economic Research. Retrieved July 31, 2012 from http://www.nber.org/papers/w5398.pdf?new_window=1
- _____.(1999). The big push, natural resource booms and growth. *Journal of Development Economics*, 59(1), 43-76.
- _____.(2001). Natural resources and economic development: The curse of natural resources. *European Economic Review*, 45, 827-838.

- Sayer, J. (2005). Guest editor's introduction: Do more good, do less harm: Development and the private sector. *Development in Practice*, 15(3&4), 251-268.
- Sebudubudu, D. (2010). The impact of good governance on development and poverty in Africa: Botswana – a relatively successful African initiative. *African Journal of Political Science and International Relations*, 4(7), 249-262.
- Seidler, V. (2010). *Why did Botswana end up with good institutions: The role of culture and colonial rule* (ISNIE 2010 Working Paper). Vienna: Vienna University. Retrieved April 11, 2015 from <http://extranet.isnie.org/uploads/isnie2010/seidler.pdf>
- Smillie, I (2010). *Blood on the stone: Greed, corruption and war in the global diamond trade*. Ottawa: International Development Research Centre.
- Szablowski, D. (2007). *Transnational law and local struggles: Mining, communities and the World Bank*. Portland, OR: Hart Publishing.
- Transparency International. (2015). *Corruption perceptions index 2011*. Retrieved March 1, 2015 from http://www.transparency.org/cpi2011/in_detail.
- Treverton, G.F. (2014). *Dividing divided state*. Philadelphia: University of Pennsylvania Press.
- UNAIDS. (2002). *The private sector responds to the epidemic: Debswana – a global benchmark*. Geneva: Joint United Nations Programme on HIV/AIDS.
- United Nations Conference on Trade and Development. (1996). *Trade and Development Report 1996*. Retrieved March 1, 2015 from <http://unctad.org/en/pages/PublicationArchive.aspx?publicationid=2089>
- _____. (1999). *The social responsibility of transnational corporations*. Retrieved December 13, 2012 from http://unctad.org/en/docs/poiteiitm21_en.pdf
- United Nations Department of Economic and Social Affairs. (2013). *World population prospects: The 2012 revision*. Retrieved April 4, 2015 from <http://esa.un.org/unpd/wpp/index.htm>
- United Nations Development Programme. (2014). *Sustaining human progress: Reducing vulnerabilities and building resilience* (Human Development Report 2014). Retrieved March 1, 2015 from http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/BWA.pdf

- United Nations Economic Commission for Africa and the African Union (2011). *Minerals and Africa's Development* (The International Study Group Report on Africa's Mineral Regimes). Addis Ababa, Ethiopia: UNECA. Retrieved March 1, 2015 from http://www.africaminingvision.org/amv_resources/AMV/ISG_Report_eng.pdf
- UNICEF. (2014). *Statistics*. Retrieved August 30, 2014 from http://www.unicef.org/infobycountry/botswana_statistics.html
- Utting, P. (2005). Corporate responsibility and the move of business. *Development in Practice*, 15(3&4), 375-388.
- Van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustainability: Between agency and communion. *Journal of Business Ethics*, 44(2&3), 95-105.
- Van Wyk, D. (2009). *Corporate social responsibility in the diamond mining industry in Botswana: De Beers, Botswana and the control of a country* (SADC Research Report). Pretoria, South Africa: Bench Marks Foundation. Retrieved March 1, 2015 from http://www.bench-marks.org.za/research/botswana_edit_fina_dvw.pdf
- Vu, T. (2007). State formation and the origins of developmental state in South Korea and Indonesia. *Studies in Comparative International Development*, 41(4), 27-56.
- Wade, R. (1990). *Governing the market*. Princeton, New Jersey: Princeton University Press.
- Waldner, D. (1999). *State building and late development*. Ithaca: Cornell University Press.
- World Business Council for Sustainable Development. (1999). *CSR: Meeting changing expectations*. Retrieved December 12, 2012 from <http://www.wbcd.org/pages/edocument/edocumentdetails.aspx?id=82&nosearchcontextkey=true>
- Weber-Fahr, M. (2002). *Mining and development. Treasure or trouble? Mining in developing countries*. Washington, D.C.: World Bank and IFC. Retrieved January 3, 2015 from <http://siteresources.worldbank.org/INTOGMC/Resources/treasureortrouble.pdf>
- Weiss, J. (2011). *The economics of industrial development*. London: Routledge.
- Weldon, R. & Shor, R. (2014). Botswana's scintillating movement. *Gems & Gemology*, 50(2). Retrieved April 5, 2015 from <http://www.gia.edu/gems-gemology/summer-2014-weldon-botswana-scintillating-moment>

- White, G. (1998). Building a democratic developmental state: Social democracy in the developing world. *Democratization*, 5(3), 1-32.
- Wilson, A., McMahon, F., & Cervantes, M. (2013). *Survey of mining companies: 2012/2013*. (Fraser Institute Annual). Vancouver: Fraser Institute. Retrieved November 16, 2014 from <https://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/mining-survey-2012-2013.pdf>
- Woo-Cumings, M. (1999). Introduction: Chalmers Johnson and the politics of nationalism in development. In M. Woo-Cumings (Ed.), *The development state* (pp.1-31). Ithaca, NY: Cornell University.
- World Bank. (1989). *From crisis to sustainable growth – sub Saharan Africa: A long-term perspective study* (8209). Washington, DC: The World Bank. Retrieved January 4, 2015 from http://www-wds.worldbank.org/servlet/WDSContentServer/IW3P/IB/1999/12/02/000178830_98101901364149/Rendered/PDF/multi0page.pdf
- _____. (1992). *Strategy for African mining* (World Bank Technical Paper Number 181). Washington, DC: The World Bank. Retrieved January 4, 2015 from http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1999/10/21/000178830_98101904142281/Rendered/PDF/multi_page.pdf
- _____. (2001). *Attacking Poverty* (The World Development Report 2000/2001). Toronto: Oxford University Press for World Bank. Retrieved March 1, 2015 from <https://openknowledge.worldbank.org/handle/10986/11856>
- _____. (2003). *Striking a better balance* (World Bank Extractive Industries Review Final Report). Washington, DC: World Bank. Retrieved March 28, 2015 from <http://www.commdev.org/striking-better-balance-final-report-extractive-industries-review>
- _____. (2014). Data: Botswana. *The World Bank*. Retrieved July 5, 2014 from <http://data.worldbank.org/indicator/NY.GNP.PCAP.CD/countries/BW-ZF-XT?display=graph>
- _____. (2015). Total natural resources rents (% of GDP). *The World Bank*. Retrieved April 27, 2015 from <http://data.worldbank.org/indicator/NY.GDP.TOTL.RT.ZS>

Zenawi, M. (2012). States and markets: Neoliberal limitations and the case for a developmental state. In Akbar Noman et al. (Eds.), *Good growth and governance in Africa: Rethinking development strategies* (pp.140-174). London: Oxford University Press.

Appendix 1: Interview Table

Interview Number	Type of Interview	Organization/Affiliation
Interview #1	Semi-Structured	Ministry of Mines, Energy and Water Affairs Resources
Interview #2	Semi-Structured	Botswana Chamber of Mines
Interview #3	Semi-Structured	Debswana
Interview #4	Semi-Structured	Ministry of Finance and Development Planning
Interview #5	Semi-Structured	Ministry of Education and Skills Development
Interview #6	Semi-Structured	Botswana Mine Workers Union

