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Utilisation of Mineral Rent and the Diversified Growth of the Botswana Economy

By

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(Economics) at the University of Stellenbosch

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ABSTRACT

This study analyses the relationship between mineral rent and Botswana's economic diversification. The analysis is done by; 1) providing an overview of Botswana's economy and development, 2) explaining the economics of minerals, 3) describing Botswana's mineral economy, 4) examining how mineral rent is generated and utilised in Botswana, 5) analysing the economic diversification of Botswana, 6) investigating constraints faced by Botswana in diversifying the economy, and 7) concluding by offering recommendations that can assist policy makers with decisions regarding economic diversification.

The economic value of minerals is measured by the rent they earn. Rent is profit above the normal return on total investment and is due to the scarcity of minerals. Management of minerals to achieve sustainability requires that rent is recovered through various taxes and be invested in economic activities that can provide income and employment for the future generation. In Botswana, mineral rent is generated from royalty payments, profit taxes and withholding tax on remitted dividends. Total resource rent was estimated at P160 million in 1979, but by the 2008/09 financial year, rent had increased by more than tenfold and was estimated at P10.56 billion. Diamond mining generates most of the rent and accounts for most of all the economic value of minerals, between 98 percent and 99 percent from 2004 and 2009. Copper nickel is the second most important resource after diamonds with a contribution that is between 1.03 percent and 1.34 percent of total resource rent in the 2007/08 and 2008/09 financial years. Coal, gold and soda ash are much less valuable from an economic perspective.

In the 1973/74 financial year, the mining industry contributed about 34 percent to Gross Domestic Product (GDP) at current prices and a high of 48 percent in 2000/01, although contribution declined to 40 percent in 2007/08. The mining industry contributed about 90 percent to total exports in 2001. In the same year, diamonds contributed about 85 percent to total exports and about 95 percent to the mining sector's exports.

Since minerals took centre stage in the economy of Botswana, rent has been utilised to acquire foreign reserves abroad and finance development priorities such as the provision of

health care, education and infrastructure. Part of the rent is also used to develop economic diversification through targeted initiatives that increase private sector involvement in economic activity. Even though that is the case, the Ogive Index shows that from 1973 to 2009, economic diversification has taken place, but at a slow pace. Slow economic diversification is a result of structural problems such as; a small domestic economy, high transportation costs, high cost of doing business, not fully benefitting from regional trade and vulnerability to transitional challenges like the economic crisis'. To overcome these problems, Botswana should benchmark in other mineral-rich countries to address internal capacity problems and production deficiencies. The country should also strive to benefit from international trade at a bilateral, regional and multilateral level.

OPSOMMING

In hierdie studie is die verhouding tussen mineraalontginningsurplus en Botswana se ekonomiese diversifikasie ontleed. Hierdie ontleding is gedoen deur 1) 'n oorsig te bied van Botswana se ekonomie en ontwikkeling; 2) die ekonomie van minerale te verduidelik; 3) Botswana se mineraalekonomie te beskryf; 4) die manier waarop mineraalontginningsurplus in Botswana gegenereer en benut word, te ondersoek; 5) die ekonomiese diversifikasie van Botswana te ontleed; 6) beperkings waarvoor Botswana te staan kom in die diversifikasie van die ekonomie te ondersoek; en 7) af te sluit met aanbevelings wat beleidmakers kan help met besluite oor ekonomiese diversifikasie.

Die ekonomiese waarde van minerale word gemeet deur die ontginningsurplus wat dit verdien. Ontginningsurplus is wins bo die normale rendement van die totale belegging en is in gebruik weens die skaarste van minerale. Die bestuur van minerale vir volhoubaarheid vereis dat ontginningsurplus deur verskeie soorte belasting verhaal word en in ekonomiese aktiwiteite belê word wat inkomste en werkverskaffing vir die toekomstige generasies kan verskaf. In Botswana word mineraalontginningsurplus uit tantiëmebetaling, winsbelasting en terughoubelasting op geremitteerde dividende gegenereer. Die totale hulpbronontginningsurplus is in 1979 op P160 miljoen geraam, maar teen die 2008/09-finansiële jaar het die ontginningsurplus tienvoudig vermeerder en is dit op P10.56 biljoen geraam. Diamantontginning genereer die meeste van die ontginningsurplus en is verantwoordelik vir die grootste gedeelte van die totale ekonomiese waarde van minerale – tussen 98% en 99% vanaf 2004 tot 2009. Nikkeliet is die tweede belangrikste hulpbron ná diamante, met 'n bydrae van tussen 1.03% en 1.34% van die totale hulpbronontginningsurplus in die 2007/08- en 2008/09- finansiële jaar. Steenkool, goud en soda-as is aansienlik minder waardevol vanuit 'n ekonomiese perspektief.

In die 1973/74- finansiële jaar het die mynwese ongeveer 34% tot die bruto binnelandse produk (BBP) teen huidige pryse bygedra, met 'n hoogtepunt van 48% in 2000/01, alhoewel die bydrae tot 40% in 2007/08 afgeneem het. Die mynwese het ongeveer 90% tot totale uitvoere in 2001 bygedra. In dieselfde jaar het diamante ongeveer 85% tot totale uitvoere en ongeveer 95% tot die mynbedryf se uitvoere bygedra.

Sedert minerale die kern van Botswana se ekonomie begin vorm het, is ontginningssurplus gebruik om buitelandse reserwes te verkry en ontwikkelingsprioriteite, soos die verskaffing van gesondheidsorg, opvoeding en infrastruktuur, te finansier. 'n Gedeelte van die ontginningssurplus word ook gebruik om ekonomiese diversifikasie te ontwikkel deur teikeninisiatiewe wat die privaat sektor se betrokkenheid by ekonomiese aktiwiteit bevorder. Ten spyte hiervan, toon die Ogive-index dat ekonomiese diversifikasie wel van 1973 tot 2009 plaasgevind het, maar dat dit teen 'n stadige pas geskied het. Stadige ekonomiese diversifikasie is 'n gevolg van strukturele probleme soos 'n klein binnelandse ekonomie, hoë vervoerkoste, hoë sakekoste, streekshandel waaruit voordeel nie ten volle verkry word nie en kwesbaarheid vir oorgangsuitdagings soos die ekonomiese krisis. Botswana moet met ander mineraalryk lande normeer om interne kapasiteitsprobleme en produksiegebreke die hoof te bied. Die land moet ook daarna streef om op 'n bilaterale, streeks- en multilaterale vlak uit internasionale handel munt te slaan.

'The first lesson of economics is scarcity: There is never enough to satisfy those who want it. The first lesson of politics is to disregard the first lesson of economics'.

(Thomas Sowell)

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The errors that remain are my own.

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LIST OF ABBREVIATIONS AND ACRONYMS

AD	After Death
ADB	African Development Bank
ADIA	Abu Dhabi Investment Authority
ADIC	Abu Dhabi Investment Council
AGOA	African Growth and Opportunity Act
AIS	Accumulated Investment Surplus
AMAX	American Metal Climax
AU	African Union
BAMB	Botswana Agricultural Marketing Board
BC	Before Christ
BCB	Botswana Cooperative Bank
BCL	Bamangwato Concessions Limited
BDC	Botswana Development Corporation
BDVC	Botswana Diamond Valuing Company
BECIGA	Botswana Export Credit Insurance and Guarantee Agency
BEMA	Botswana Exporters and Manufactures Association
BEDIA	Botswana Export Development and Investment Agency
BIDPA	Botswana Institute of Development Policy Analysis
BIFM	Botswana Insurance Fund Management
BIH	Botswana Innovation Hub
BIUST	Botswana International University of Science and Technology

BLNS	Botswana Lesotho Namibia Swaziland
BMC	Botswana Meat Commission
BMR	Botswana Metal Refinery
BOB	Bank of Botswana
BOCCIM	Botswana Confederation of Commerce, Industry and Manpower
BPC	Botswana Power Corporation
BR	Botswana Railways
BRST	Botswana Roan Selection Trust
BSB	Botswana Savings Bank
CGS	Credit Guarantee Scheme
CDC	Colonial Development Corporation
CDC	Commonwealth Development Corporation
CEDA	Citizen Entrepreneurial Development Agency
CEEPA	Centre for Environmental & Economic Policy in Africa
CIC	Coal Investment Corporation
CIU	Collective Investment Undertakings
COLDECO	Corporation Nacional del Cobre de Chile
CSO	Central Statistics Office
DGS	Department of Geological Services
DIA	Department of Industrial Affairs
DNGMAG	Department of National Museum and Art Gallery
DRC	Democratic Republic of Congo

DTC	Diamond Trading Company
DWA	Digby Wells & Associates
DWNP	Department of Wildlife and National Park
ECC	Economic Committee of Cabinet
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EMP	Environmental Management Plan
EOLSS	Encyclopaedia of Life Support System
EPA	Economic Partnership Agreement
EU	European Union
FAP	Financial Assistance Programme
FDI	Foreign Direct Investment
FNB	First National Bank
FTA	Free Trade Agreement
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
GIC	Government Investment Corporation
GICC	Gaborone International Convention Centre
GNP	Gross National Product
GRF	General Reserve Fund
HLCC	High Level Consultative Council
IFS	Integrated Field Services

IFSC	International Financial Services Centre
IMF	International Monetary Fund
IP	Industrial Policy
ISPAAD	Integrated Support Programme for Arable Agriculture Development
IT	Information Technology
KG	Kilograms
KIA	Kuwait Investment Authority
KM	Kilometres
LEA	Local Enterprise Authority
MDGs	Millennium Development Goals
MEP	Mmamabula Energy Project
MESD	Ministry of Education & Skills Development
MEWT	Ministry of Environment and Water Resources
MFDP	Ministry of Finance and Development Planning
MIGA	Multilateral Investment Guarantee Agency
MIT	Massachusetts Institute of Technology
MMEWR	Ministry of Minerals Energy and water resources
MoH	Ministry of Health
MPC	Monetary Policy Committee
MPS	Morupule Power Station
MPS	Monetary Policy Statement
MWT	Ministry of Works and Transport

NAMPAAD	National Agricultural Master Plan for Arable Agriculture Development
NBFIRA	Non- Bank Financial Institutions Regulatory Authority
NCTPN	National Committee on Trade Policy Negotiations
NDPs	National Development Plans
NEER	Nominal Effective Exchange Rate
NGOs	Non-Governmental Organisations
NHRDP	National Human Resource Development Plan
PL	Prospecting Licenses
REPA	Resource Economics & Policy Analysis
RL	Retention Licences
RTA	Regional Trade Agreements
RUF	Revolutional United Front
SACU	Southern Africa Customs Union
SADC	Southern Africa Development Community
SADCC	Southern Africa Development Coordinating Conference
SAFDICO	South African Diamond Corporation
SAIIA	South African Institute of International Affairs
SAIMM	South African Institute of Mining and Metallurgy
SBI	Sustainable Budget Index
SBPA	Small Business Promotion Agency
SCB	Standard Chartered Bank
SDR	Special Drawing Rights

SSKA	Sir Seretse Khama Airport
SSMEs	Small Micro Medium Enterprises
SWF	Sovereign Wealth Fund
TIPS	Trade and industrial Policy Strategies
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDCD	United Nations Declaration of Cultural Diversity
UNDI	United Nations Development Index
UNESCO	United Nations Educational Scientific and Cultural Organisations
UNIDO	United Nations Industrial Development Organisation
UNITA	Unio Nacional Para a Independencia
UNRISD	United Nations Research Institute for Social Development
UNWS	United Nations World Summit
US	United States
USA	United States of America
USAID	United States Agency for International Development
USGS	United States Geological Survey
UT	Union Treaty
WB	World Bank
WTO	World Trade Organisation

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CHAPTER 1- INTRODUCTION

1.1 INTRODUCTION

For a considerable number of mineral-rich countries around the world, mineral wealth has provided an opportunity for sustainable development (Page, 2008). The opportunity stems from the fact that minerals are a natural capital base that can generate rent, stimulate economic growth and raise the living standards of citizens through appropriate policy choices (Tilton, 2005). Policy options will depend on a country's stage of development and the economic drawbacks it faces (Venables & Van der Ploeg, 2009). For countries that aspire to utilise rent for development, rent is not automatic. It should be recovered through taxes, failing which, it will accrue as 'windfall' profits to mining companies (Centre for Applied Research & Department of Environmental Affairs, 2007). Generated rent should then be invested in alternative activities that can provide sources of income and employment (Abouchakra. et. al., 2008). One efficient channel of converting mineral rent into permanent income in the future is to boost the private sector for economic diversification (Page, 2008). That way, in the absence of minerals, or side by side with the mineral industry, a diversified economy will ensure positive economic activity. The principle of re-investing mineral rent into permanent sources of income is known as Hartwick's rule (Hartwick, 1977).

It is not difficult to see why economic diversification is popular; a diverse economy based on a wide array of profitable sectors and export commodities is self-sustaining (Page, 2008). It is widely held that it reduces the economic volatility associated with any particular industry as the risk is spread evenly among a variety of sectors. In the event that one sector is performing badly, other sectors will ensure that the economy continues to grow on a healthy path by providing opportunities for new technology, revenue and employment (Abouchakra. et al., 2008).

While economic diversification through the use of mineral rent is promoted, it has been evident that the dynamics involved can present challenges to this development path. Challenges are evidenced by the fact that most mineral producing countries are almost totally dependent on minerals for revenue. For over 20 countries around the world, mineral exports account for about three quarters of export earnings (Collier & Venables, 2009). The devaluing factor for mineral dependence is that they are limited in the context of time and location. Their exhaustible nature results in the industry's inability to retain a steady rate of

production (Hotelling, 1931; Chatterjee, 1993). Consequently, mineral rent and the mineral industry related economic activities will cease to exist once minerals run out. This calls for the urgency of economic diversification to make the exploitation of minerals economically sustainable, as they themselves are not biologically sustainable (Van Rensburg & Bambrick, 1978).

The other challenge faced in mineral-led economic diversification is structural and involves inefficiencies involved in the use of mineral rent. Firms and individuals seek to increase access to mineral rent by any means possible and in the process misuse it. Unjustified acquiring of mineral rent leads to inefficiencies in markets and results in wide price dispersions (Asfaha, 2008). Unfortunately economic diversification is often ignored, postponed or mismanaged due to the illusion brought about by temporary mineral wealth. In that regard, mineral wealth is then used to finance current consumption, as well as low return projects, instead of targeted economic initiatives (Salai-i-Martin & Subramanian, 2003). This occurrence reinforces the sad reality that even though the mineral industry is lucrative, in most cases it provides fewer connections to the rest of the economy (Auty & Mikesell, 1998).

Mineral rent and its subsequent use to achieve economic diversification are pertinent to Botswana. When the country gained independence in 1966, it was one of the poorest countries in the world with a national income of P50 million in 1968/69. With the discovery of minerals, particularly diamonds, economic development looked less bleak (Iimi, 2006). Botswana became the world's largest producer of diamonds by both carats and value, mineral revenue sustained economic expansion and social spending (Clausen, 2008; Gaolatlhe, 2009). In 2007, the mining industry¹ contributed about 41 percent to Gross Domestic Product (GDP) at current prices and 85 percent to total exports. In the same year, diamonds alone contributed about 63 percent to total exports and 75 percent to the mining sector's exports (Bank of Botswana, 1999; 2007; 2008, Stats Brief, 2009). Mineral wealth enabled Botswana to achieve one of the fastest growing economies in the world, with a growth rate of above 8 percent in 1965 to 1998 (Conteh, 2008).

¹ Diamonds, copper nickel and soda ash.

A successful mineral industry in Botswana was warranted by the nationalisation of mineral rights, with government controlling the extraction of minerals and revenue generated on behalf of citizens (Masire, 2006). To capture rent, special taxes were levied on the industry (Centre for Applied Research and Department of Environmental Affairs, 2007). All of these were done on a foundation of prudent economic management as evidenced by the positive macroeconomic variables and policies. This enabled the country to invest mineral rent in foreign reserves abroad, improve infrastructure, as well as provide social services to Botswana² (Hazleton, 2002). Mineral rent was also used to promote export-led development and import substitution activities, although the two are not mutually exclusive (Jefferies, 2010a).

On a less positive note, the impressive economic growth record and macroeconomic indicators conceal structural weaknesses in the Botswana economy. At close inspection, economic shortcomings leading to a weak private sector have haunted the economy for years leading to slow economic diversification (Marobela, 2008; Good, 2009). Problems encountered include high labour costs, declining economic benefit of mineral rent, small domestic economy and lack of a strategy to benefit from regional trade. Lack of access to the sea also creates high transportation costs for merchandise trade. As a result, the non-mineral sector has not performed well over the years, especially the manufacturing sector which has been out performed by most sectors. The manufacturing sector contributed between 3 percent and 8 percent to GDP in the period from 1973 to 2009, and the share has declined steadily in the last 10 years. Non-mineral exports have also not performed well; in 2007, their share was estimated at only 15 percent. Of that total, meat and meat products account for 2.2 percent, live animals 0.002 percent, hides and skins 0.12 percent, textiles 6.9 percent, vehicle parts and other goods 0.4 percent and 5.3 percent respectively (Bank of Botswana, 2007).

The unsatisfactory performance of the non-mineral sector is a worrying factor and was recently blamed for the vulnerability of the Botswana economy that became evident in 2008 and 2009 when the financial and economic crisis became prevalent (Marobela, 2008). During this time, mineral production and revenue were badly affected, particularly in November

² People from Botswana are referred to as Batswana.

2008 when diamond production took a nosedive and hit an all-time low (Nsingo, 2009). At the time, diamond production stood at 32.6 million carats, down from 33.8 million carats in 2007 and diamond sales dropped by 17 percent (Gaolatlhe, 2009). Financial losses made it evident that the narrow foundation the economy lies on was unravelling. Government tightened fiscal spending and economists emphasised the need for intense economic diversification (Nsingo, 2009). With the economy being this vulnerable, it is often difficult to reconcile the factors that account for good macroeconomic policies whilst there is a lacklustre export sector (Conteh, 2008).

Economists are not the only people concerned about the weak private sector in Botswana. Economic commentators in the media reckon the impact of the crisis would have been less severe had Botswana's economy been more diverse (Botswana Gazette Online, 2010). Excessive losses would have been cushioned by other sectors, because certainly the mineral industry stood to be affected due to the high income elasticity nature of mineral products. Alas, it was not the case.

The mediocre private sector is surprising considering the various policy instruments Botswana engaged to encourage and implement the development of new industries in the last 30 years. The policies are geared towards increased participation of new industries in the economy by the implementing measures to develop the private sector and make it a strategic partner in combating poverty, unemployment and under development (Mmusi, 1998). The private sector is also groomed to contribute to the export base and ensure that the contribution of commodities to exports, and sectors to GDP, is balanced. This is made clear in the country's long-term framework, Vision 2016, as well as in the National Development Plans (Gaolatlhe, 1997).

Although Botswana's economic development policies cover all issues of national importance, they were instrumental in setting up economic diversification initiatives such as the Financial Assistance Plan of 1982 (Siwawa-Ndai, 1997), which was merged into the Citizen Empowerment Development Agency in the late 1990s. Other initiatives include the National Development Bank of 1963, Botswana Development Corporation of 1970, Botswana Export Development and Investment Authority of 1997, Botswana Confederation of Commerce, Industry and Manpower of 1971, Local Enterprise Authority of 2004 and International

Financial Services Centre of 2003. The formation of these parastatals is a major step in stimulating economic diversification (Masire, 2006).

On a less optimistic note, private mining companies in Botswana have scaled up diamond production, although the yearly proportions are unknown. Production is expected to reach a peak of 44 million carats in 2017, compared with 32 million carats in 2005. At that rate of mining, diamond production will decline after 2017, after which diamond resources are expected to be depleted around 2029 (World Bank, 2009). With an estimated 19 years until diamond resources are exhausted and the various economic diversification initiatives introduced over the years, by now GDP should be significantly distributed across economic sectors. There should also be a variety of commodities contributing to the export base in a balanced manner. Concentration ratios of a given sector and commodity should be low and diversification high (Abouchakra. et al., 2008). Furthermore, production should have shifted from traditional goods to non-traditional goods.

At this point in time Botswana should be at crossroads. If existing economic diversification initiatives are not effectively stimulating new industries, it should be clear that there are deeper problems that hinder their development. Prevailing problems should be addressed to improve private sector performance, or better still, new industry development initiatives should be implemented because the country is running out of time.

The main focus of this thesis is on the relationship between mineral rent and Botswana's economic diversification. Questions asked will include the following: How was mineral rent utilised for economic diversification? Has economic diversification taken place? What are the main constraints faced in diversifying the economy and how can the economy better diversify away from minerals?

The study will address research questions through the use of appropriate development theory and the available datasets on the topic. To measure the level of economic diversification, the study will use the Ogive Index as a concentration measure. To derive constraints faced in economic diversification, the author will conduct interviews with relevant people in order to gain more insight into the topic.

This study is both relevant and timely. Its relevance stems from the fact that Botswana has relied on its minerals for economic development and there are a few studies conducted on the topic. The study is timely as Botswana's fiscal environment was recently affected by the loss of mineral revenue as a result of the global and economic crisis that became evident in 2007. As the crisis persisted, proclamations calling for economic diversification resulted in an interest in investigating this subject in Botswana.

1.2 OBJECTIVES OF THE RESEARCH

This thesis aims to achieve the following objectives;

1.2.1 MAIN OBJECTIVE

The main objective of this paper is to analyse the relationship between mineral rent and Botswana's economic diversification. To effectively answer this question, the following specific objectives were formulated;

Objective 1: Provide preliminary work on the topic, outline the research problem, lay out research objectives and the methodology.

Objective 2: Provide an overview of Botswana's economy and development.

Objective 3: Explain the economics of minerals.

Objective 4: Give a descriptive analysis of the mineral economy of Botswana.

Objective 5: Examine the generation and utilisation of mineral rent in Botswana.

Objective 6: Analyse economic diversification in Botswana.

Objective 7: Investigate constraints that faced by Botswana in diversifying the economy and provide ways of addressing them.

Objective 8: Offer some policy recommendations to achieving economic diversification in Botswana.

1.3 DESCRIPTION OF TERMS

To assist in providing meaning to the important concepts of the thesis, the following definitions are supplied;

- **Economic diversification-** varied economic sectors and commodities contributing at almost the same rate to Gross Domestic Product, employment and export earnings. This paper is interested in positive economic diversification, one coupled with economic growth.
- **Economic rent-** a surplus of revenues over costs that the government can tax away without affecting the behaviour of the firm.
- **Mineral rent-** mineral rent is a type of economic rent accruing to the mineral industry. The income generated is unearned because it is not received in return for any service rendered. In this paper, mineral rent includes royalties and other form of taxes. Dividends are not essentially rent, they are accounting payments. Even though that is the case, it is difficult to separate the revenue generated from royalties and taxes to that of dividends, especially when concentrating on the use of such revenue. For simplicity purposes, this paper will include dividends as part of mineral rent.
- **Resource-** where the word resource is used, in most cases the author is referring to minerals, however other resources included in the description include oil and metals, especially in chapter 3.

1.4 METHODOLOGY

The methodology of the thesis is designed to achieve the specific objectives set out in section 1.2. This paper will mostly use appropriate development theory to provide answers to the research questions. For chapter 1, the author will use relevant literature from books, reputable articles and electronic databases to provide a thorough overview, the same goes for chapter 2. Chapter 3 will consist of literature review from reputable books and articles, to lay the foundation for the study. In chapter 4, a detailed descriptive analysis will be used. The author will use books, as well as reports from mines, organisations and the Department of Mines. The chapter will also use data from the Central Statistics Office (CSO). Chapter 5 will examine the generation and utilisation of Botswana's mineral rent using Department of Mines reports and the annual national budget.

Chapter 6 will analyse economic diversification in Botswana using reports from organisations mandated to stimulate economic diversification. The chapter will also use books and articles that contribute to the subject. The progress of economic diversification since 1973 will be measured by analysing GDP and exports datasets to generate the Ogive Index of concentration. In chapter 7, the author will carry out interviews with the relevant people knowledgeable on economic diversification issues in Botswana. By conducting these interviews, the chapter will investigate constraints faced in attaining economic diversification. The response obtained through these interviews other literature will form the basis of this chapter. Chapter 8 will include the author's assessment based on the findings of the study.

A summation of the methodology used in this study is presented in Table 1.1.

Table 1.1: Methodology of the Research

Objective	Data	Method	Expected outcome
Objective 1: Provide preliminary work on the topic, outline the research problem, lay out research objectives, provide the research methodology and present the structure of the thesis.	Literature review from books, articles and websites.	Literature review	Identification of the research problem, research objectives and methodology.
Objective 2: Provide an overview of the Botswana economy and development and outline indicators of economic diversification.	Literature review derived from Books, articles and databases.	Literature review	History of economic development and the country's macroeconomic variables, as well as identification of variables of analysis for economic diversification.
Objective 3: Explain the evolution of minerals as a subject study in economics.	Literature review derived from Books and articles.	Literature review.	Understanding the concept of mineral rent and its optimal utilisation to avoid the resource curse.
Objective 4: Give a descriptive analysis of the mineral economy of Botswana.	Literature from Books, reports from the Department of Mines and data from the Central Statistics Office.	Descriptive report	Identification of components of the mineral economy.

Objective 5: Examine the generation and utilisation of mineral rent in Botswana.	Reports from the Department of Mines and the National Annual Budget.	Report.	Identification of components that make up mineral rent and how it is subsequently utilised.
Objective 6: Analyse economic diversification in Botswana	Reports from BEDIA, CEDA, IFSC, BDC, BSB, De Beers Mining Company, BOCCIM, LEA, BECI and BCB. GDP and exports data from Central Statistics Office and Bank of Botswana will be used.	Analytical report.	Analysis of economic diversification initiatives and a measure of economic diversification.
Objective 7: Investigate the constraints that Botswana faces in diversifying its economy and provide ways of addressing them.	Information generated from interviews.	Empirical report.	Constraints faced in diversifying the economy.
Objective 8: Offer some policy recommendations to achieving economic diversification in Botswana.	Review of the findings.	Report.	Policy information for decision makers.

1.5 STRUCTURE OF THE THESIS

The structure of this paper is as follows;

Chapter 1: Introduction. This chapter contains an overview of the topic, the problem statement, research objectives and the research methodology. The structure of the paper is also outlined.

Chapter 2: An Overview Botswana's Economy and Development. This chapter provides an overview of Botswana's development history and macroeconomic variables. Economic diversification indicators are also outlined.

Chapter 3: The Economics of Minerals. This chapter provides a review of the evolution of minerals as a subject study in economics. The concept of mineral rent is introduced with various definitions provided, as well as how rent should be optimally utilised.

Chapter 4: Botswana's Mineral Economy. This chapter describes Botswana's mineral economy. The chapter will also show mineral production patterns, as well as the contribution of mining to Gross Domestic Product and exports alongside other sectors and commodities.

Chapter 5: Generation and Utilisation of Mineral Rent in Botswana. This chapter examines the generation and utilisation of mineral rent. This will include an analysis of the fiscal environment and an estimation of resource rent.

Chapter 6: The Economic Diversification of Botswana. The economic diversification of Botswana is analysed in this chapter. The dimensions of this chapter include 1) an assessment of economic diversification initiatives and, 2) a measure of economic diversification.

Chapter 7: Constraints Faced by Botswana in Diversifying the Economy and Ways of Addressing Them. This chapter will investigate constraints faced in diversifying the economy and provide options that can be adopted to improve the situation.

Chapter 8: Conclusion. This chapter will provide concluding remarks and offer some policy recommendations.

CHAPTER 2- AN OVERVIEW OF BOTSWANA'S ECONOMY AND DEVELOPMENT

2.1 INTRODUCTION

There has been a fascination with Botswana's transformation over the years with scholars such as Auty & Mikesell (1998) and Conteh (2008) exploring the path and approach taken towards economic development. To understand the unique nature of this economy and further strengthen the relevance of this study, it is important to understand the history of economic development and macroeconomic variables at play.

For this reason, this chapter will provide an overview of the Botswana economy and development by dwelling on the state of economic affairs pre and post-independence, with an emphasis on the macroeconomic features. Pre-independence developments will mainly concentrate on the time when Botswana was a British Protectorate. The analysis follows from the fact that scholars like Bertocchi & Canova (1996) have explored the colonialism variable when analysing economic and social development in Africa.

On the issue of macroeconomic indicators in Botswana, Asfaha (2008) and Brunnsweiler (2008) are just some of the scholars that have come to the conclusion that they are positive. The variables include inflation, monetary and fiscal policies, exchange rates and currency. From an analytical point of view, a positive macroeconomic environment and abundant mineral resources, makes the case for more economic diversification possible and expected. This is the foundation that will be laid down in this chapter.

In addition to the history of economic development and macroeconomic variables, indicators of economic diversification such as Gross Domestic product, employment rates, as well as imports and exports will be outlined in this chapter. Analysis of economic indicators will be useful in chapter 6 when Botswana's economic diversification is measured. The chapter is structured as follows. Section 2.2 provides a general overview that includes colonial history and macroeconomic features. Section 2.3 outlines indicators of economic diversification and section 2.4 provides concluding remarks.

2.2 OVERVIEW OF BOTSWANA

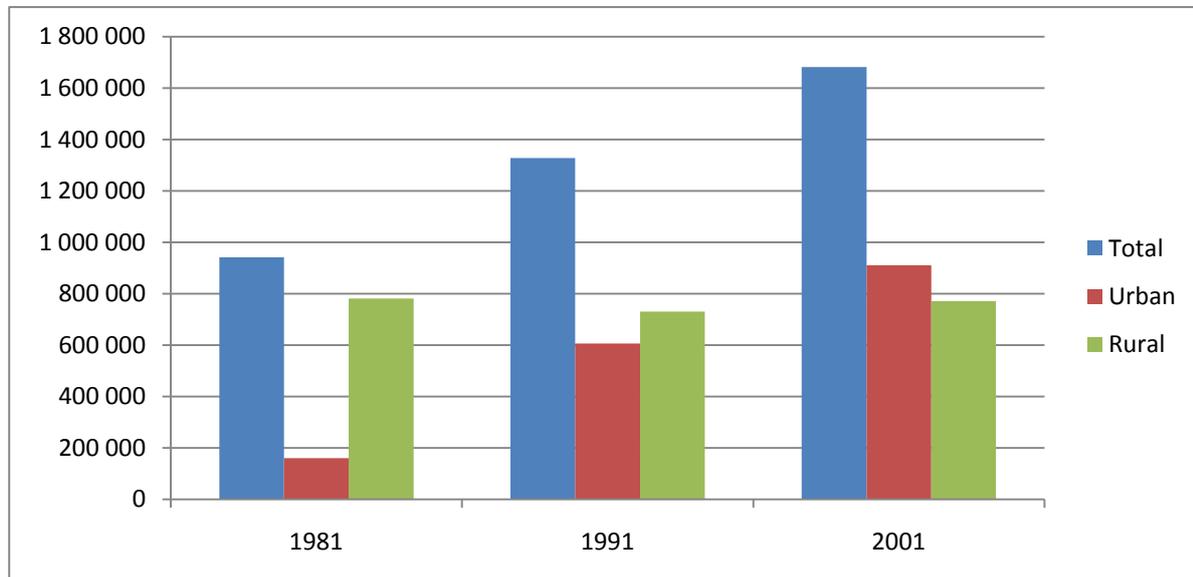
The Republic of Botswana is landlocked and located in the centre of Southern Africa. It borders South Africa on the South, Zimbabwe and Zambia on the North East, and Namibia on the North. Geographically, it covers a surface area of 582 000 sq km, of which one third is

a desert. Almost the entire country is part of the Kalahari basin which comprises of the principal semi-arid zones in Africa (Morton, Murray & Ramsay, 1989).

A majority of the population lives along the eastern borders with South Africa and Zimbabwe as the surface on the western side of the country is considered not suitable for permanent settlement (Morton, Murray & Ramsay, 1989). In the 2001 population census, total population was estimated at 1,680, 863 million, growing at a rate of 3.5 percent per annum (Botswana Export Development and Investment Authority, 2008). However, the 2009 population figures estimate total population at 1.83 million (World Bank, 2009).

Population distribution figures show that in 1981, 20 percent of the population was in urban centres and about 80 percent was in rural areas. In 1991, about 40 percent of the population was in urban areas, while 60 percent was found in rural areas. In the 2001 population census, a majority of people were in the urban centres compared to rural centres and the proportions were about 55 percent and 45 percent respectively (Ref. Figure 2.1).

Figure 2.1 Population Distribution during Census Year

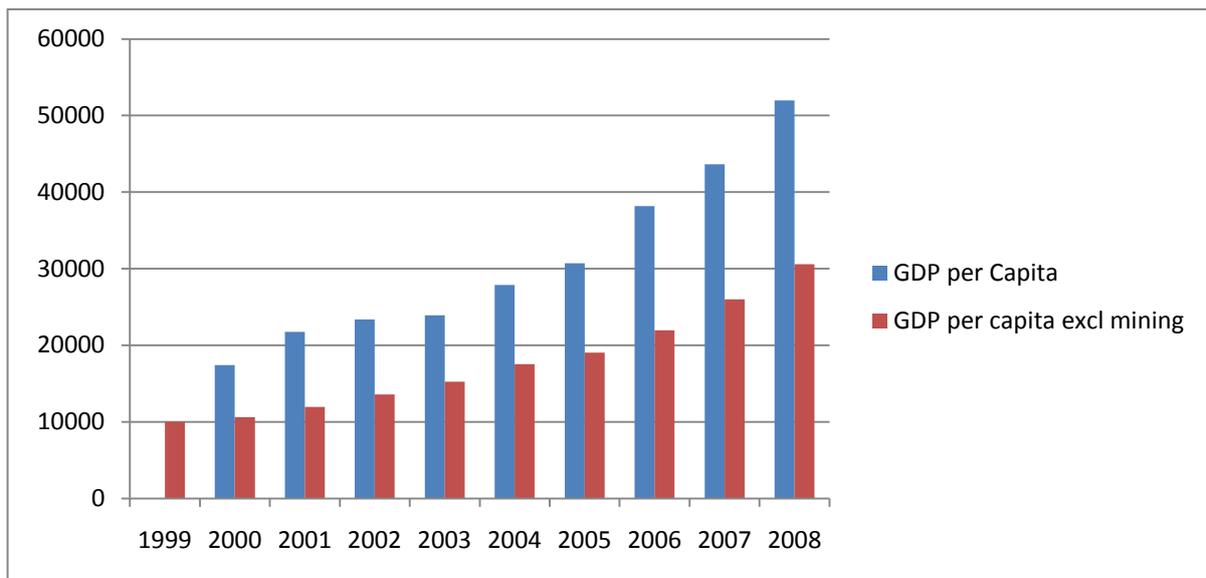


Source: Central Statistics Office Website-last accessed on the 18th April, 2010.

In assessing general indicators, Botswana comes across as an ordinary small Southern African country. However, there is nothing ordinary about it; the country has experienced extreme poverty, poor macroeconomic and social indicators in the early 1960s to become one of Africa's economic success stories because of its rich mineral endowment. As a result,

Botswana achieved the highest economic growth rates in the world with an annual average of about 9 percent in the last 30 years (Sachs and Warner, 1995; Clausen, Delechat, Gaetner, 2008; Sethare, 2005; 2005, World Bank, 2008a). Per capita income increased from \$70 per annum at independence to an estimated P16 839 per annum and P51 973 in 2008 (Clausen, Delechat & Gaetner, 2008; Ref. Figure 1.2).

Figure 2.2: Gross Domestic Product per Capita (Current Prices) from 1999 to 2008



Source: Bank of Botswana Statistics (2009).

While it achieved remarkable economic growth rates, Botswana has not been immune to economic slowdown in some years. In the 2003/04 financial year, economic growth slowed down by 3 percent as result of sluggish mineral prices (Good, 2009). This had far reaching consequences for fiscal policy. Currently, the economy is still reeling from the brunt of the global financial and economic crisis which reached a peak in 2009 (Gaolatlhe, 2009).

2.2.1 HISTORY OF ECONOMIC DEVELOPMENT

Botswana is a former British Protectorate and was called Bechuanaland Protectorate at the time. Events leading to protectionism were set in motion in 1884 when a British born businessman, Cecil John Rhodes (1853- 1902) declared that Bechuanaland is the 'neck of the bottle' and commands the route to the Zambezi (Zins, 1997). He meant that Bechuanaland was in a strategic geographical position and provided easy access to other parts of Southern

Africa. He had an agenda; it was to keep the Bechuanaland pathway free from the Transvaal Boers and German control. He convinced the British that Bechuanaland would be a strategic ally and that it would be vital for the British to exert control over the territory. Coincidentally three Batswana chiefs, amid protests from other chiefs, had gone to England to seek protection from the hostile white minority regime in South Africa and Southern Rhodesia (Cumberlege, 1952).

In 1885, the British reluctantly agreed to exert control on Bechuanaland and they declared it a British protectorate by royal decree (Botswana Embassy (Japan) Website- last accessed on the 8th November, 2009). In 1895 there were various attempts to incorporate Bechuanaland into the Rhodes colony of Southern Rhodesia (now Zimbabwe), but the plan did not fall through. Subsequent attempts to hand over Bechuanaland were also made in 1910 when the Union Treaty of South Africa was formed. The union made provisions to incorporate the three high commission territories namely Bechuanaland, Basotholand and Swaziland into the Union of South Africa (Akinkugbe. et al., 2005). The inclusion of Bechuanaland threatened the wellbeing of the protectorate as the country did not want to form part of South Africa. However, the British felt that Bechuanaland was ready to be handed over as the situation had improved from what it was in 1885. After drafting the 1910 treaty, an undertaking by colonial masters sought to consult inhabitants of territories to be incorporated. The process was delayed by Britain and in the end the inclusion of Bechuanaland never occurred (Oden, 1981).

Failure to incorporate Bechuanaland into the Union Treaty of South Africa was positive news to Bechuanaland. The country remained under British control, but little did they know that the British would make their presence felt in a small way (Akinkugbe. et al., 2005). Bechuanaland Protectorate was ruled according to the needs of the British government despite the fact that most Batswana chiefs wanted to protect their own power (Botswana Embassy (Japan) Website- last accessed on the 8th November, 2009). In this context, the British did very little of administration and settlement (Colclough & McCarthy, 1980). In an odd fashion, the country was administered from Vryburg in 1885 to 1895 and from Mafikeng in 1895 to 1966 (Akinkugbe. et al., 2005). To Batswana this system was considered a case of protection from development, rather than protection from hostile neighbours and this was a major source of discord between the British and Batswana chiefs who were eager to see Bechuanaland develop, at the same time preserving their identity (Oden, 1981).

The conflict between the British and Batswana was in many respects the reason why Batswana were calling for independence. As proclamations were made curtailing the powers of the chiefs and the need for Bechuanaland to be independent, the more chiefs became outspoken in asserting their birth right to rule their tribes and manage their affairs (Botswana Embassy (Japan) Website- last accessed on the 8th November, 2009). By 1930, the subject had become a heated debate. The British government insisted that Bechuanaland was not ready to gain independence despite the fact that in 1910 when the Union Treaty of South Africa was formed, Britain indicated that Bechuanaland could be handed over. Batswana chiefs were irked at this turn of events (Zins, 1997). Fortunately, by 1955 the winds of change were blowing in Africa as more colonies were gaining independence. Britain also conceded to demands for independence and structures were put in place for independent rule in Bechuanaland (Botswana Embassy (Japan) Website- last accessed on the 8th November, 2009).

Ultimately, in 1965 a constitution was drafted, and on September 30th 1966, Bechuanaland gained independence to become Botswana, with the late Sir Seretse Khama (1921-1980) becoming the first president. At independence leaders stressed the importance of nation building and the fundamental human rights of all people regardless of their race. Such proclamation coming from a country neighbouring the then apartheid South Africa was a strong moral declaration, it set the stage for Botswana's economic prosperity (Hazleton, 2002; Saugestad, 2001) or in the case of Good (2003), the (un) civil society of Botswana.

The British system of administration had neglected Bechuanaland's economic development and the resulting factor was widespread poverty and low economic activity (Akinkugbe. et al., 2005). Basically, the country did not have much going on for it in terms of economic development. The only significant infrastructure was the railway line which acted as a strategic link between the Cape Province in South Africa and Southern Rhodesia³. Oddly, the railway line was maintained and staffed by Southern Rhodesia, therefore there were no economic spill over's in terms of employment and skills acquisition to Batswana (Harvey and Lewis, 1990). Instead, recurrent expenditure depended on British aid (Oden, 1981). British

³ Present day Zimbabwe.

aid was discontinued in 1976, but more aid came in from other sources as donors generously rewarded Botswana's political stability (Hartland- Thunberg, 1978).

The only significant investment at the time was Botswana's 1200 head per day meat abattoir, now known as the Botswana Meat Commission (BMC) which began operating in the 1950s. The abattoir was an investment made possible by the Colonial Development Corporation (CDC) (later changed to Commonwealth Development Corporation). The abattoir encouraged beef production for export to the European market and employed about 2400 people in the 1950s (Harvey, 1993). BMC purchased cattle directly from cattle owners, cooperatives and cattle collectors as long as they met the stipulated requirements. Purchasing prices depended on the health of the stock, as well as probable beef prices in foreign markets. However, the abattoir took time to generate financial spill overs and it was only in later years that it generated revenue from exports of meat and meat products. One such a time is when beef exports tripled in 1970, despite the strenuous foot and mouth disease (Hartland- Thunberg, 1978).

Reiterating Botswana's economic shortcomings before independence is the amount and value of infrastructure. There was only about 90 KM of tarred road, no real communication or power networks, as well as unreliable water supply. There were no amenities such as a good health system and education facilities (Hartland- Thunberg, 1978). A majority of Batswana were not educated; hence there was a lot of unskilled labour. In many respects, lack of a capital city encouraged labour to migrate to neighbouring countries, predominantly South Africa, in search of employment opportunities. The pool of workers was mainly in the Cape Province and the South African mines. In 1966, Botswana only had about twenty seven students who had graduated from secondary school alone, this accounted for serious shortages in skilled manpower (Harvey, 1993).

However, at independence Botswana was well aware of the economic challenges it faced. Most policies were spearheaded towards the fair and just distribution of resources to all citizens, although Saugestad (2001) asserts that development at the time set the stage for dispossession. To a larger extent, much of the economic development policies were driven by the desire to lessen dependence on the more developed neighbour, South Africa, by any means possible. South Africa was, and still is, an economic giant compared to a smaller Botswana. The history and close geographical proximity between the two has ensured a

patrimony of a close economic integration (Hartland- Thunberg, 1978), which Botswana tries to break out of, without much success (Good, 2009).

Instead, in the years after independence Botswana carved its developmental path. Policies were geared towards remote area development through further development of agriculture. Agriculture is perhaps the oldest form of economic activity even though problems of geography have dominated this sector. Nonetheless, it was identified as a source of feasible growth despite the fact that much of the country is covered in sands on one side, and the extensive Okavango swamps on the north east side. The best agricultural land was identified in the eastern side where the Tuli Block is located (Hartland-Thunberg, 1978). This is where most of agricultural production takes place.

At one point, agriculture remained the largest industry in Botswana. In the 1967/68 financial year, agriculture accounted for about 44 percent of total GDP and in 1968/69 contribution rose to 45 percent (Statistical Bulletin, 1976). However, the contribution of the agricultural sector to the economy has varied considerably between years of drought and years of favourable weather (Hartland- Thunberg, 1978). Even though that is the case, cattle rearing has remained the most dominant agricultural activity and in the 1970s, it accounted for about 80 percent of total agricultural output, and about 55 percent of total agricultural production. Crop production accounted for about 20 to 25 percent of total output (Hartland- Thunberg, 1978).

Even though agriculture has long been identified as an important sector in Botswana, what it means for the economy and citizens is unique. Arable and pastoral agriculture are a source of national pride and the way it is carried out testifies to this. Agriculture is carried out on freehold⁴ land and to a larger extent, on traditional⁵ lands. In the traditional sense, Botswana produce crops and milk mainly for subsistence purposes and the government has introduced interventions to grow this sector in the effort to reduce dependence on government (Hartland-Thunberg, 1978; Morton, Murray & Ramsay, 1989). Efforts to grow crop production include the establishment of the Botswana Agricultural Marketing Board (BAMB) in 1974 to centralise the storage, distribution and marketing of grain production. BAMB sells seeds and

⁴ Farming is mixed but it predominantly livestock production.

⁵ Farms on either tribal or state land.

fertilizers at low costs to farmers and even buys produce from local producers (Botswana Agricultural Marketing Board Website- last accessed 8th November, 2009; Morton, Murray, Ramsay, 1989). However, because of its mismanagement and lack of proper finance, BAMB has not been very effective in elevating the level of crop production in Botswana (Morton, Murray, Ramsay, 1989; Masire, 2006). Other farming initiatives introduced include the National Agricultural Master Plan for Arable Agriculture Dairy Development (NAMPAAD) and the Integrated Support Programme for Arable Agriculture Development (ISPAAD) (Hartland- Thunberg, 1978).

2.2.2 MACROECONOMIC FEATURES

Botswana has come a long way from the time it was a British Protectorate. Diamond mining has been a contributing factor for such a transformation, but Botswana's self-rule, procedures and dedication to economic planning and implementing projects and policies became important (Masire, 2006). The fact that the leaders were, and remain pastoralists whose experience with the negative effects of farming taught them to consume wisely during times of increased harvest, and leave some for the drought season, prompted the state to apply this principle to economic development (Auty & Mikesell, 1998). With the same momentum, every step to manage the economy was calculated. Planning influenced the choice of currency, exchange rate, monetary and fiscal policy, as well as trade policies and strategies, all of which are aligned to international best practices. Ultimately, these policy choices have a bearing on economic growth.

2.2.2.1 CURRENCY AND EXCHANGE RATES

One of the earlier attempts to step away from the shadows of the South African economy and claim economic identity was to extinguish the use of the South African Rand as a legal tender in Botswana. This took place in the first decade after independence (Hartland- Thunberg 1978). There were two motivating factors for Botswana to develop her own currency. Firstly, the South African monetary reserves relied heavily on exports from Southern African countries, particularly ones that used the Rand as a medium of exchange, but no compensation in the form of income had accrued to these countries. Botswana was one of them and economically speaking, this was unacceptable. On the 23rd August 1976, the Rand ceased to be a legal tender and was replaced by the Botswana Pula (which means rain) (Masire, 2006).

Secondly, in 1976, the Pula was pegged to the US Dollar, meaning that there was a fixed rate at which the two currencies can be exchanged (Ochieng, 1979). Coincidentally, the Rand was also pegged to the US Dollar. This had negative connotations for the Pula, mainly because the South African economy was volatile at the time, with high levels of inflation. The resulting effect was as if the Pula was pegged to the Rand (Masire, 2006).

In 1979, when South Africa delinked from the US Dollar and resorted to the floating Rand, Botswana saw it as an opportunity to turn a new leaf. It could no longer allow its currency to remain pegged to the US Dollar because the value of the Pula was dragged up relative to the value of the Rand, and this was detrimental to the exporting sector. In 1986, the Pula was pegged to a basket of currencies comprised of the Special Drawing Rights (SDR) of the IMF (Masire, 2006). Pegging the Pula to a basket of currencies created a debate in Botswana on the best mix in the basket that would benefit this new economy (Kempe, 2000). However since 2006, the SDR has been made up of the United States Dollar, the Japanese Yen, the European Euro and the British Pound.

Managing the exchange rate is important to Botswana as it determines the performance of non-traditional exports in the international market. This is mainly because an overvalued exchange rate will make exports more expensive in the international market. That is why the real exchange rate has not been allowed to fluctuate upwards. Instead, it has shown a downward tendency from 1984 to 1985 when it was devalued by 5 percent and 15 percent respectively (Harvey, 1993). The Pula was devalued again by 7.5 percent in 2004, and 12 percent in 2005. In 2007, the exchange rate depreciated by 1.4 percent (Bank of Botswana, 2007).

Countering the downward spiral of the exchange rate is the fact that Botswana's currency has been stable. In the midst of economic mishaps, it has managed to pull itself together (Good, 1992). Table 2.1 shows exchange rates between the Pula and the US Dollar, South African Rand, British Pound, Japanese Yen and the Euro. On overall, the Pula has shown stability despite other currencies gaining strength against it. This is merely as a result of a deliberate measure by government to develop a competitive position for domestic producers (Ochieng, 1979; Bank of Botswana, 2008).

Table 2.1 Exchange Rates, Foreign Currency per Pula from 1999 to 2009 (end of)

Years	US\$	South Africa Rand	British Pound	Japanese Yen	Euro
1999	0.2159	1.3292	0.1336	22.11	0.2142
2000	0.1865	1.4106	0.125	21.39	0.2008
2001	0.1432	1.7188	0.0987	18.8	0.1617
2002	0.1829	1.5801	0.114	21.68	0.1745
2003	0.2251	1.4875	0.1265	24.06	0.1791
2004	0.2336	1.3233	0.1211	23.96	0.1714
2005	0.1814	1.1511	0.105	21.27	0.1527
2006	0.1658	1.1565	0.0844	19.71	0.1259
2007	0.1665	1.1318	0.0833	18.63	0.1129
2008	0.133	1.2455	0.0921	12	0.0944
2009	0.1499	1.1086	0.0932	13.85	0.1043

Source: Bank of Botswana Statistics (2010).

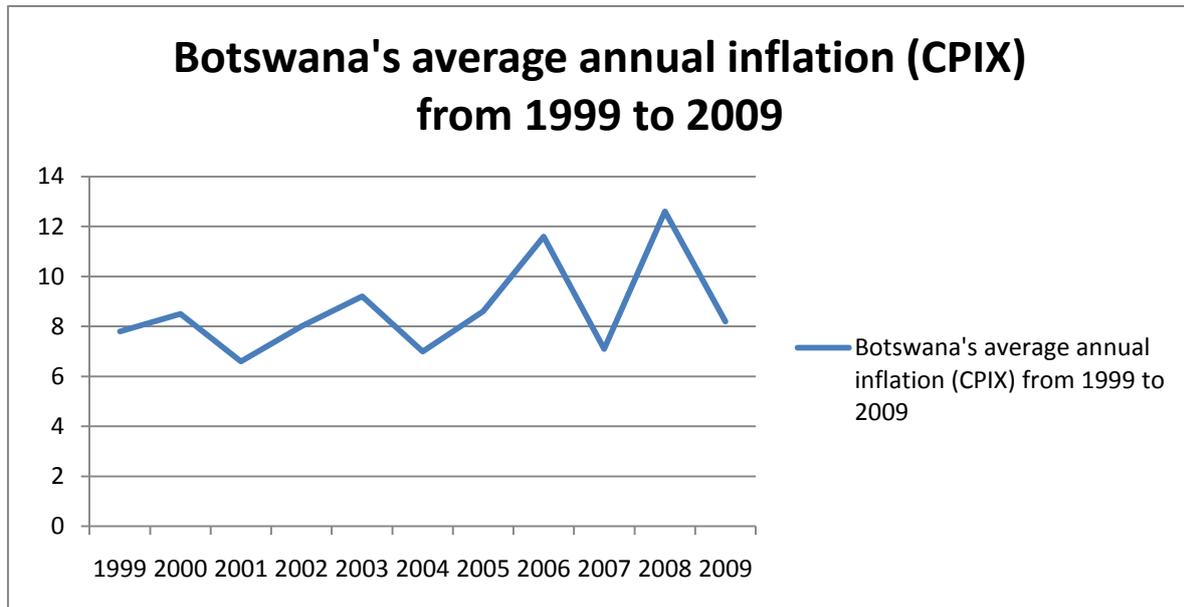
2.2.2.2 MONETARY AND FISCAL POLICY

Botswana achieves monetary policy objectives through the Central Bank of Botswana or Bank of Botswana (BoB) as it is popularly known and objectives are clearly outlined in the Bank of Botswana Act of 1996 (which replaced the original Act of 1975) (Setlhare, 2005). BOB came into being following recommendations by the Monetary Preparatory Committee (MPC) calling for the establishment of a central bank. The motion was passed and BoB was established on the 1st July, 1975. Its directive is to promote and maintain monetary stability through an efficient payment mechanism, liquidity, solvency and proper functioning of a soundly based monetary, credit and financial system (Bank of Botswana Website- last accessed on the 20th November, 2009; Motlaleng & Paul, 2005). Objectives are geared towards the effective supply of domestic credit, at the same time stimulating economic growth (Hermans, 1996; Clarke, 1992). Since inception, BoB has achieved strides in the aforementioned introduction of the Pula as a legal tender in Botswana. BOB has also reformed the financial sector by enacting liberalisation mechanisms. Such mechanisms include the removal of interest rates controls, the provision of start-up licenses to commercial banks, as well as the introduction of the BoB certificate for open market operations. Exchange rate controls were also dealt away with and Collective Investment Undertakings were enacted (United Nations, 2007). As a result of these mechanisms, the country has gained monetary stability and credibility in Africa and the rest of the world. The monetary

environment is complemented by commercial banks, merchant/investment banks, insurance companies, leasing finance institutions, a development bank, a savings bank, a building society, a development finance company, a stock exchange, stockbrokers, pension funds, asset management companies, Collective Investment Undertakings (CIU) and micro lenders (Motlaleng & Paul, 2005).

Inflation is one of the priorities of the Bank of Botswana through some inflation curbing mechanisms that the bank has introduced over the years. Before 2007, an annual inflation objective range was set by the Monetary Policy Committee (MPC) and announced in the Monetary Policy Statement (MPS) (Bank of Botswana, 2008). The inflation objective range was set at a rate of 4 to 7 percent. In 2008, the setting of a yearly inflation objective was discontinued and the central bank adopted a rolling three year monetary policy framework, with medium-term inflation objectives (Bank of Botswana, 2007; 2008). This implied that inflation would be guided by the medium-term forecast, taking into account inflation determinants such as credit growth. In lieu of the new inflation policy, MPS set a 3-6 percent medium-term inflation objective which would be adjusted thereafter (Bank of Botswana, 2008).

With the rolling three year monetary policy framework, Botswana's yearly inflation rates are in par with that of other countries around the world. In 2008, inflation was generally high across countries of the world including Botswana, this was caused by a rise in food and fuel prices (Bank of Botswana, 2009b; World Bank, 2008b). Figure 2.3 shows Botswana's average annual inflation from 1999 to 2009. In 1999, average annual inflation rate stood at 7.8 percent. In January 2004 to May 2005, the inflation rate fluctuated between the 6 and 8 percent bracket, after which the average annual rate at the end of 2005 stood at 8.6 percent. Inflation rate then declined from an annual average of 12.6 percent in December 2008 to 8.2 percent in 2009 (Ref. Figure 2.3).

Figure 2.3 Botswana's Average Annual Inflation (CPIX) from 1999 to 2009

Source: Bank of Botswana (2010).

In comparison to South Africa, SDR countries and some of the trading partners, Botswana's average inflation has not been peculiar; in all cases increases in inflation were noted, although to a lesser degree in some countries. Average inflation for Botswana's trading partners declined from 6.5 percent in December 2008 to 3.9 percent in June 2009, and South Africa's inflation rate declined from 9.5 percent in December 2008 to 6.9 percent in June 2009. For SDR countries, most of which first experienced the repercussions of the global recession, inflation declined from 0.7 percent in 2004 to -0.8 percent in 2009 (Bank of Botswana, 2010).

On the fiscal policy side, the Ministry of Finance and Development Planning (MFDP) is the custodian, the ministry coordinates development planning by mobilizing and managing financial and economic resources (Ministry of Finance and Development Planning Website- last accessed on the 15th October, 2009). Like some countries around the world, expenditure and development priorities, as well as the resources to finance them are outlined by the MFDP and presented in the annual budget since 1966. The strategic financial allocations have contributed to Botswana meeting three of its fiscal objectives. These include; achieving a

budget and non-investment balance⁶ surplus in most years, as well as maintaining government spending below the ceiling of 40 percent of GDP (Clausen, Delechat & Gaetner, 2008).

2.2.2.3 TRADE POLICY AND STRATEGIES

Botswana's trade policy document was unveiled in 2007. It is geared towards gaining market access for domestic industrial goods and services in foreign countries by facilitating access to cheaper raw materials, as well as a reduction in tariffs. The policy is influenced by the desire to expand the country's export base by encouraging the participation of local producers in economic activity (Zizhou, 2009). Botswana has bilateral, regional and multilateral trade agreements that facilitate the cross border movement of goods and services (Botswana Export Development and Investment Agency Website- last accessed on the 13th October, 2009).

Bilaterally, Botswana has agreements with Zimbabwe and Malawi. The country is also a member of the Southern African Development Community group of countries that are negotiating a bilateral Economic Partnership Agreement (EPA) with the European Union (EU). The EPAs are envisaged to replace the trade aspect of the Lome agreement, and negotiations are still on-going in spite of the initial 2007 deadline (Bertelsmann-Scott & Grant, 2007).

Regionally, Botswana is signatory to the Southern Africa Customs Union (SACU) and Southern Africa Development Community (SADC). SACU was first signed in 1910 and subsequently revised in 1969 and 2002. Botswana shares the membership of SACU with Lesotho, Namibia, Swaziland (which form the BLNS group) and South Africa. The organisation promotes regional integration and facilitates trade among member states in order to improve economic development in the region (Southern Africa Customs Union Website- last accessed on the 10th April, 2010). Regional integration is promoted through a high degree of protection against imports from the rest of the world thus promoting the access of the regional market. Such protection was in the past carried out by escalating tariffs, but high tariffs have since been progressively reduced as per the requirements of the WTO

⁶ This is the difference between non- mineral revenues and current spending.

membership of SACU member states (Hartzenberg Charalambides & Jakobeit, 2005). Although the effectiveness of SACU in bringing in regional development has been questioned (Guma, 1990), Botswana continues to generate revenue from the SACU revenue sharing pool. In 2005/06, Botswana's share of intra SACU imports was the highest of all the member states, at 29.3 percent (Flatters & Stern, 2005). As a result, in the year under review, the country generated about R4 million in revenues, ahead of all SACU member states except South Africa which generated about R13 million. The revenue is calculated using a formula agreed by SACU members and is biased towards net importing countries (Hartzenberg, Charalambides & Jakobeit, 2005).

In addition to being a member of SACU, Botswana joined SADC in 1980 when the organisation was a loose alliance of the Southern African Development Coordinating Conference (SADCC). The current protocol was implemented in August 1992 when the organisation seized to be a Coordinating Conference and became known as the Southern Africa Development Community (SADC). Membership of SADC includes SACU member countries, as well as Mauritius, Zambia, Malawi, Tanzania, Madagascar, Mozambique, Zimbabwe, Angola and Democratic Republic of Congo (Southern African Development Community Website- last accessed on the 5th November, 2008). Like SACU, SADC addresses economic integration and development in the region which is rather a duplication of objectives (Hartzenberg, Charalambides & Jakobeit, 2005; Alves, Draper, Halleson, 2007). Nonetheless, SADC, with the exclusion of Democratic Republic of Congo and Seychelles, became a Free Trade Area (FTA) in 2008.

Multilaterally, Botswana is a member of the World Trade Organisation (WTO) since 1995. By virtue of this membership, Botswana is signatory to all WTO agreements and has to abide by the rules and principles governing the movement of goods and services failing which it is liable to punishment through the dispute settlement body (World Trade Organisation- last accessed on the 10th April, 2010). Like bilateral and regional agreements, membership to the WTO presents market access opportunities for Botswana, but it may mean a great deal of competition for domestic industrialists and entrepreneurs. As such, there is need for Botswana to keep a progressive and consistent trade policy agenda.

In addition to trade agreements, Botswana benefits from the African Growth and Opportunity Act (AGOA) of 2000 where she and other Sub-Saharan countries liberally access the United States (US) market on a quota free and duty free basis. AGOA represents the United States' strong commitment to increasing trade in Africa and has about 6500 product lines that firms can benefit from (African Growth and Opportunity Act Website- last accessed 10th October, 2008). Botswana is also a member of the Commonwealth group of countries⁷, African Union and World Bank group of countries.

2.3 INDICATORS OF ECONOMIC DIVERSIFICATION

Inter-relationships between economic variables have prompted researchers to theorise about, and research the association between some economic indicators and their relationships with economic diversification. The enquiries have led scholars to identify indicators discussed below.

2.3.1 GROSS DOMESTIC PRODUCT

The composition of Gross Domestic Product (GDP) is used to measure economic diversification. As a national accounts indicator, GDP measures overall economic output. It represents the value of final goods and services that originate within the borders of a country, it is closely correlated to the quality of living (Blanchard & Fisher, 1989). GDP is calculated through the production, expenditure and income approaches.

As a measure of economic diversification, the composition of GDP gauges sectoral concentration. An economy that is not adequately diversified will have GDP shares concentrated on a few sectors, a more diversified economy will have GDP sectors contributing in balanced proportions. The use of GDP as an economic diversification measure is often used in conjunction with indexes of economic concentration to derive point estimators. For example, Abouchakra et al (2008) used GDP data to come up with a Herfindal concentration metric when analysing the economic diversification of 19⁸ countries around the world. Similarly, the Research and Analysis Division of Hawaii (2008) shows that

⁷ By virtue of being a former British colony.

⁸ Bahrain, Kuwait, Oman, Qatar, The Kingdom of Saudi Arabia, The United Arab Emirates, Canada, France, Germany, Italy, Japan, United Kingdom, United States, Hong Kong, Ireland, New Zealand, Norway, Singapore, South Korea.

the Ogive Index and the Entropy Index can be used to measure sectoral concentration using GDP data.

GDP as measure of economic diversification in Botswana is relevant. In Botswana's colonial days, national accounts were not consistent; hence there were no reliable data reference points. Nowadays, the Central Statistics Office collects and maintains GDP data and is accessible to the public. The data is updated on a quarterly basis (Jefferies, 2007) and consists of ten sectors namely; agriculture; mining; manufacturing, water and electricity; construction; trade, hotel and restaurant; banks, insurance and business; general government and social & personal services sectors (Botswana Statistics, 2008). Proportions of GDP will be elaborated further in chapter 4 and 6.

2.3.2 EMPLOYMENT RATES

Another metric for judging the level of economic diversification is sectoral employment ratios (Jefferies, 2010a). According to theory, a more diverse economy is competitive and less concentrated on a few sectors for not only revenue, but employment as well (Scherer, 1980). The industrial organisation theory specifies that in using concentration measures such as the Ogive Index and the Entropy Index, small or large sectoral shares of employment in comparison with other sectors shows less diversification. A balanced share of employment rates across sectors represents more diversification (Research and Economic Analysis Division of Hawaii, 2008). In a more logical setting, the growth rate of employment should not be much lower or much higher than the growth rate of real GDP (Jefferies, 2010a).

Botswana's employment consists of both skilled and unskilled labour. Prior to gaining independence in 1966, there was a high number of unskilled labour that migrated to South Africa to work in the mines. Although the number of the migrants is not known, this movement of labour led to serious labour deficiencies (Harvey, 1993). In recent years more Botswana have joined the labour force and recent estimates by Jefferies (2010a) show that total employment increased by 2.3 percent from 1994 to 2008. Government employment for that period increased by 2.6 percent and parastatal, private sector, as well as non-mining private sector employment increased by 0.3 percent, 2.4 percent and 2.2 percent respectively.

2.3.3 INTERNATIONAL TRADE

According to economic development theory, economic diversification is driven by variables such as simultaneous changes in production as reflected by exports and imports (Barghouti & Schub, 1988). An increase or decrease in export commodities, as well as their generated revenue indicates a diversification status. Like GDP, if an economy is highly reliant on a few export commodities for revenue, it is considered less diverse. Reliance on more export commodities for revenue indicates a more diversified economy. Similarly, imports indicate an economy's diversification status. It is widely believed that, a reduction in imports suggests that import substitution is taking place, thus locally manufactured goods are replacing imports, while an increase in imports suggests that domestic production is not rapid. The inter-link trade relationship between a country and its trading partners is thus important (Deller & Wagner, 1993).

Components of international trade as an economic diversification measure are relevant to Botswana. An export-led growth strategy was adopted when the country was a British protectorate, although export-led growth and import substitution are not mutually exclusive (Jefferies, 2010a; Sentsho, 2000). The idea is to lessen dependence on diamonds for foreign exchange, as well as to reduce balance of payment problems and create employment opportunities (Jordaan, 2007). In 2010, a new trade policy strategy called the Economic Diversification Drive (EDD) was unveiled to monitor export growth and import substitution (Moloi, 2010). Although this is mainly a duplication of existing initiatives, the country is yet to see if the drive will bring in positive results.

Botswana's exports include; meat & meat products; live animals; hides & skins; diamonds; copper nickel matte; textiles; soda ash; vehicle parts and other goods (Botswana Statistics, 2008). Principal imports include food beverages & tobacco; fuels; chemicals & rubber products; wood and paper products; textiles & footwear; metals & metal products; machinery & electrical equipment; vehicles and transport equipment and other goods (Botswana Statistics, 2008).

2.4 CONCLUSION

The discussion in this chapter has highlighted some critical points for the foundation of the study. The chapter provided a geographical, historical and macroeconomic overview of

Botswana. Historical overview is centred on the state of economic and social development when Botswana was a British protectorate from 1885 until 1966. Analysis shows that during this period, Botswana endured years of economic neglect. Since independence in 1966, there has been a great deal of macroeconomic transformation. This includes changes in currency and exchange rates, inflation, monetary and fiscal policies, as well as trade policy and strategies, and these have been positively contributing to economic stability. By discussing the above, the chapter has laid down an important foundation for the study. Positive macroeconomic variables are necessary for economic diversification to take place.

CHAPTER 3- THE ECONOMICS OF MINERALS

3.1 INTRODUCTION

The world is made up of various mineral producing countries. Africa has 12 out of 18 diamond producing countries in the world, as well as major oil producing countries such as Guinea Bissau, Angola and Nigeria⁹ (Sebudubudu, 2009; United Nations Industrial Development Organisation, 2004). Given this dynamic, Africa's comparative advantage is expected to be vested in primary resource sectors to facilitate industrialization (United Nations, 1984). This expectation has increased interest in the economics of minerals, particularly the concept of mineral rent as an economic rent, as well as its optimal use. To introduce this chapter, one of the pillars guiding the utilisation of mineral resources, which is sustainable development, will be discussed.

Achieving sustainable development is important to most economies (African Development Report, 2007; United Nations Educational Scientific and Cultural Organisation, 2001). Even though the concept is somewhat new and eclectic, it is better explained by an array of definitions. In 1987, the Brundtland¹⁰ report defined sustainable development as one that meets the economic needs of the present generation without preventing the future generation from meeting their needs (United Nations, 1987). Due to lack of economic precision in this definition (Lange and Wright, 2002), the United Nations World Summit (UNWS) concentrated on the inter-dependent and mutually reinforcing pillars¹¹ of sustainable development (United Nations, 2005). The implication of the definitions is that resources such as minerals can be used to achieve this development. The fact that minerals are limited in the context of time and location means that the principles of sustainable development should be adopted to ensure that they achieve long term objectives. Economics therefore adds a key dimension to the economic dilemma as the subject is founded on the optimal allocation of scarce resources (Khanna, 2003).

As a consequence of this revelation, there has been an interest in the study of minerals using economic analysis techniques. Scholars particularly dwell on their extraction and utilisation.

⁹ One of the world's largest producers of oil, producing 2.1 million barrels a day.

¹⁰ Named after Norwegian Prime Minister Gro Harlem Brundtland who chaired the world commission on environment and development that delivered the report in 1987.

¹¹ Pillars include economic development, social development, environmental protection and later cultural diversity.

In the process, some of them have developed theories that were incorporated in mainstream economics (Bradley, 2007). Such pivotal scholars include Adam Smith, David Ricardo, William Jevons, Lewis Gray, Harold Hotelling and Erich Zimmermann and are mentioned throughout the course of this chapter.

The chapter is structured as follows. Section 3.2 uses theories provided by Erich Zimmermann, William Jevons and Lewis Cecil Gray to reiterate the importance of minerals. Section 3.3 will define the concept of mineral rent and section 3.4 will outline the evolution of mineral rent. Section 3.5 will analyse the optimal utilisation of mineral rent and section 3.6 the pre-requisites for the optimal generation and utilisation of mineral rent. Section 3.7 will explain how some countries got affected by the resource curse and section 3.8 will provide concluding remarks.

3.2 THE IMPORTANCE OF MINERALS

The importance of minerals has been a subject of research for many years. There is a near consensus that minerals are a gift from God and harnessing the revenues that accrue as rent is important for economic development (Asfaha, 2008; Collier & Gunning, 1999). This is because rent opens up fiscal space to accommodate countries development priorities. This optimistic view would be particularly true for Africa as the continent is rich in natural resources (Sebudubudu, 2009).

Economic scholar Erich Zimmermann (1888-1961) published a book titled *'World resources and industries'*, where he provides a unique view of minerals, at the same time providing an excellent economic geography (Hunker, 1964). He describes resources as a source of security and survival; therefore they have an impact on man's war and peace. Their importance depends on their usability and capability to serve man's needs. The usability of natural resources changes according to the needs of individuals, the society and the revision of the existing standards of living. For example, coal in its natural composition would not be considered a resource, but it becomes one because man can utilise it as a source of energy, a situation that is dubbed 'resource appraisal' (Zimmermann, 1933).

Resource appraisal is a direct result of man's ability to adapt and create cultural and artistic environments based on his brain power and depends on two factors, namely the technological and societal factors. The technological factor involves man's ability to create sources of energy and livelihood using resources. The societal arts factor refers to man's ability to regulate such relations with technology. Resource appraisal is a good explanation of the usefulness of natural resources as the appraiser (man) decides which resources are important and which resources to discard (Zimmermann, 1933). Apart from the usability view, resource appraisal has a bearing on the conservation of natural resources. In addition to factors of resource appraisal mentioned above, man depends on the environment for survival and the relationship is symbiotic. The nature of the relationship between the two agents prompts man to use mineral resources wisely to prevent the environment from seizing to provide those resources. Man as the agent of production of natural resources should realise that he is part and parcel of the environment and his actions should be aimed at conserving natural resources (Zimmermann, 1933).

Even though the importance of minerals has been outlined, especially in recent literature, their sensitivity in economic development became renowned in 1865, when William Jevons (1835-1882) published a book titled '*the coal question: an inquiry concerning the progress of the nation, and the probable exhaustion of our coal mines*'. The book aroused research and careful introspection on the use of minerals. The analysis was a clear transition from questions on the availability of agricultural food at the time, to questions on the availability of coal to sustain England's industrialisation. Questions were largely motivated by the increasingly clear notion that the coal that England possessed in the 1800s was the cornerstone of civilisation at the time. It was the backbone of the economy and was used mainly as a source of fuel and as a major ingredient in the discovery and improvement of the arts. As such, its absence would devastate England's industrialization plans. Jevons (1865) particularly questioned the longevity of the cheap coal supplies that gave England the streak to industrialize more than other countries.

To seek answers to the coal question in England, an analysis of the present coal situation was done. Results showed that cheap supplies of coal in England and the level of skill of coal production could sustain industrialization for a certain time period. However, England was cautioned that the continued mining of coal puts a strain on its quantity and increases the

possibility of exhaustion and inevitably industrialization faced a slowdown. The realisation that it would be difficult and costly to transport foreign coal as a substitution for the domestic coal was too much to contemplate. Jevons (1865) then recommended the imposition of an export tax on the coal to preserve it and discourage its export.

Luckily for England, the coal panic turned out to be a false alarm. Coal demand growth stood at 3 percent between 1865 and 1880, 2 percent between 1881 and the turn of the century and even went down to 1 percent afterwards, which is far less than what was predicted (Bradley, 2007). Even though the coal question was unfounded, it aroused interest on natural resource conservation around the world. For example, in America President Roosevelt became aware of the careless use of natural resources and campaigned for their conservation. He encouraged ‘the application of common sense to common problems for the common good’ (Roosevelt, 1902. In Devarajan & Fisher, 1981). By this he meant that natural resource conservation is vital for economic development, conservation of natural resources was later discussed by Lewis Gray.

Lewis Gray (1895-1951) researched and published a paper on ‘*the economics of conservation*’. The paper noted that natural resources are scarce and their careless use in America threatened their existence. It was evident at the time that some factors encourage their conservation and some factors lead to their careless use (Gray, 1913). Categorisation of natural resources according to renewable and non-renewable resources is an important aspect of conservation (Robinson, 1989). It leads to the distinctive use of resources according to the category in which they fall in. Renewable resources do not pose a conflict between present and future use, not to say they should be used carelessly, but these resources do not require intense conservation mechanisms since they can be restored. On the other hand; minerals, coal, metals and petroleum require a clear choice between present and future use and require intense conservation mechanisms (Gray, 1914).

One of the main problems in achieving the conservation of non-renewable resources involves clearly determining the rate of discount on the future in the utilization of natural resources (Gray, 1913). Poor determination of this rate leads to the repeated use of natural resources in the present time period, therefore jeopardising the use of such resources for the future generation (Hotelling, 1931). Another concern to conservation is the issue of private property

rights on non-renewable resources. Questions on how property rights perpetuate conservation of natural resources have been raised (Gray, 1913). This is mainly because private ownership of natural resources will encourage their conservation if the individual property rights owner sees it profitable to do so. To make the profitability decision, the property rights owner should determine the rate of interest on natural resources in the present and future time periods. The property rights owner will also need to assess the law of diminishing productivity on natural resources to gauge their value (Gray, 1913). If the present rate of interest is high, then the property rights owner will find it less profitable to postpone extraction. In addition, if the subject of extraction is limited in quantity and has a rising market value, then it is wise to slow down extraction and the utilization of that resource in order to benefit from future profits.

As a result of the conservation concerns levelled by Gray (1914), economists were challenged to find solutions to the conservation problem which will be used as the basis for some economic adjustment. Adjustments include the fair distribution and redistribution if necessary, of natural resources among people. Adjustments also include adopting an educational strategy on the effective ways of exploiting natural resources, especially in combating individual self-interest. An educational approach to conservation promotes and encourages scientific research, invention aimed at widespread knowledge on methods of natural resources utilization (Gray, 1913).

Natural resource conservation puts a lot of pressure on present population and policy makers alike, it also presents a social pressure to those concerned, as its adoption or lack of is influenced by the political will of the government in power (Gray, 1913).

3.3 THE CONCEPT OF MINERAL RENT

The purpose of this sub-section is to define mineral rent as an economic rent, its evolution and how rent comes into being.

3.3.1 THE EVOLUTION OF MINERAL RENT

Mineral rent as a subject matter has evolved in economic thought. One of the earliest scholars to define mineral rent was Scottish economist, Adam Smith (1723-1790). Smith published a

book in 1776, titled '*an inquiry into the nature and causes of the wealth of nations*'. Although the main theme of the book is the theory of the invisible hand, particularly issues surrounding the industrial revolution and competitiveness in the eighteenth century Britain, it is his earlier attempt at the definition of rent that the book was put in the spotlight, and the term mineral rent was developed (Robinson, 1989).

The analysis did not differentiate mineral resources from agricultural goods in the definition of rent, the book employs the term 'farm' to refer to agricultural land and mines. According to Smith (1952), the treatment of land and mines is hardly different when assessing their rent. Little did he know that by not differentiating minerals such as copper, diamonds and oil from agricultural produce, he failed to account for the fact that minerals are fixed commodities and unlike agricultural goods they cannot be produced in large quantities (Ricardo, 1821). Nonetheless, the definition of rent laid a solid foundation that would later benefit subsequent scholars. The rent of land is defined as the highest price the tenant can afford to pay for the use of land in its actual circumstances (Smith, 1952). Compensation (rent) is paid for the liberty of removing and selling resources derived from the land (Ricardo, 1821). In some cases, the ignorance of the landlord or tenant can lead either of them to accept or pay a share of rent that guarantees a loss of revenue on either part. In this case, the farmer would receive less rent, or the tenant would pay more rent than they are entitled to. This accounts for the constantly gravitating rent paid to the landlord by tenants (Malthus, 1951).

In most cases, rent itself is determined by the location of the land. A piece of land that is rich in resources, for example, one that is in the neighbourhood of an island that has fish can provide a source of living for its inhabitants. In such a situation, the rent of the landlord is not only in proportion to what the farmer can make by the land, but to the returns from both the land and the water in that land (Smith, 1952). The price of such land (rent) is monopolistic, it is not tied to the developments laid upon in that land, but it reflects the farmer's opportunity cost associated with giving away that land. The highest cost farm (mine) would determine the amount in rent received by other farms (mines). Farms (mines) whose production costs equal their generated revenue would receive no rent, while mines that produce higher grade deposits that generate higher revenue vis a vis costs because of close proximity to markets, receive rent accordingly (Cawood & Minnit, 2002). Awarding higher rent to produce located close to their markets has nothing to do with the price of labour employed, or the quality of the produce, but the transportation costs involved in moving the produce to the market

(Smith, 1952). Rent is calculated as the excess of the price of the whole produce above what is necessary to pay labour wages and interest on capital employed in production (Malthus, 1951).

The approach by Smith to define rent was considered vague by Robinson (1989), mainly because he explained the most essential causes of the ordinary excess of the price of raw produce over and above cost of production, but could not provide a sufficient economic interpretation. Instead, his explanation centred on the monopolies involved in the accumulation of rent, which in the end did not explain the necessary economic peculiarities involved (Malthus, 1951). However, Smith provided a good theoretical basis for the definition of mineral rent by scholars such as David Ricardo.

Almost half a century after Smith's work on rent, in 1821, David Ricardo (1772- 1823) who is one of the most influential classical economists, published a book on '*the principles of political economy and taxation*'. Ricardo provided a more analytical discussion on the economics of mining and noted Smith's inadequacy in explaining mineral rent. In lieu of this fact, Ricardo made a notable distinction between mineral rent and land rent.

The Ricardian land rent is defined as 'the portion of produce paid to the landlord for the use of the original and indestructible powers of the soil' (Ricardo, 1821). In this case, rent is synonymous with the interest generated by the land and the initial capital employed. For example, if two farms with the same fertility existed and one is properly maintained and has all the necessities such as water, fencing and buildings, more remuneration would be paid for the use of one, rather than both, even though the remuneration in both farms still qualifies to be called rent. A portion of the rent is given for the structures in place in that land, while the other portion is payment for capital used to build such structures. Consequently, when producing timber, rent is paid to the landowner for the productive powers of the soil, as well as the future demand of timber. Raw produce tends to rise in value in comparison with refined produce, because more labour is needed for the last batch of production (Ricardo, 1821).

According to Ricardo (1821), when explaining rent of mines, one should note that minerals are provided by nature and they are obtained through the use of labour. The rent paid for them is not only as a result of the high value of the produce, but the user costs associated with exploiting such a non-renewable resource. If there were plenty of mines available for almost

everyone to explore, rent would cease to exist, the value would be limited only to the labour used in the exploitation of such minerals and the effort it took for such minerals to be available in the market. This is because rent is paid for the scarcity of resources found in a given land. The Ricardian definition on rent of mines remains the same as that of land rent, but unlike land rent, the payment is for the commodity (minerals) itself that is extracted from the mines. Such rent is not to be confused with the interest and profit of capital paid by a farmer to the landlord (Ricardo, 1821). Mine rent reflects the fact that minerals approach exhaustion with each production (Cawood & Minnit, 2002).

Although Smith and Ricardo are not the only scholars that defined mineral rent, theirs was the most pivotal. It shaped the present day definition of mineral rent, even though Ricardo failed to account for the variances in mineral royalties as a result of countries having different mineral rights ownership regimes (Cawood & Minnit, 2002). The discrepancies are supplemented by the approach that modern analysis of mineral rent provides, not in terms of the definition of rent, but how they come about.

3.3.2 MINERAL RENT DEFINED

Mineral rent is a type of economic rent. Economic rent exists due to the need to determine the flow of payment in the production process. It consists of a surplus earned by any factor of production over and above the minimum price/supply price at which that factor would be provided. Factors of production include labour, capital and land. For each factor of production that generates economic rent, the demand for that product plays an important role, as well as supply characteristics which ultimately determine its supply price (Griffiths and Wall, 2000).

In the case of labour, economic rent is generated through wages (Brown, 1941). To illustrate economic rent as a surplus on wages, consider a model earning P¹²10 000 a month, who could instead be a receptionist earning P1000. If she is prepared to model when she is paid P1000 or more, then her supply price is P1000 and her salary as a model contains P9000 in rent (surplus). The rent can be taken away without affecting the behaviour of the model (Tilton, 2004). Economic rent therefore denotes the market power of a factor of production, that is

¹² Pula is the currency of Botswana, and as of 6th of January, 2010. It exchanged at US\$1:P6.60939 and P1: ZAR 1.10074.

what the factor of production is paid to remain in use (The Economist Website- last accessed on the 8th November, 2009). In some cases individuals who possess unique skills and qualities can receive an income that is many times larger than the average income, therefore their earnings consist mainly of economic rent. In theory, a free market can eliminate economic rent because paying a high salary will induce demand for that position as more people will be attracted to the firm, leading to a drop down of the salary. However, in practice it is not always possible due to the market barriers¹³ that might exist in relation to the post (Griffiths & Wall, 2000).

Economic rent can also be applied to the yield of produced or constructed capital. The surplus generated would be in the form of interest earned from capital. Like economic rent on labour, rent on capital is considered to be earned through the equivalent service given by the factor of production (Brown, 1941).

Another type of economic rent is one that is applied to land. Economic rent can form a large part of the revenue that landowners receive. The rent generated by the land is related to mineral rent, although such an assertion has caused debates amongst scholars in the past (Smith, 1952; Ricardo, 1821). When rent is paid for a piece of land that possesses minerals, it is called mineral rent and should not be confused with a piece of land used for agricultural purposes. Regarding mineral rent, economics puts forward certain generalisations about the production process. Generalisations involve the fact that production of minerals is assumed to bear a combination of land, capital and labour. Land is a source of minerals, capital is the revenue and equipment needed to carry out the mining and labour is used to extract minerals from the soil. In the end, labour is rewarded with wages and owners of capital receive interest payment. Finally, royalty payments for the transfer of mining rights are advanced at different stages of production. These payments include deductions for labour and capital used. Furthermore, mineral rights owners can impose taxes on the output. In this context, mineral rent is these taxable revenues accruing to the mineral industry. However, the tax should not cause the pattern of mineral production to be altered (Cordes, 1998; Tilton, 2004).

¹³ Potential employees might not be willing to relocate for the post, mismatch of skills and other requirement that might not be met.

Unlike rent on capital and labour, mineral rent is unearned income because it is not received in return for a service to those from whom it is drawn (Brown, 1941). Nonetheless, some economic factors affect the value of mineral rent, for example a mine that is close to its market, or can provide easy access thereof due to good quality infrastructure will receive greater payments compared to a mine that provides the opposite (Ricardo, 1821).

On the basis of economic rent representing a surplus on income, and a properly constructed tax system falling on these rents, some scholars (Tilton, 2004) have asked the question: given the fact that the mining industry incurs large costs, is it possible to tax mineral rent without changing the production pattern? Not only that, some scholars (Brown, 1941) question if the income that accrues to the mineral rights owner as a result of taxation qualifies to be called rent? Scholars have had different views to these questions. In theory, the government can tax away the surplus (rent) without affecting the behaviour of the factor of production. In reality, added tax may cause political repercussions and a loss in revenue for a factor of production. As such, Tilton (2004) argues that in the context of mining, the treatment of rent is better restricted to user costs, lest no mineral rent, as any attempt to take away part of the surplus in the mineral industry will alter the behaviour of firm, and potentially reduce production, as well as the incentive for the mining companies to explore in that country. Although Brown (1941) asserts that income generated through tax does not qualify to be called rent, a large body of literature shows that indeed rents can be generated through taxation (Boulding, 1941)

3.3.3 HOW MINERAL RENT COMES ABOUT

In providing a further analysis of mineral rent, the fundamental question is; how do they come about and what are the components that make up such rents? Mineral rents are a direct result of the transfer of property rights from a mineral rights owner to a mining company due to the knowledge intensive nature of the mining industry and the lack of physical and human capital in some mineral-rich countries (Hazleton, 2002). Rights are transferred when mining companies approach governments to seek exploration and mining rights. These are transferred according to set conditions. Exploration rights are granted to companies that are still prospecting for minerals on the agreement that such companies make monthly or annual royalty payments to the owner of the mining rights. After discovery of minerals, a mining licence will be issued based on the outcome of negotiations on how output will be shared

between the parties involved. Output shared will take into consideration the amount of capital invested by the two parties. In a favourable setting, the agreement should have leeway for re-negotiation so as to allow public officials the latitude to raise their shares of the mining industry output (Tilton, 2004).

After a mining license is granted for a sufficient duration needed to mine the resource, production will start and minerals will be sold. The mining company and the mineral rights owner will share output from the mineral sale according to the agreed shares. In addition, government has the liberty to levy a tax on production according to the weight or gross revenues generated (Tilton, 2004). Tax instruments are broad, but usually fall in the category of direct taxes, indirect taxes and tax incentives to the government. Direct taxes levied usually comprise of 'income tax, royalty tax, import duty, export tax, withholding tax, local taxes, fly in-fly out tax and other taxes. Indirect taxes include landowner compensation, local component rules (social development requirements), foreign exchange regulations, equity participation and transfer of technology' (Clark, 2001). Tax levied on the mineral industry and royalty payments are what usually make up mineral rent (Cawood, 2000). By design, rent accounts for the pessimistic view that mineral resources are not augmentable in the process of their productive use and benefits should be derived from them while they are still in existence (Lange and Motinga, 1997).

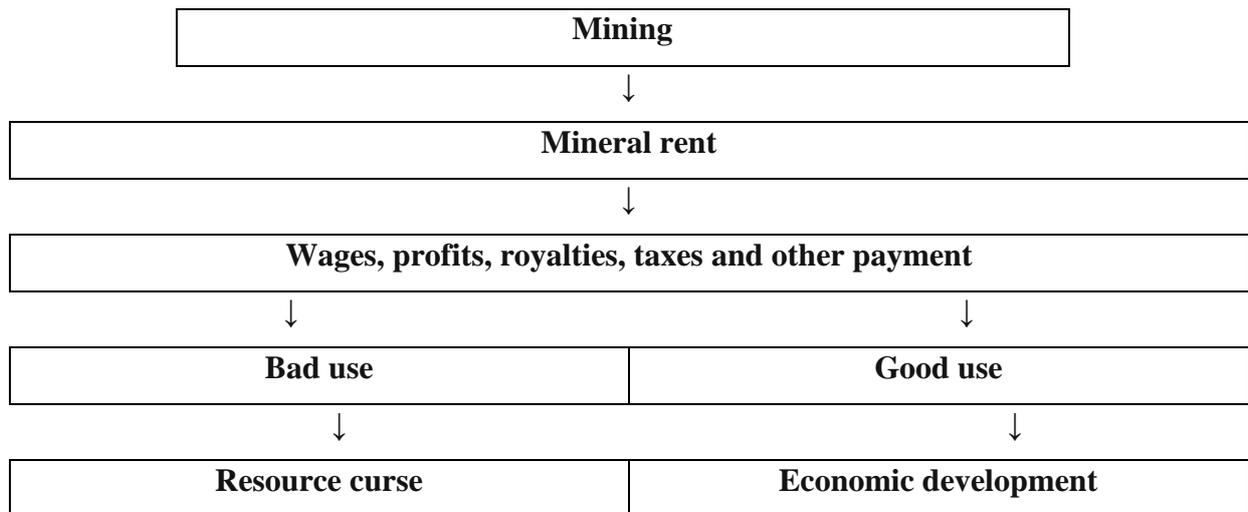
Even though scholars have explained the composition of mineral rent, in actual fact they are defined within the fiscal regime of the respective country (Clark, 2001). Fiscal regimes may include economic policy and instruments set out by that policy. Policies do not only determine instruments used to derive the mineral rent, it specifies recipients according to their rightful share. The hierarchy of claim is principally prescribed by national objectives/priorities, as well as social and political pressures involved (Cawood & Minnit, 2002). Once that has been established, rents are invested in a way that will bring long-term positive results to the economy.

Although rent represents a source of revenue, it is worthwhile to mention that they are peculiar. The peculiarity arises from the fact that the mineral industry products, especially diamond products, are luxury goods. As a result they have high income elasticity as their demand rises more than proportionally to a rise in income (Brue & McConnell, 2005). In the

same manner, their demand drops when income drops. This affects prices of mineral products, making them volatile in short-run and long-run. Volatility of mineral prices is usually evident during economic crisis', like it was the case in 2008/09 when global financial and economic crisis was prevalent (Nsingo, 2009). Volatility of mineral prices is usually compounded by quantity shocks of mineral products, but the sector is usually the quickest to show signs of recovery once the crisis subsides (Collier & Hoeffler, 2005). In the long-run, mineral rent will decline when minerals near depletion (Asfaha, 2008; Eggert, Gocht & Zantop, 1988).

3.4 OPTIMAL UTILISATION OF MINERAL RENT: A THEORETICAL PERSPECTIVE

One of the rare consensuses among mineral economists concerns the strategic nature of mineral rent as the driving force in ensuring that such transitional wealth is converted into permanent income in the future (Asfaha, 2008). For this reason; the evaluation, distribution and utilisation of mineral rent has been a subject of research and an issue to ponder most countries (Khanna, 2003). Understanding the underlying development dilemma that mineral-rich countries face is important in avoiding poverty and underdevelopment. To explain the intricacies involved in the optimal utilisation of mineral rent, the author will employ the use of figure 3.1 below. Positive management of mineral rent is associated with certain pre-requisites and a development outcome. If resources are properly managed, rent will serve as an engine of sustainable economic development. However, if rent is utilised badly, not much is gained and there is likelihood of the resource curse.

Figure 3.1 Mineral Rent As a Tool for Development

Author's Own Interpretation.

For mineral rent to lead to sustainable development, four key instruments should be in place. These include the presence of an extraction contract; transparency in revenues generated, savings in the form of Sovereign Wealth Funds, as well as economic and public investments.

3.4.1 EXTRACTION CONTRACT

In 1913, Harold Hotelling (1895-1973), an American economist, designed an approach aimed at deriving optimal extraction of fixed resources in the present and future time periods¹⁴. The analysis discussed underlying work on terms of resource extraction without dwelling much on the extraction costs involved. Instead, Hotelling (1931) provided guidelines on how natural resources should be exploited in the present and future time periods to derive maximum profits from them. Hotelling observed that 'a return to the resource/mine owner is the capital gains on the stock left in the ground' (Gray, 1914). Certainly, resources exploited in the present time period will not be available in the future and will not yield profit based on the future prices. On the other hand, resources left untouched have the potential to yield higher returns in the future, assuming a rise in future resource prices. Resource owners can, therefore extract resources in the present time period and invest it only if the proceeds to his investment exceed the anticipated future price increase. However, if the opposite is true, i.e.

¹⁴ In his seminal paper on the 'Economics of exhaustible resources'.

anticipated future price increase exceeds the present time investment, then holding on to the resource by postponing extraction makes economic sense (Hotelling, 1931).

Hotelling's theory on the optimal utilisation of fixed resources has important connotations. These are; 1) countries should determine resource extraction patterns and develop an extraction contract accordingly, and 2) such determination should be based on sound price predictions. An extraction contract ensures clear, concise and binding terms to guard against the probable loss of rents to mining companies. It should contain property rights the government (assuming government is the resource owner) proposes to sell. In most cases, these include extraction rights and mining rights. Extraction rights contain key dimensions on duration of extraction, the tax regime to be used, as well as the credibility of such commitments. The duration of extraction will depend on the resource and long-term economic plans and so is the tax regime. The extraction contracts can offer long-term terms that allow latitude for the expansion of the mineral sector based on the needs of the economy and effective resource price predictions (United Nations Industrial Development Organisation, 2009).

3.4.2 TRANSPARENCY IN REVENUE

To facilitate the optimal utilisation of mineral rent, these revenues should be made transparent. Two reasons are given for the need to have information on mineral revenue available to the public. Firstly, extraction companies, usually being large capitalists, can make payments to governments that are not compliant with terms of the contract. Secondly, corrupt government officials can divert some of the mineral payments away from the budget. In both instances, transparency makes the extraction companies and government officials subject to a high level of scrutiny as information is accessible to the public, therefore forcing them to comply with the terms of the extraction contract. At the same time, allowing mineral rent to be utilised for the benefit of all citizens (United Nations Industrial Development Organisation, 2009).

The launch of the Extractive Industries Transparency Initiative (EITI) in 2002 has enforced more transparency in mineral-rich countries around the world. The initiative encourages regular publication of all information regarding resource exploitation to support sustainable

economic development (Extractive Industries Transparency Initiative website- last accessed on the 10th March, 2010).

3.4.3 SAVINGS: SOVEREIGN WEALTH FUNDS

The optimal utilisation of mineral rent in the present and future time periods will depend on a successful aggregate savings decision. In agreement with some economic theories, savings are important for development and lack thereof can lead to stagnant economic growth in the long-run.

Mineral-rich countries experience large revenue surpluses as a result of their economic endowment. As such, it does not make sense for the money to be channelled towards present consumption. Surplus revenues derived from mineral production can be converted into different types of savings that will counter the boom-bust cycles and mitigate against adverse effects of mismanagement of revenue in the long-run. For this reason, scholars such as Venables & Van der Ploeg (2009) and Pedro (2004) are in support of setting up Sovereign Wealth Funds (SWFs) to manage the excess liquidity from mineral surpluses.

SWFs are state owned investment instruments that comprise of stocks, property, bonds, as well as other financial instruments (Rozanov, 2005). The foreign exchange assets are instruments of investment and can be managed separately from the official reserves of the central bank with the aim of utilising them in the future (Investor Relations Roundtable, 2008; Kern, 2007). SWFs come in different forms which include; Stabilization funds, Inter-generational Funds, Reserve Investment Corporations, Development Funds and Pension reserve funds. Stabilization funds are exactly what the name suggests, they stabilise the economy during revenue fluctuations and balance of payment problems. Although they are commonly used by oil and gas producing countries, stabilization funds can be used by mineral producing countries as well. The Inter-generational Fund, sometimes referred to as the Non-renewable Resource Funds (NRF) manages present absorption efficiency by putting money aside to achieve inter-generational equity (Investor Relations Roundtable, 2008).

On the other hand, the Reserve Investment Corporation Fund reduces the cost of not investing revenue by generating financial returns on revenue using a variety of assets. The

assets are considered part of a country's official reserves. Revenue held by the Development Fund is used for economic projects and the pension reserve fund is a pension or a contingent type liability on government's balance sheets (International Monetary Fund, 2007).

Although SWFs have set objectives, in practice they can have multiple or gradually changing objectives dependent on economic needs. For example, some countries that initially set up savings and stabilization funds were propelled by changing circumstances to use funds for other objectives. This is especially true for most resource exporting countries that establish stabilization funds as a precautionary measure against a volatile economy and as the revenue grows beyond the amount needed for stabilization, they re-design the fund to include other objectives (Global Financial Stability Report, 2007).

Most countries around the world have channelled their revenues into SWFs for stabilization, savings, development and precautionary purposes and they generate large sums of money as interest. In the case of Chad and Cameroon, the World Bank imposed the establishment of the stabilization fund to prevent corruption in the development of oil pipelines (Pedro, 2004). The summation of the size and structure of the major sovereign funds is shown by table 3.1 below. The table shows that a majority of countries that hold major SWFs are oil producing countries. In 2007, assets are estimated as follows; the United Arab Emirates \$250- \$875 billion, Norway \$308 billion, Saudi Arabia \$250 billion, Kuwait \$160- \$250 billion and Russia \$127 billion. Furthermore, the United States (Alaska) had assets estimated at \$35 billion and China, Singapore, Australia, Brunei, Korea and Chile has assets estimated at \$200 billion, \$200 billion, \$42 billion, \$30 billion, \$20 billion, \$15 billion, \$11.20 billion respectively. Lastly, Botswana had \$5 billion in assets (Ref. Table 3.1).

Table 3.1 Major Sovereign Wealth Funds in 2007

Country	Fund Name	Assets	Source	Ownership and investment management
United Arab Emirates	Abu Dhabi Investment Authority	\$250- \$875 billion	Oil	Emirate of Abu Dhabi

	(ADIA)/ Abu Dhabi Investment Council (ADIC).			
Norway	Government Pension Fund-Global	\$308 billion	Oil	Owned by the government of Norway. Managed by the Norges Bank Investment Management.
Saudi Arabia	No given name	\$250 billion	Oil	Saudi Arabia, and is managed by the Saudi Arabia Monetary Agency.
Kuwait	1) Kuwait Investment Authority (KIA), 2) General Reserve Fund (GRF), and 3) Future Generations Fund (FGF)	\$160-\$250 billion	Oil	KIA manages the funds on behalf of the government of Kuwait.
Singapore	Government Investment Corporation (GIC) and Tamasek	\$200 billion	Other	Tamasek holdings and a separate investment corporation

	Holding			manage the fund on behalf of the government of Singapore.
China	State Foreign Exchange Investment Corporation	\$200 billion	Other	Not known.
Russia	Oil stabilisation Fund	\$200 billion	Other	Managed by the Russian central Bank on behalf of the Government
Australia	Australian Future Fund	\$42 billion	Other	Managed by the Future Fund Management Agency for the government of Australia.
United States (Alaska)	Alaska Permanent Reserve Fund	\$35 billion	Oil and minerals	Managed by the Alaska Permanent Fund corporation for the state of Alaska
Brunei	Brunei Investment Authority General Reserve Fund	\$30 billion	Oil	Managed by the Brunei Investment Authority on behalf of the Brunei government

Korea	Korea Investment Corporation	\$20 billion	Oil	Owned by Bank Korea and the Korean government.
Canada	Alberta Heritage Savings Trust Fund	\$15 billion	Oil	Managed by Alberta Finance on behalf of the Province of Alberta.
Chile	There are two funds, namely, Economic and Social Stabilisation Fund and the Pension Reserve Fund	\$11.20	Copper	Managed by the Central Bank of Chile, for the Chilean government.
Botswana	Pula Fund	\$5 billion	Diamonds	Owned jointly by the government of Botswana and the Bank of Botswana

Source: Global Financial Stability Report (2007).

3.4.4 ECONOMIC AND PUBLIC INVESTMENT

Once an optimal savings plan has been established, there is need to decide on economic projects to engage in, as well as assets to acquire. The decision will not only be based on a country's absorptive capacity, but its economic constraints and national priorities. In that regard, economic diversification has been advocated for by Venables & Van der Ploeg (2009), Pedro (2004) and Enriquez (2007).

The revelation that mineral rent can result in inter-generational equity through economic diversification has been articulated in many national and regional developmental strategies. Regionally this is echoed in the SADC Mineral Sector Programme and Africa Mining Partnership strategy. What is increasingly important is the upstream and downstream activities around the mining sector (Abouchakra. et al., 2008). There are a number of reasons why economic diversification is advocated for. A diversified economy mitigates against the economic volatility caused by relying on a few sectors of commodities. This is because if one sector is not performing adequately, other sectors will ensure that the economy continues to grow (Page, 2008). Economic diversification as a policy choice calls for introspective planning on the execution of investments and this can be achieved especially when looking at the success story of Chile.

Before minerals became the driving force in the Chilean economy, the country was one of the poorest in the world with high levels of inflation (Kalter, 2004). In the 1980s, Chile became the world's significant producer of potassium nitrate, sodium nitrate and iodine and by 2000 it was a top producer of copper by both volume and value with a global market share of approximately 35 percent (Alier & Kaufman, 1999; Spilimbergo, 1999). As a result, growth in real GDP from 1991 to 1997 averaged a high of 8 percent. The mining industry accounted for about 50 percent of total exports, with 42 percent of those exports being copper. Chile achieved a dynamic market oriented economy characterised by high levels of foreign trade and investment and was subsequently ranked the 30th most competitive country in the world, beating Brazil, Mexico and Argentina (Riesco, 2008).

In analysing the case of Chile, Kalter (2004) reckons the nationalisation of the copper mines was important in guaranteeing that generated rent is channelled to economic diversification. Copper mines were nationalised in the 1970s and Corporation Nacional del Cobre de Chile (COLDECO) was appointed to administer them (Spilimbergo, 1999; Riesco, 2008; International Monetary Fund Magazine Survey, 2008). Government on the other hand, was committed to the implementation of a broad range of effective economic policies (Kalter, 2004). These policies contributed to the implementation of economic reforms and effective macroeconomic policies such as low inflation and maintaining a fiscal surplus. These reforms became instrumental in cushioning the economy from external shocks (International Monetary Fund Magazine Survey, 2008).

In building a dynamic market, the Chilean government reduced the tax burden of investing companies by depreciating the local currency to create a Foreign Direct Investment (FDI) incentive for companies. Meanwhile, the bulk of Chile's disposable revenue was channelled to the private sector through provision of business loans (Riesco, 2008). As investment grew, there was a significant growth in average productivity per worker (Spilimbergo, 1999). Increase in production enabled Chile to embark on a boost of the domestic economy, by not only exporting copper, but using some of it for domestic consumption. This import substitution strategy reduced Chile's dependence on developed countries for finished goods (Jadresic & Zahler, 2000).

Apart from economic diversification, mineral-rich countries should utilise part of their rent to provide public goods. Public goods include health care, education, clean drinking water and a safe environment provided by crime prevention and control (Pedro, 2004).

3.5 PRE-REQUISITES FOR THE OPTIMAL GENERATION AND UTILISATION OF MINERAL RENT

Theory and experience has shown that for mineral-led development to be successful, there is need for some economic, social and political structures to be in place. These include the role of policy, good governance, institutions, as well as the necessary checks and balance as provided by civil society.

3.5.1 THE ROLE OF POLICY

Policy plays an important role in mineral-led development (Asfaha, 2008; Addison. et al., 2008). For policy to be effective it should change in different stages of mineral development to address development priorities as they arise. In the infant stage of mineral development, policies are important in authorising prospecting and mining of economic minerals. Policy also guides the economic interpretations of important concepts in the mining industry and administers the industry (Auty & Mikesell, 1998).

Prudent macroeconomic policies provide the economic stability needed for the mining industry to flourish. This includes stabilisation oriented policies that even out the business cycle and manage the short-term and long-term volatility of mineral revenues. Stabilizers are

in the form of monetary and fiscal policies, or a mix of the two. Monetary policy controls the supply of money (resource rents) and interest rates to avoid inflation and harmful exchange rate fluctuations. Fiscal policy encourages efficient government spending of resource rents for the benefit of all stakeholders in the economy (Auty & Mikesell, 1998).

3.5.2 GOVERNANCE

From the viewpoint of effective management of mineral resources, good governance ensures transparent allocation of mineral rights and rent generated (Iimi, 2006). Where there is good governance, there is a likelihood of rent being effectively utilised for development purposes (Mkwezalamba, 2009). To achieve this, the political environment ought to be supportive of the policies in place (Asfaha, 2008).

3.5.3 INSTITUTIONS

Relating to the role that institutions play in mineral development, several studies have outlined their importance (Mauro, 1995; Acemoglu, Johnson & Robinson., 2001). Institutions include the rule of law, a system of checks and balances, state bureaucracy, academia and property rights organisations. Rule of law maintains enforces legitimate proceedings in the state and checks and balances ensure accountability on the use of mineral revenue. Academia is important in providing scholarly work that is used as the basis for policy and property rights organisations licence the rightful property rights owner. Although the importance of institutions has been outlined theoretically, quantitatively it has been difficult for scholars to verify this mainly because of the ambiguity involved. Ambiguity is mostly because the direction of causality between mineral abundance and economic growth through the institutional quality variable is not always clear (Salai-i- Martin and Subramanian, 2003). The dilemma is; does mineral abundance affect the quality of institutions and ultimately economic growth or the quality of institutions determines how minerals rents are deployed to stimulate economic growth and development? (Bulte, Damania & Deacon, 2005). It can happen both ways; mineral abundance can undermine the quality of institutions (Brunnshweiler and Bulte, 2008) and vice versa (Salai-i- Martin & Subramanian, 2003).

To measure the relationship between economic growth and resource abundance through the institution variable, some studies have tested the relationship using a proxy for the institution

variable, in most cases corruption. For example, after initial regressions, Salai-i- Martin & Subramanian (2003) controlled for the institutional quality variable to assess the relationship between mineral abundance and economic growth, but found out that the variable had no impact on economic growth. Empirical work by Bulte, Damania & Deacon (2005) took a different approach by examining alternative models in measuring institutional quality. The study established that institutions are important for mineral-led development.

When discussing the role played by institutions in, it is highly relevant to mention the role of civil society. Moribame & Obasi (2005) have shown that civil society is an important tool of checks and balances as it often lobbies for effective public policy, as such acting as a watchdog of government.

3.6 WHAT IS THE ALTERNATIVE? HOW SOME COUNTRIES GOT AFFECTED BY THE RESOURCE CURSE

A large body of economic theories highlight the pre-requisites for a successful mineral-led development. However, theories also highlight the tendency by certain countries to disregard such pre-requisites due to political, social and economic complexities. Complexities are evident in a majority of countries and are contentious because of practical observations made (Pendergast, Clarke & Van Kooten, 2008). They centre on the observation that counter intuitively mineral wealth has exhibited a negative relationship with economic growth, standards of living, income equality and institutions in most mineral-rich countries around the world (Sachs & Warner, 1995, 1997; Auty, 1994b; Iimi, 2006). The negative relationship is mostly evident in countries with substantial resources compared to resource scarce countries (Sachs & Warner, 1995; Basedau, 2005; Ross, 2003). Countries such as Algeria, Angola, Ecuador, Gabon, Nigeria, Sierra Leone, Venezuela and Yemen have experienced worse development outcomes and have often found themselves near the bottom of the United Nations Development Index (UNDI) (Asfaha, 2008). African countries have been leading in this regard. Between 1970 and 1990, the per capita income of resource abundant countries grew at a lesser rate compared to that of countries without substantial natural resources and the gap has continued to widen for African countries (Auty, 1994b). This has undermined governance and political stability through channels that encourage social ills and moral decay (Asfaha, 2008).

Anomalies associated with resource wealth are dubbed the ‘resource curse’. Research on the channels and causes of the curse has captured the mainstream of mineral economics. One of the pioneering studies is one by Sachs & Warner (1995, 1997, 2001), as well as more recent studies by Iimi (2006) and Brunnsweiler & Bulte (2008). Sachs & Warner (1995) used cross country data from 1970 to 1989, to assess ‘*natural resource abundance and economic growth*’ and arrived to the conclusion that, a one point increase in the standard deviation in resource intensity leads to a 1 percent decrease per year of economic growth. Consequently, the negative relationship is still evident when initial income levels and macroeconomic policies are controlled for.

After revisiting the resource curse to untangle the paradoxes involved, Brunnsweiler & Bulte (2008) used cross country data of individual resource-rich countries and identified the negative relationship. Several papers have also analysed the resource curse from different viewpoints. For example, Auty (1997) focused on the relationship between resource abundance and the quality of the political system in a country and emphasised that resource abundance will contribute to economic growth if the country has a good quality political system. Gylfason (2001) and Stijns (2006) concentrated on resource abundance and the development of human capital and concluded that the negative economic growth in resource abundant economies is a result of low human capital development. Hausmann and Rigobon (2002) assessed the trade structure and concluded that countries with a less diversified export base are more likely to experience the negative effects of resource abundance.

Although the impact of the resource curse can be easily identified by looking at the trend in economic data, untangling its causes has been challenging as the curse involves an inter-play of various social, economic and institutional pre-conditions (Auty & Mikesell, 1998; Basedau, 2005; Hausmann & Rigobon, 2002).

3.6.1 MISGUIDED POLICIES

For most resource-rich countries, the problem starts from the time resources are discovered. Countries fail to effectively establishing the best discount rate on minerals. As such, resource extraction occurs without a carefully calculated plan and eventually countries miss out on the opportunity to effectively generate rent (Gray, 1914). In some cases, rents generated are invested in low return investments resulting in catastrophic development outcomes. In both

cases, resources will not benefit economic development. This happens mostly in countries that adopt short-sighted aggressive policies that guarantee long-run economic stagnation. For most of these countries, there is a lack of understanding on the appropriate policy mix that constitutes prudent management of mineral reserves and rents (Asfaha, 2008). Misguided policies are a major cause for the resource curse for many countries (Sachs & Warner, 1995).

Bolivia is a remarkable example of a mineral dependent economy that jeopardised its development through misguided policies. In the 1970s, Bolivia generated about 77 percent of exports, 44 percent of taxes and 20 percent of GDP from mining (Auty, 1994a). However, persistent use of poor policies jeopardised led to a relaxed fiscal policy and most of the mineral revenue was used for current consumption rather than to diversify the economy away from mining. As a result, investment ratio remained low as private sector fled the country due to unfavourable macroeconomic policies. Mineral wealth failed to diffuse through to the public and there was a conflict between those eager for social spending to increase and those who resisted it. Bolivian economy showed accelerating weakness and experienced an economic decline (Auty, 1994b).

Additionally, Sierra Leone is another example of a country blessed with large diamond reserves, but poor policies to mineral-led development made it a resource curse statistic. When minerals, particularly diamonds were discovered in Sierra Leone, government nationalised the diamond industry. However, Sierra Leone's strategy did not translate well to the masses and government as diamonds were to a larger extent illegally mined. The need to gain power became the motivating factor in diamond mining and resulted in the then government using diamond revenue to support and finance militia groups, party loyalists and rebels¹⁵ at the expense of infrastructure and economic development. Consequently, Sierra Leone drowned in poverty and experienced rapid economic decline. Diamond revenue became the driving force in destroying the state and its relationship with citizens. Mismanagement of revenues manifested itself in high rates of poverty, national conflict and political turmoil (Beaulier & Subrik, 2006).

¹⁵ E.g. Revolutionary United Front (RUF) in Sierra Leone and Unio Nacional Para a Independencia Total de Angola (UNITA) in Angola.

With reference to the resource curse cases of Bolivia and Sierra Leone, the policy differences between countries that adopt good policies to mineral development and those that do not is usually not very clear and enlightening. These differences do not explain why some countries have adopted good policies to mineral development, while others, knowing which policies would bring in positive results, have not adopted such policies (Asfaha, 2008). In attempting to answer these questions scholars have resorted to the use of economic structures such as the Dutch disease to explain the intricacies of the resource curse (Asfaha, 2008; Auty & Mikesell 1998).

3.6.2 DUTCH DISEASE

For some countries, the resource curse comes about as a result of structural problems that manifest themselves as the Dutch disease. As the name suggests, the Dutch disease was first detected in the Netherlands following the discovery of large natural gas wealth in the North Sea in the early 1960s (Asfaha, 2008). It captures fears of de-industrialization as a result of resource induced real exchange appreciation crowding out export sectors in the economy (Same, 2008). In this case, real exchange rate appreciation is defined as the price ratio of tradeable goods and non-tradeable goods (Asfaha, 2008).

The Dutch disease takes place when appropriate saving measures discussed in section 3.5.3 are not implemented. Excess money supply floating in the economy induces a demand for the local currency, subsequently leading to its appreciation. As a result, the economy experiences a decline in the share of the non-resource tradable sector and a boom of the non- resource non- tradeable sectors. Factors of production such as labour and capital are diverted from the non-resource tradeable sector to the non-resource non-tradeable goods and services sector because of the sector's attractiveness. Prices of locally made goods and services appear high in comparison with less valued currencies of trading partners. This leads to loss of competitiveness in the international market. When this happens, chances of diversifying the economy from primary commodities to manufacturing are ruined and the hope of utilising engines of growth collapses and competitiveness worsens (Van der Ploeg, 2007). As a result of the less diversified nature of most resource abundant economies, some are not able to counter the effects of the Dutch disease (Asfaha, 2008). This offsets negative externalities in the economy exposing the macroeconomic environment to external shocks (Basedau, 2005).

This happened to most mineral exporting countries half a century following the Second World War (Phillip, 1990).

In attempting to unravel economic problems brought about by resource abundance, a study by Sachs & Warner (1995) quantitatively attributed the negative growth relationship to be part of the dynamic Dutch disease theory. The cases of Angola and Nigeria are good examples of this. Angola's increased reliance on oil revenue lest other alternative export sectors led to severe economic imbalances and so is the case of Nigeria (Asfaha, 2008).

Contrary to Sachs and Warner (1995)'s assertion that the resource curse in Africa can always be traced back to the Dutch disease, this is an inadequate explanation economic growth performance. This is because it is not always clear that price movements and overvalued exchange rates worked against the tradable goods sector. The need to keep exchange rates overvalued maybe a deliberate strategy to create resource rents amid declining revenues through the black market premium system (Asfaha, 2008; Salai- i- Martin & Subramanian, 2003).

3.6.3 CORRUPTION AND CONFLICT

Development literature concurs that mineral-rich countries are susceptible to corruption and conflict (Van der Ploeg, 2007). This is because natural resources have a greater potential of corrupting citizens and sowing the seeds for conflict amongst the relevant stakeholders¹⁶ (Iimi, 2006). Perpetrators dedicate time and resources to benefit from resource rent at the opportunity cost of productive economic activities. Corruption takes place because of the tendency by governments to seek power and reward favours using resource revenue as leverage. As such, resource wealth is unfairly claimed for personal benefit at the expense of economic development (Asfaha, 2008).

Salai-i- Martin & Subramanian (2003) carried out a study on '*addressing the resource curse in Nigeria*' by exploring the corruption and institutional quality channel. It was clear that the 'waste of resources' better explains Nigeria's development experience through a series of

¹⁶ Politicians, land developers, local tribes, taxpayers and the citizens.

pathologies such as corruption. This was more prevalent in the 1980s when a large chunk of wealth invested in low return projects and disproportionate social services like education and health. Basically, there were no developments to show for these investments and over time the standard of living declined tremendously pushing poverty to double to 70 percent in the period spanning from 1970 to 2000 (Asfaha, 2008). It became clear that the political spectrum in Nigeria was shaped by gaining access to oil revenue as successive military dictators most notably General Abacha amassed oil revenue by transferring large sums of money abroad. The distorted political spectrum enabled a lot of kickbacks (Salai-i- Martin & Subramanian, 2003). As a result of the prevalent corruption, the government became less accountable due to lack of proper checks and balances. The above scenario is particularly common in most countries (Iimi, 2006).

The Democratic Republic of Congo (DRC) is another appropriate example of how natural resources stimulate corruption and stir conflict. DRC is rich in metals (Tantalum, Tungsten and Tin), gold and diamonds. Conflict erupted in the 1990s as a result of various stakeholders attempting to accumulate resource wealth for personal gain. It has been particularly difficult for policy makers and the private sector to convert mineral wealth into sustainable development as institutions are failing to aid the process (Garret & Mitchell, 2009).

Just like in Nigeria, resources wealth in DRC has shaped the power strategies of the elite and politicians alike, and this is symbolic of internal governance failures (Garret & Mitchell, 2009). The Kolwezi mining city has been hard hit by development shortcomings. New mining companies have caused massive social disruptions as the Congolese are irked by companies settling in an area where they mined artisanally (Salter, 2009). The Congolese economy has since faced economic retreat, rising unemployment and soaring poverty (Garret & Mitchell, 2009).

3.7 CONCLUSION

This chapter outlined originators of some of the most important theories on mineral development that have captured mainstream economics. Theorists include Adam Smith, who presented an earlier attempt at defining mineral rent. David Ricardo's theory was based on Smith's analysis and provided a more practical definition of mineral rent. William Jevons

dwelt on the coal question where he questioned the availability of cheap coal to sustain Britain's industrial process in the 18th century. Although unfounded, fears aroused interest on the ultimate depletion of natural resources and momentum was now directed towards their conservation. Lewis Gray addressed the concept of resource conservation and outlined the necessary requirements for resource conservation. These include a proper determination of the rate of extraction and proper allocation of property rights as they relate to mining. Erich Zimmermann provided an excellent economic geography and explained that it is as a result of societal needs that value is attached on natural resources. Harold Hotelling reiterated the inability of the mineral sector to retain a steady rate of production and concentrated on the most efficient allocation of fixed resources in the present and future time periods given the price dynamic. Hotelling's theory makes implications on the need to develop resource extraction contracts to ensure that the extraction of natural resources takes place according to the long-term needs of the economy. A properly executed contract should reflect the rights transferred, and the duration of the extraction. Transparency of resource revenue should also be enforced, as well as a determination of positive investment opportunities for mineral rent.

In practice, there are two conflicting scenarios on resource development. The fact that resources are a natural capital base has led theory to assume that resources should stimulate economic growth and raise the standards of living. Indeed, theory is not mistaken, after all Chile has attained economic growth and increased its terms of trade as a result of abundant resources. However, Chile represents the fortunate few. On a larger spectrum, resource abundance has been a curse for most countries, more so in Africa. These countries have experienced economic stagnation as a result of overlapping structural, social and political problems. Structural problems include the appreciation of the exchange rate which tends to crowd out the manufacturing industry and discourage Foreign Direct Investment (FDI). Other problems include high levels of corruption, political problems, social conflicts and poor institutions. This reinforces the general consensus that geology is not destiny. Economic growth and an increased standard of living will only be guaranteed in a configuration that includes prudent macroeconomic policies, effective governance and a effective institutions.

CHAPTER 4- BOTSWANA'S MINERAL ECONOMY

4.1 INTRODUCTION

Botswana is dependent on a wide range of minerals. Diamonds have been the leading component of the mineral sector since large scale production began in the late 1960s. Copper nickel, coal, gold and soda ash have held more of a traditional significance through smaller roles in the economy.

This chapter describes Botswana's mineral economy by emphasising the process of mineral rights ownership, the different minerals that exist in the country, as well as their production statistics for the period between 1980 and 2008. Percentage contribution of mining to GDP and exports will also be analysed from 1973 to 2009. This will be judged against other sectors and commodities. The chapter is structured as follows. Sections 4.3, 4.4, 4.5, 4.6 and 4.7 outline different resources found in Botswana. A review of Botswana's mineral production is in section 4.8 and section 4.9 assesses the contribution of mining to GDP and exports.

4.2 MINERAL RIGHTS OWNERSHIP

Minerals, particularly diamonds are the pride of Botswana (Hazleton, 2002). When they were first discovered, the first President of Botswana, Sir Seretse Khama (1931- 1980) adamantly decided that they belong to the whole nation. He meant that mineral rights are a property of the state and the revenue accruing to the industry will be used for the benefit of the entire nation (Masire, 2006). The decision was a huge contrast to the pre-independence state of affairs when mineral rights were assumed to belong to the person in possession of the land where minerals are found. In centralizing ownership to government, Sir Seretse Khama feared that had minerals been a tribal right some tribes stood to benefit greatly and would have meant a great deal of national conflict (Beaulier & Subrik, 2006). After establishing mineral rights in tribal areas, the major challenge was the change of ownership from tribes to national ownership. This was easily done as there were no private mineral rights that needed to be reconciled with state rights (Masire, 2006). However, freehold land was more challenging, there were private mineral rights in the Tuli block which were part of land ownership. Government with the help of British lawyer, Mr. Roland Brown came up with a successful strategy. They established that minerals that are not exploited form part of national assets regardless of who holds the mining rights. They should be taxed and land owners could write off exploration costs against any tax owed. Given that this did not make economic

sense, farmers eventually surrendered their mineral rights to the government of Botswana (Masire, 2006).

Once Botswana had vested mineral rights for a number of areas, they were solidified by the Mines and Mineral Act of 1967, which was later amended in 1999. The 1967 Minerals Act limited prospecting licenses to a minimum duration and called for minimum prospecting expenditures. This was intended to block investors from keeping a potential mineral deposit off the market and ultimately fail to develop it (Masire, 2006). The 1999 Mines and Minerals Act did not change much of the original provisions, but outlined clearly the four types of mineral concessions in the form of licenses that can be issued or revoked (Mines and Minerals Act, 1999). The first concession is the Prospecting License (PL). The license is valid for three years with the possibility of renewal for an additional two years. The Retention License (RL) is issued when the applicant has done a feasibility study in connection with the deposit that the prospecting license is issued for. The license is issued in accordance with good industry practice in a situation where mining cannot occur at the time of application. The mining concession is offered when mineral deposits have been identified and is issued for a period not exceeding twenty five years. It can be renewed thereafter depending on the length required to mine deposits. The last concession is the mineral permit and is issued to prospective miners on a short-term basis¹⁷ (Mines and Minerals Act, 1999; Botswana Embassy (Japan) Website- last accessed on the 3rd November, 2009).

The requirements for application and renewal of mining concessions are detailed. Holders of prospecting and retention licenses are required to provide the following; the surface rights acquired from land authorities, survey area coordinates and information on total area applied for. Applicants should also submit prospecting and retention licenses or a waiver from the Department of Geological Survey in addition to proof of consent from the PL holder if area falls within a certain prospecting license. An archaeological clearance from the Department of National Museum and Art Gallery (DNGMAG), environmental clearance from the

¹⁷ For a period of five years and can be renewed after.

Department of Wildlife and National Parks (DWNP) and a project feasibility report¹⁸ are also needed (Botswana Embassy (Japan) Website- last accessed on the 3rd November, 2009).

4.3 DIAMOND MINING

The De Beers Mining Company was established in 1888 and is currently leading in the exploration, mining and marketing of diamonds around the world. De Beers and its joint venture companies work in 25 countries and employs more than 22 000 people, with 17 000 of them based in Southern Africa (De Beers, 2008a). The company has three major shareholders namely: Anglo American at 45 percent, the Oppenheimer family through Central Holdings at 40 percent and the government of the Republic of Botswana at 15 percent (De Beers, 2008b).

It is on this basis that diamond production, the De Beers Mining Company, the Botswana government and economic growth have been simultaneously related since diamonds were first discovered in Botswana (Good, 2009). The precise time when diamonds were first discovered is debatable. Some scholars (Hazleton, 2002) reckon diamonds were discovered in the period after independence in 1967. Contrary to that statement, most scholars (Good, 2009) believe diamonds were discovered before independence and De Beers corporate chairman Harry Oppenheimer told the then president of Botswana Sir Seretse Khama in confidence that viable diamond deposits existed at Orapa¹⁹, news that were not announced until after independence in 1967 (Good, 2009). The discovery marked the beginning of a symbiotic relationship between Botswana and De Beers (Debswana Diamond Company Website- last accessed on the 30th March, 2010). In 1969, the two parties formed the De Beers Botswana Mining Company presently known as Debswana Diamond Company. From 1969 the company was under the control of Anglo-American services Ltd until 1992 when it created its own managerial structures and moved its headquarters to Gaborone. Debswana's

¹⁸ The report should include details of mineral deposit; technical report on mining and treatment possibilities; proposed program of mining operations; Environmental Impact Assessment (EIA) report and Environmental Management Plan (EMP); forecast of capital investment; cash flow and details of anticipated financial plan. Also, proposed employment level and training program, sources of goods and services and expected infrastructure are needed.

¹⁹ Orapa is a mining town in the Boteti Sub district, about 240 kilometres from Botswana's second city of Francistown and about 300km from the Bangwato village of Serowe.

motto is simple; the company favours joint ventures, mutually beneficial profit sharing agreements and expansion of production through effective negotiations (Good, 2009). Debswana also maximises value for its shareholders by stimulating economic activity by yielding high revenues through the use of cost effective measures that stimulate secondary economic activity around mining (Masire, 2006). Given its powerful shareholders, Debswana controls most of diamond mining and has the authority to mine, recover and sort diamonds on behalf of the state. Diamond mining currently takes place at the Orapa, Lethakane, Jwaneng and Damtshaa mines (Debswana Diamond Company Website- last accessed on the 30th March, 2010).

Orapa is the first mine where diamonds were discovered in 1967 and open pit production began in July, 1979 (Hartland- Thunberg, 1978). In the initial stages of operation, Orapa provided a home to more than 2000 people employed in the mines, but grew as the mine gained profitability. Orapa mine is currently the largest open pit operation in the world (Debswana Diamond Company Website- last accessed on the 30th March, 2010). The second oldest diamond opened in Lethakane²⁰ in 1975. In 1972, De Beers exploration also led to the discovery of diamond bearing pipes in the present day town of Jwaneng²¹, but an agreement to mine was only signed in 1978 with the actual mining starting in 1982 (Hartland-Thunberg, 1978; Debswana Diamond Company Website- last accessed on the 30th March, 2010). The high rate of diamond extraction coupled with high quality diamonds fetching excellent per weight prices make Jwaneng mine the richest and profitable mine in the world (Good, 2009). In 2002, the fourth and newest Debswana diamond mine opened at the Damtshaa²² settlement. Just like other Debswana mines, the Damtshaa mine is an open pit operation.

Even though the government of Botswana and the De Beers Mining Company have joined forces to mine diamonds, the relationship between the two is considered unorthodox and highly questionable (Good, 2009). Mainly because De Beers made it a priority for Botswana to benefit more from diamond mining than the company did and no capitalist would ever agree to this unless they had a concealed way of making up for it (Magang, 2008). Further,

²⁰ Letlhakane is located about 30 km from Orapa and about 195KM from the city of Francistown.

²¹ Jwaneng is a Setswana word that means a place of small stones and is located in the Southern part of the country about 120 KM from Gaborone.

²² Damtshaa is located 220 KM from the city of Francistown and 20KM from Orapa.

De Beers' involvement in diamond mining was uncontested, at least from a prospecting competition standpoint and this left Botswana vulnerable to this monopolist (Hazleton, 2002). Regardless of these concerns, on the surface the relationship seems beneficial. Mostly because agreements between the two are open for negotiations (Masire, 2006). For example, when Debswana was formed, De Beers through its retention of revenues and higher taxes was the major shareholder with a stake of 85 percent (includes exploration and land ownership rights). Botswana only had a 15 percent stake in the company. However, after long periods of negotiations, an agreement was reached in 1975 concerning production at the Orapa mine. Subsequent negotiations led to the development of the two new kimberlite pipes South East of Orapa in the aforementioned Damtshaa mine. Negotiations saw Botswana's ownership Debswana rise from 15 to 50 percent (Beaulier & Subrik, 2006)

Subsequent amendments to the initial terms of contract were made in later years. In 1996, Botswana government, De Beers and Debswana Mining Companies signed an agreement that would later raise Debswana's total production. The agreement called for the doubling of production at the Orapa mine and resulted in diamond production reaching a high of 34.3 million carats in 2006. The same year yet another historic agreement was signed, this is the landmark agreement. The agreement involved both parties embarking on a watershed initiative. The landmark agreement covered a suite of agreements, one of which called for De Beers and the government of Botswana to each appoint five directors to serve on Debswana's management board (Debswana Diamond Company Website- last accessed on the 30th March, 2010).

While most of De Beers and Botswana's agreements remain confidential, the much anticipated renewal agreements were also signed in 2006. They include the renewal of the Jwaneng mining license to the year 2029 (Debswana Diamond Company Website- last accessed on the 30th March, 2010). Other three Debswana mines are also included in the overall agreement with their renewal running concurrently. Both parties signed yet another agreement on the long anticipated sale of Debswana's diamond production to the Botswana Diamond Trading Company (DTC) originally based in London (Debswana Diamond Company Website- last accessed on the 30th March, 2010). De Beers agreed to partially or wholly relocate DTC from London to operate in Gaborone (Good, 2009). Amid sceptism that Botswana should beware of De Beers' motives regarding the relocation of DTC (Mmegi

Online- 2009) since De Beers was once adamant that it would not be profitable to cut and polish diamonds in Botswana, DTC Botswana was launched in March, 2008. The launch marked a greater monument in the ongoing and enduring partnership between Botswana and De Beers as the facility is a 50/50 joint venture (Botswana Review, 2009; Oppenheimer, 2008). DTC takes over and expands some of the roles that were previously carried out by the Botswana Diamond Valuing Company (BDVC) (De Beers, 2008a; De Beers, 2008c).

4.4 COAL MINING

Apart from the four diamond mines in Botswana, Debswana owns Morupule Colliery Limited, a coal mine located near Palapye village. Morupule was established in 1973 mainly to supply coal to the Botswana Concessions Limited (BCL) mine in Selibe Phikwe and meet Botswana Power Corporation (BPC)'s coal requirements around the Gaborone area (Debswana Diamond Company Website- last accessed 30th March, 2010; Hartland-Thunberg, 1978; Mobbs, 2005). The mine also supplies Botswana Ash plant located in Sua Pan (Botswana Review, 2009).

The Morupule coal mine contains very good quality coal and has exceeded coal production expectations over the years. The mine was initially anticipated to produce only 200, 000 tonnes a year from an open pit operation, but production has since increased steadily over the years from 371 395 tonnes per annum in 1980 to 984 876 tonnes in 2005 and coal deposits are expected to have a lifespan of 600 years (Botswana Review, 2009; Debswana Diamond Company Website- accessed on the 30th March, 2010; Hartland- Thunberg, 1978). Of the total coal resource base estimated at 200 billion tonnes, 26 billion tonnes is estimated at Morupule (Botswana Review, 2009). With its elongated lifespan and importance to the economy, coal is promoted as a source of fuel and is envisaged to discourage the chopping down of trees for firewood. It is also promoted for export to foreign markets once the development of the Mmamabula Energy Project (MEP) is complete (Hartland- Thunberg, 1978).

Development of the MEP started in 2005 when Coal Investment Corporation Energy (CIC) of the British Virgin Islands and Meepong Investments (Pty) Ltd of Botswana (a subsidiary of CIC energy) entered into a joint venture to re-evaluate the status of coal production at MEP

(Mobbs, 2005). The reason for the re-evaluation is that the Mmamabula Energy Project has in the past been explored by a number of organizations²³ as a possible coal export project, but lack of water to maintain the project ruined production prospects at the time. With renewed production resources, coal exploration at Mmamabula East and West has the potential to be converted into a large scale power supply and 800 million tonnes of coal are earmarked for the project (Coal Investment Corporation Energy Website- last accessed on the 6th November, 2009).

So far, commercial operations for the 1200 MW phase one of the MEP power station have not taken off and are expected to be underway in 2012 or 2013 (Multilateral Investment Guarantee Agency, 2009). Even though phase one is yet to be finalised, Mmamabula's promoter (CIC Energy), has announced in December 2009, that it will defer some of its work at the project due to power problems taking place in South Africa (Benza, 2009a).

4.5 COPPER NICKEL MINING

Copper and nickel mining has long been carried out in Botswana as far back as 650 AD. Small scale mining also took place in the period after World War II (Morton, Murray & Ramsay, 1989). However, large scale mining took place for the first time in 1967 after the discovery of the Shashe project and its importance to the mining sector and the country's economic diversification plans. To kick start the project, Tshekedi Khama²⁴ signed an agreement for a mining project at Matsitama in 1959. However, when the project forged ahead it was intended to mine copper nickel deposits at Selibe Phikwe, not Matsitama (Masire, 2006). Government quickly pulled together its resources to turn the project into a profitable operation. A dam was built, as well as a coal- powered generating station and a copper-nickel matte refinery for the complex (Hartland- Thunberg, 1978). Local materials such as bricks and sand were also put to use whenever the need arose. The overall infrastructure became known as the Shashe project (Masire, 2006).

²³ 'AMAX Exploration Inc, Anglo American Corp, The coal division of Petroleum Ltd, Charbonnages De France International, the geological survey and shell coal Botswana Ltd' (Mobbs 2005).

²⁴ He is the uncle of the first president of the Republic of Botswana, Sir Seretse Khama and was the regent to the Bamangwato chieftainship starting from the period around 1925.

Although negotiations for the copper nickel project were not easy (Masire, 2006), the Bamangwato Concessions Limited (BCL), a company in which the government of Botswana has a 15 percent share, while Botswana Roan Selection Trust (BRST) Norilsk's holding company has 85 percent shares, administered the mine. American Metal Climax (AMAX) and Anglo-American (which has shares in BRST) process the copper-nickel concentrate derived from the mine (Morton, Murray & Ramsay, 1989). Initial investment needed was P160 million and this was a large sum of money given that the country's national income in 1968-69 was estimated at P50 million (Masire, 2006). The project also needed millions in Pula to meet the day to day operations. It was clear at the time that government did not have a steady income, at least one sufficient enough to carry out a project of this magnitude. Not even the British grant in aid could help finance such an investment and this had four implications. Firstly, Botswana aimed at negotiating a larger share of the profits to be derived from copper nickel mining and saw an opportunity to break dependence on the British grant. Secondly, the country needed to borrow revenue required and needed guarantees from foreign shareholders (Anglo American and AMAX). Financing was not difficult to source, Germans were interested copper and nickel, therefore provided part of the financing. Together with finance from World Bank (WB), United States Agency for International Development (USAID), a South African export credit, bank credit, equity investments by Anglo American²⁵ and American Metal Climax (AMAX) the project forged ahead (Masire, 2006).

The third implication involved the fact that the Shashe project's anticipated success at the time, gave stimulus to aid diversification plans. Although Britain had reduced the amount of aid flowing into Botswana from 78 percent between 1967 and 1971 to 9 percent between 1977 and 1982, foreign donors rose from one to nine (Stevens, 1981. In Harvey, 1993). Foreign aid made it possible to meet some of national developmental priorities. Fourthly, due to the fact that Botswana relied on foreign investors and aid donors to finance the Shashe project, Anglo American and AMAX had to provide funds if the copper nickel project incurred problems, which it did (Harvey, 1993). In the initial stages of production, the smelter failed. Furthermore, anticipated costs of mining doubled. As the project battled technical

²⁵ De Beers sister company.

problems, operating companies were propelled to assume a financial burden of R95 million. Fortunately, Botswana was protected from financial loss as most of the financial risk was taken by the foreign shareholders. Once financial problems were addressed, the mine achieved a capacity production of 3500 tonnes of matte a month in 1976 (Hartland-Thunberg, 1978).

The words spoken by the second president of Botswana, Sir Ketumile Joni Masire echo in absolute terms, he said the Shashe complex is a major development (Masire, 2006) and in some ways it is. The project has had the full support of its shareholders and has somehow managed to cover most its production costs since the 1970s, but most important it has been a source of employment for a number of Botswana. In 1977, the level of employment stood at 3424 (Lewis, 1981). Currently, the Shashe project employs 4200 people (Bamangwato Concessions Limited Website- last accessed on the 30th September, 2009).

However in recent years, copper nickel mining in Botswana has been marred by problems. Selibe Phikwe mine has been operating at a loss, and resulted in an underestimation of the country's Gross national Product (Lewis, 1981; Mobbs, 2005). Fortunately, this has not affected the general welfare of Botswana negatively, but threatens the livelihood of those employed by the mine. Another problem stems from the fact that copper reserves in Selibe Phikwe have all along been anticipated to be depleted between 2011 and 2012 (Mobbs, 2005), but recently discovered resources can extend the life of the mine beyond 2020 (Smarts, 2010). Much of the concern is on what happens to economic activity in Selibe Phikwe should the mine shut down, as well as the negative effects this will have on the BCL smelter, BPC, Botswana Railways (BR) and the Morupule mine, all of which depend on the BCL mine in one way or another (Mobbs, 2005). Preemptive solutions to the eminent problem have been advanced and parliamentarians have encouraged government to focus on attracting FDI to Selibe Phikwe by reducing tax and rental rates, as well as the provision of serviced land in Selibe Phikwe to attract investment to the town (Kolantsho, 2007). Government is also advised to spend revenue on creating industries in Selibe Phikwe to circumvent mines shutting down (Sunday Standard Online- 2007). Despite problems surrounding copper nickel mining in Selibe Phikwe, world prices have remained strong in the past years, especially in 2007 when they stood at about US\$16.88 per pound and US\$3.23 per

pound respectively, compared to US\$13.61 and US\$3.24 per pound in 2006 (Bamangwato Concessions Limited Website- last accessed on the 30th September, 2009).

Another base metal mine is located about 50 KM from the city of Francistown and is the Phoenix mine. It is run by Tati Nickel Mining Company owned by Norilsk Nickel. The mine produces about 14 500 tonnes per annum of nickel concentrate and the high grade matte generated from this mine together with BCL concentrates are used to produce high sulphur matte and low sulphur matte. High quality Sulphur matte is processed in Norway by Falconbridge Company and an agreement extending the refinery of the matte until 2015 was signed in 2002. Low grade sulphur matte is refined in Zimbabwe (Mobbs, 2005).

Although copper beneficiation through the Botswana Metals Refinery (BMR) has been put on hold, there are a number of copper and nickel exploration activities going on in the past few years. African Copper²⁶ has prospected for copper through the Dukwi Copper project near the village of Dukwi (130 Kilometers from Francistown). In 2005, Discovery Nickel Ltd continued exploration drilling on the North East Botswana as part of the Brownfields nickel project that includes the Dikoloti, Kima and Lentswe projects (Mobbs, 2005). In the same year, Discovery Metals was granted prospecting licenses in an area that formed the Maun project. In 2006, Messina Copper Botswana (Pty) Ltd was also granted a license, but to mine copper, although the actual mining has not yet started. The development of the Mowana Copper mine by African Copper began in 2007 and a copper nickel mine in Sehitwa started operations in June 2009 (Botswana Review, 2009).

4.6 GOLD MINING

Gold mining in Botswana has held a lesser economic importance and its contribution to overall development has been minimal compared to other minerals (Mobbs, 2005). Gold was first discovered in the 18th century at the Tati concession near the city of Francistown, but production had long run out by the time Botswana gained independence. The Somerset mine (owned by Joren (Pty) Ltd) carried out the mining, but the company's current activities are

²⁶ Copper mining company.

restricted to exploration for potentially profitable gold deposits around Botswana (Masire, 2006).

Presently, Mupane Gold Mine, which is a subsidiary of Gallery Gold both of which are owned by IAM Gold (Pty) Ltd, is the only gold mine in Botswana. It has been operational since 2004. The mine is envisaged to remain operational until 2012 or longer if the company can extend the lifespan of the mine (Botswana Embassy (Japan) Website- last accessed on the 3rd November, 2009; Botswana Review, 2009).

4.7 SALT AND SODA ASH

Botswana Ash (Pty) Ltd, a company owned by Botswana government, AECI Company, Anglo-American Corporation, De Beers Mining Company and some financial institutions, all of whom own; 50 percent, 14 percent, 14 percent, 14 percent and 8 percent respectively produces salt and soda ash at Sua Pan. Although one of Botswana's minor minerals, soda ash and salt production is vulnerable to competition from other countries especially South Africa and Botswana remains a relatively small player on salt and soda ash production (Botswana Review, 2009). Nonetheless, soda ash is an important chemical as an input in the steel, glass, paper, textile and detergent manufacturing industries (Botswana Review, 2009).

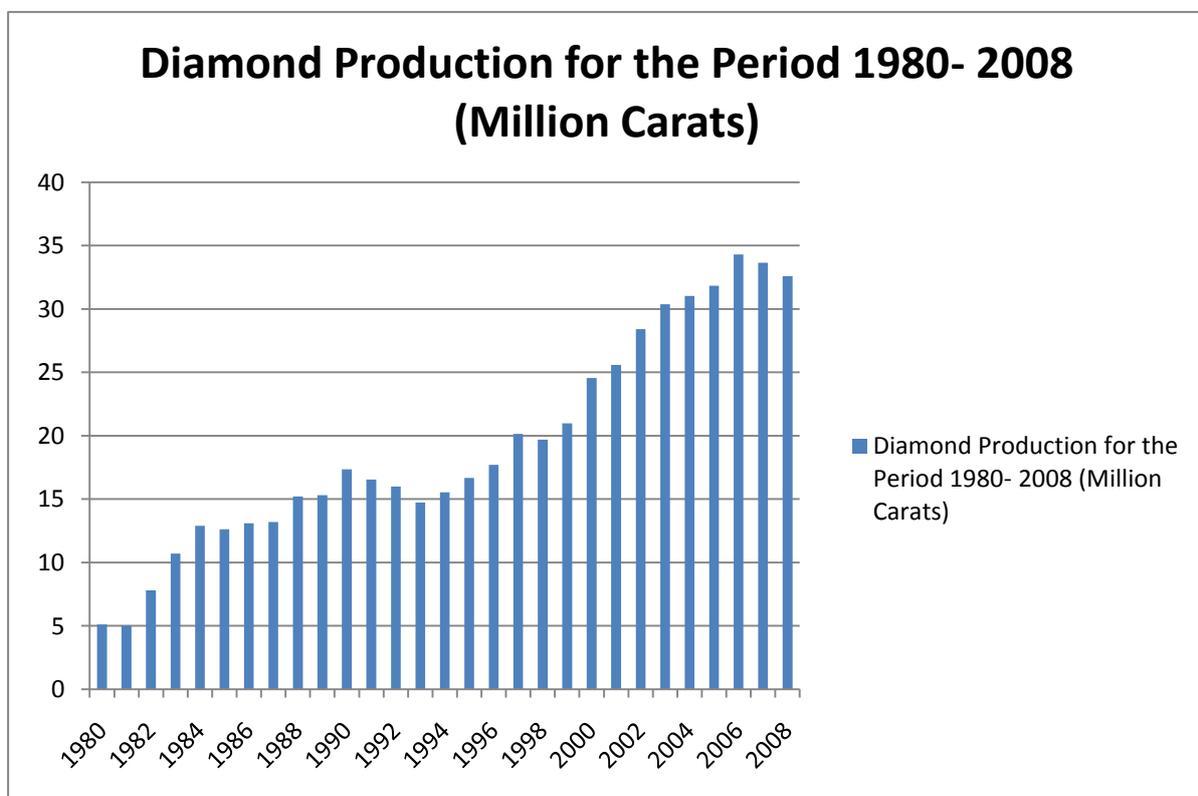
4.8 MINERAL PRODUCTION

Diamond production statistics are shown from 1980 to 2008 as there is no disaggregated data for the period between 1970 and 1979. Similarly, copper, nickel and coal production are also presented from 1980 to 2008. Soda ash and salt production statistics are shown from 1991 to 2008 and gold production statistics from 1981 to 2008.

Figure 4.1 shows that diamond production has increased over the entire period. In 1980, production was estimated at about 5.1 million carats and it decreased slightly by 1.9 percent to 5.0 million carats in 1981. Production then increased to 7.8 million carats in 1982. In 1991, production declined from 17.4 million carats in 1990 to 16.5 million carats that year and continued to decline to 16 million carats in 1992 and 14.7 million carats in 1993, after which production increased to 34.3 million carats in 2006. Increase in diamond production from 2000 onwards is attributed to expansion in production levels in mines, as well as the opening of the Damtshaa mine in 2002 (Mobbs, 2005).

As a result of the global financial and economic crisis which first showed signs in late 2007, mineral production decreased from 34.3 million carats in 2006 to 33.6 million carats and 32.6 million carats in 2007 and in 2008 (Ref. Figure 3.1). Although not shown in the figure, the last global and economic crisis affected diamond production in the first quarter of 2009. In that quarter, production was not recorded because all Debswana diamond mines were closed to align diamond production with the declining global demand. At the end of 2009, diamond production stood at 17.7 million carats and is expected to have increased by 60 percent by the end of 2010 (De Beers Mining Company Website- last accessed on the 16th April, 2010).

Figure 4.1: Diamond Production (million carats) 1980 to 2008

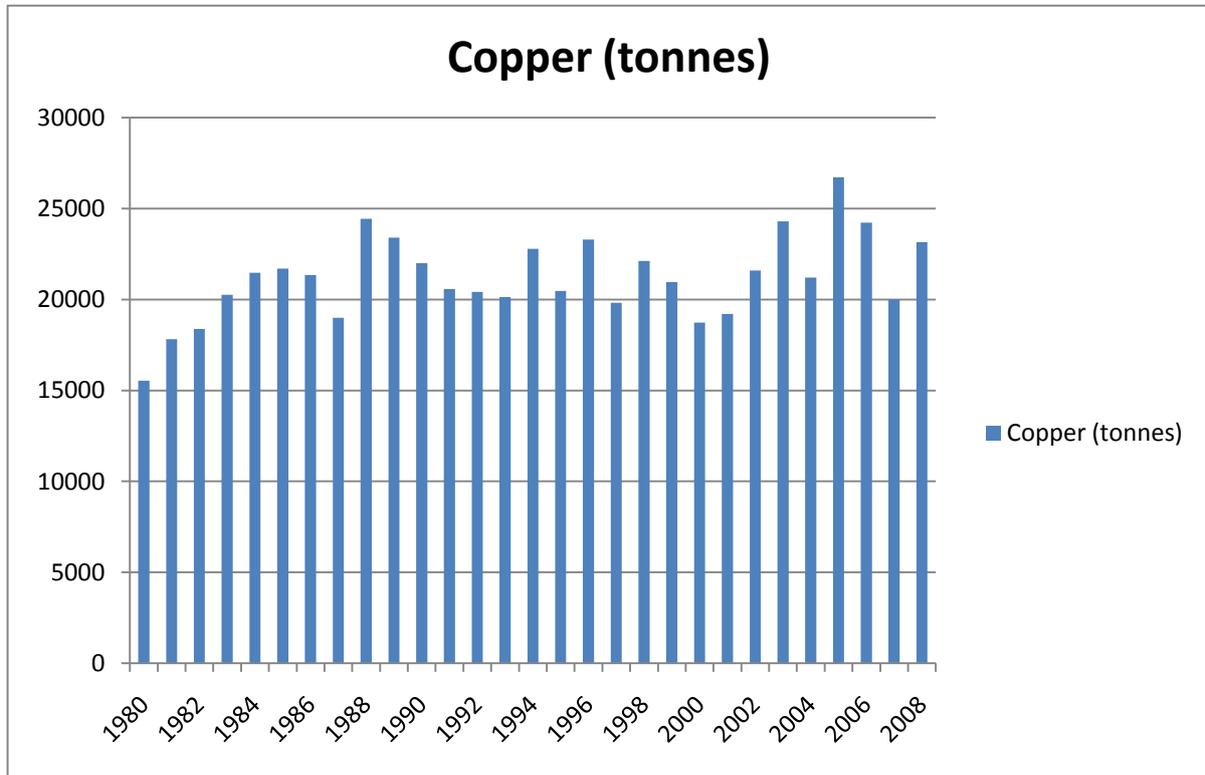


Source: Central Statistics Office Website- last accessed on the 15th April 2010; Centre for Applied Research and Department of Environmental Affairs, 2007).

Unlike diamond production, copper production has shown somewhat mixed production levels in the period 1980 to 2008. Figure 4.2 shows that generally copper production has increased from 1980 to 2008, at values estimated at 15, 533 tonnes and 23, 146 tonnes respectively. However production has declined in some years, for example in 1987 production declined by 11 percent. Production also declined by 4 percent in 1989, 6 percent in both 1990 and 1991,

0.8 percent in 1992 and 1.4 percent in 1993. Copper production also decreased in 1995, 1997, 1999, 2000, 2004, 2006 and 2007 (Ref. Figure 4.2).

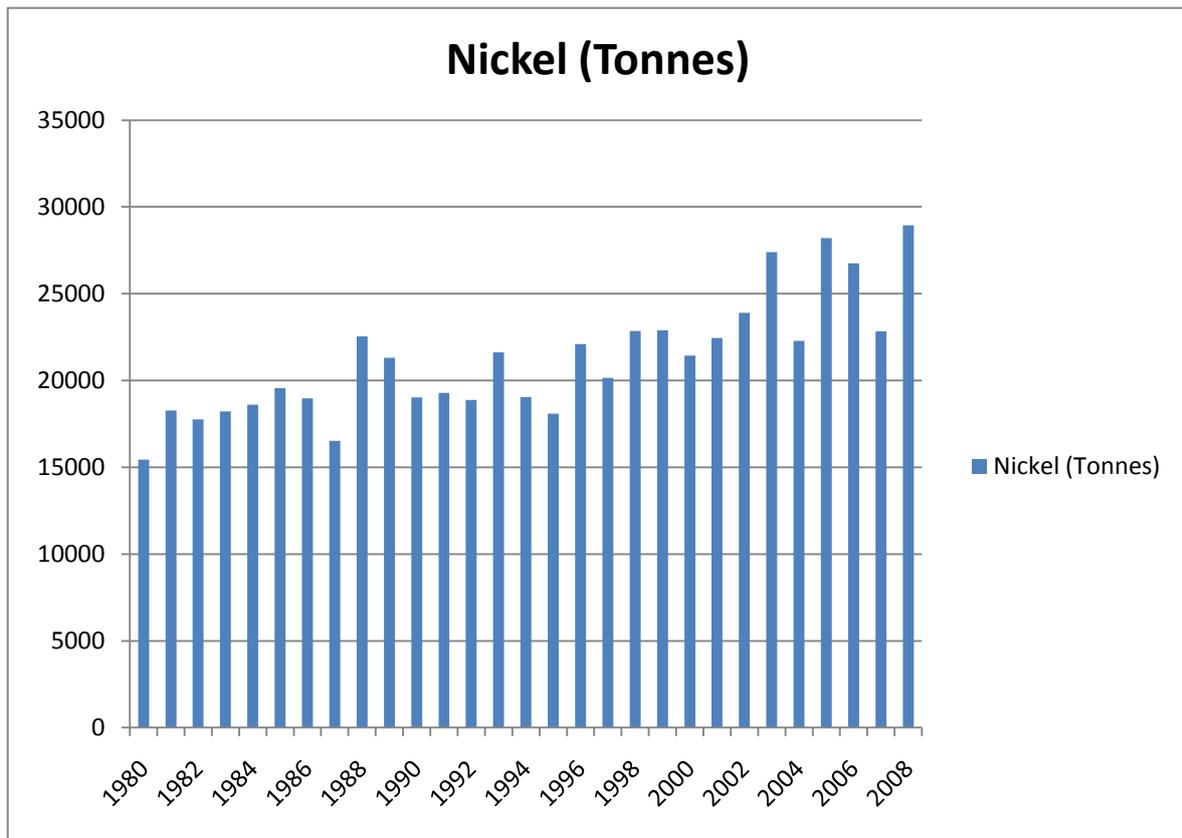
Figure 4.2: Copper Production (Tonnes) 1980 to 2008



Source: Department of Mines (2002;2008).

Just like copper, nickel production has shown upswings and downswings in the period 1980 to 2008. Figure 4.3 shows that on overall, nickel production has increased by about 90 percent. The greatest decrease in production took place from 2003 and 2004 when it declined from 27, 400 tonnes to 22, 292 tonnes. Another major reduction in production took place from 2006 to 2007 by 14.5 percent (Ref. Figure 4.3).

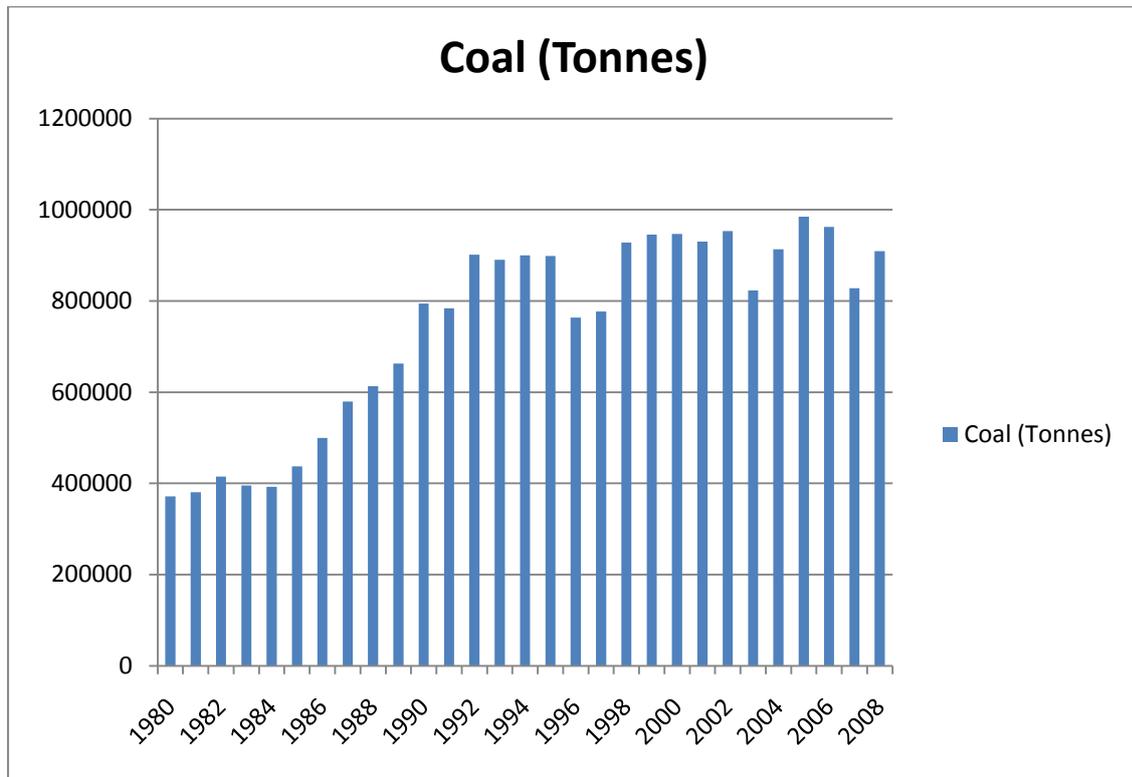
Figure 4.3 Nickel Production (Tonnes) 1980 to 2008



Source: Department of Mines (2002;2008).

Figure 4.4 shows that coal production has increased significantly from 371, 395 tonnes in 1980 to 909 511 tonnes in 2008. The large increase is attributed to the continual discovery of coal deposits around the country.

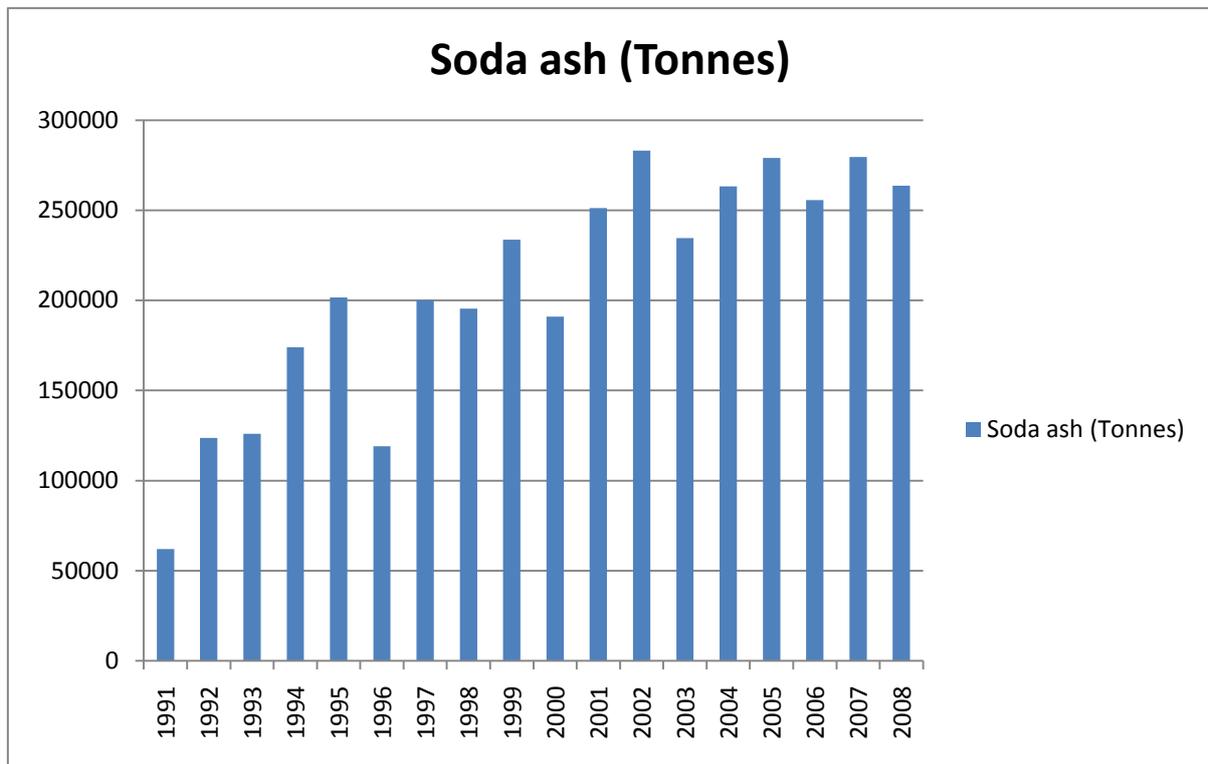
Figure 4.4: Coal Production (Tonnes) 1980 to 2008



Source: Department of Mines (2002;2008).

Figure 4.5 shows soda ash production from 1991 to 2008. Production increased from 62 000 tonnes in 1991 to 263 566 tonnes. However, the highest recorded production level is in 2002, when it was estimated at 283, 197 tonnes.

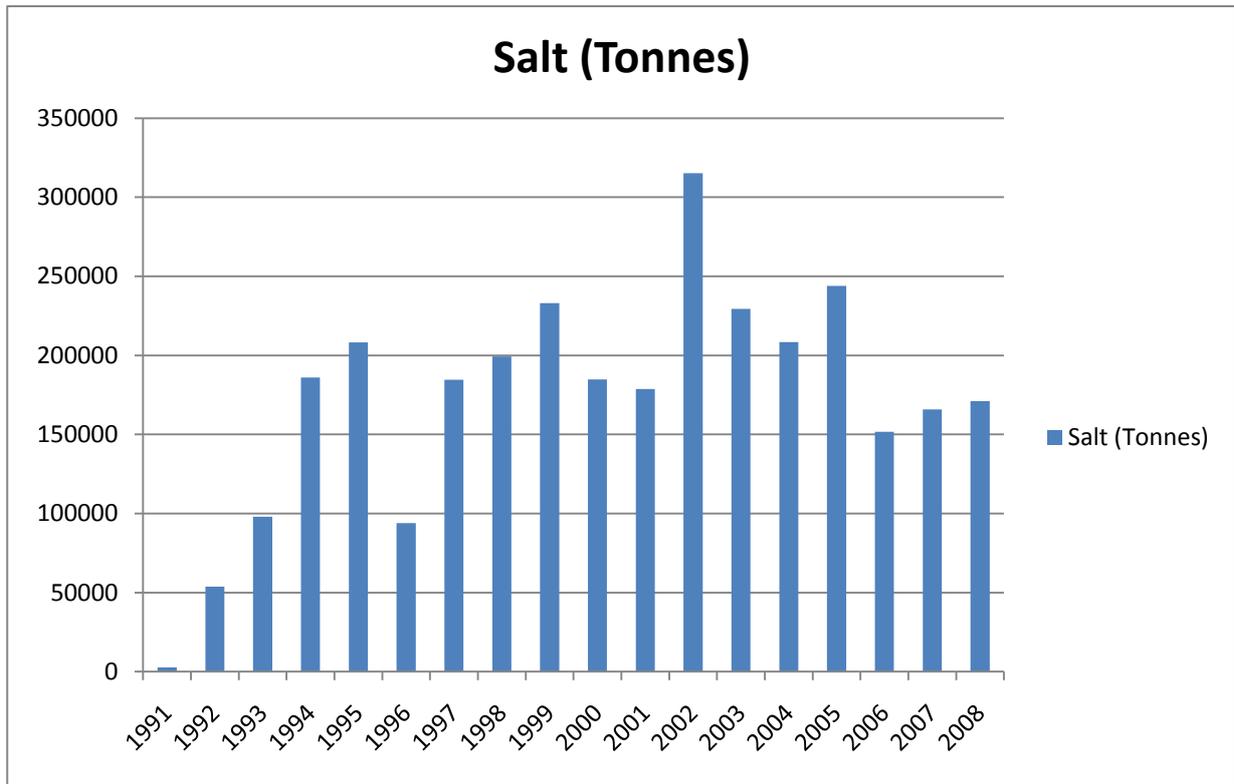
Figure 4.5: Soda Ash Production (Tonnes) 1991 to 2008



Source: Department of Mines (2002;2008).

Figure 4.6 shows that salt production differs from years of high production, as well as years when production was relatively low. On overall, just like other resources, salt production has shown a steady increase, it increased from 2, 600 tonnes in 1991 to 170, 994 tonnes in 2008.

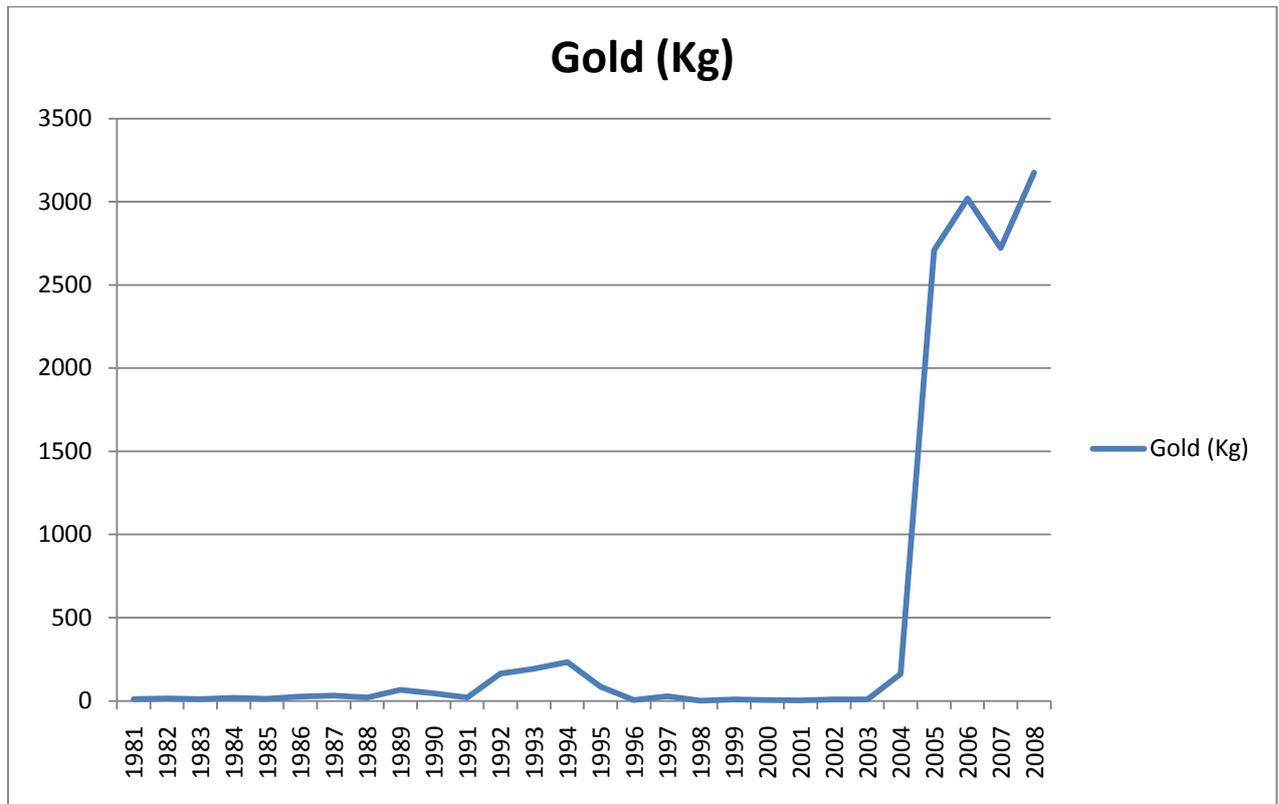
Figure 4.6: Salt Production (Tonnes) 1991 to 2008



Source: Department of Mines (2002;2008).

The production trend in figure 4.7 reiterates the somewhat mediocre contribution of gold to the economy, judging by the quantities produced between 1981 and 2003. Gold production increased from 9KG in 2003 to 162,15 KG in 2004 and ultimately 3175.63 KG in 2008. The surge in gold production since 2004 was a result of the operation of the Mupane gold mine in 2004.

Figure 4.7 Gold Production (KG) 1981 to 2008



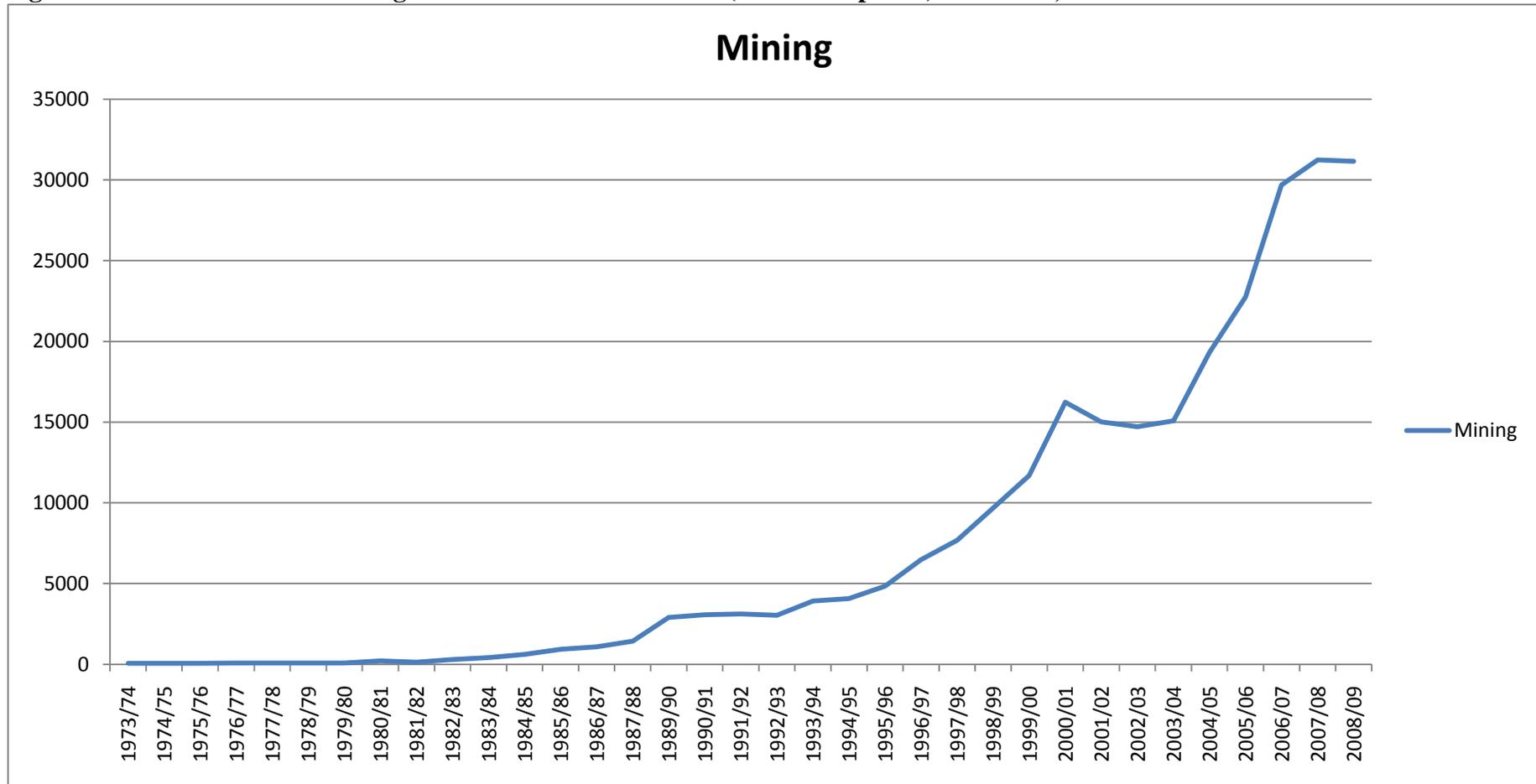
Source: Department of Mines (2002;2008).

A table of Botswana's mineral production statistics is attached as Appendix A.

4.9 CONTRIBUTION OF MINING TO GROSS DOMESTIC PRODUCT AND EXPORTS

Figure 4.8 shows growth in revenue contributed by the mining industry to GDP (at current prices) for the period 1973 to 2009. On overall, revenue has increased although it declined from 2003/04 to 2004/05 and from 2007/08 to 2008/09. Figure 4.8 is substantiated by table 4.1 which shows percentage contributions of sectors to GDP from 1973 to 2009. In the 1973/74 financial year, mining only contributed about 9 percent to GDP, but the share has increased to a high of 46 percent in 1989/90. The share declined by about 3 percentage points from 1989/90 to 1990/91 and it reached 35 percent in 1995/96. In 2008/09, mining contributed about 37 percent to GDP and the remaining 63 percent is generated by the remaining nine sectors. The growth relationship between mining and manufacturing has moved in opposite directions. Generally manufacturing has declined from a 5.4 percent share of GDP in 1973/74 to 3.8 percent in 2008/09. However, in the most years that the mining experienced an increase in the share of GDP, the manufacturing sector experienced a decline. One such example is from 2006/07 to 2008/09 when mining declined by 6.4 percentage points and manufacturing experienced a 0.25 percentage point increase (Ref. Table 4.1). The disparity between the share of mining on GDP and other sectors reinforces the superiority of the mining sector as the backbone of the Botswana economy. Figure 4.9 shows mineral exports as diamonds, copper, nickel matte and soda ash and reiterates that diamonds are by far the primary export commodity as they accounted for 34 percent of exports in 1973 and 85 percent in 2001 although the share declined steadily afterwards (Ref. Table 4.2).

Figure 4.8: Contribution of Mining to Gross Domestic Product (at current prices) P' million, 1973 to 2009



Source: Statistical Bulletin (1976;1982;1988); Bank of Botswana (2009).

Table 4.1: Percentage Contribution of Sectors to Gross Domestic Product (current prices), 1973 to 2009

Sector	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85
Agriculture	33.6	28.9	24.1	23.3	19.7	15.0	10.5	11.2	10.8	7.2	5.7	4.9
Mining and quarrying	8.6	8.5	12.3	13.2	15.4	22.5	30.3	25.3	16.0	26.7	30.5	36.6
Manufacturing	5.4	7.3	7.7	7.9	6.7	8.2	4.1	6.1	8.8	7.3	6.2	5.2
Electricity and water	1.8	3.3	4.1	2.9	2.8	2.2	2.1	2.4	2.7	2.8	2.4	2.5
Construction	10.8	9.5	6.9	4.8	4.7	4.1	5.1	4.7	5.9	4.2	5.3	3.8
Wholesale retail trade	15.0	16.2	15.6	17.4	19.8	19.6	22.0	21.7	22.5	21.0	20.8	18.6
Transport and communications	4.0	3.5	4.6	3.7	4.1	2.6	1.9	2.1	2.4	2.9	2.5	2.3
Financial institutions	7.2	6.9	6.7	7.7	8.2	8.9	9.8	6.5	7.6	6.6	6.5	6.5
General government	9.8	11.8	13.2	15.1	14.4	13.5	11.4	16.7	19.3	17.8	16.9	16.2
Household, social and community services	3.7	4.2	4.8	3.9	4.2	3.5	2.9	3.4	4.0	3.5	3.3	3.3

**Note that the mining sector is referred to as mining and quarrying because that is what the sector was called before 1996.*

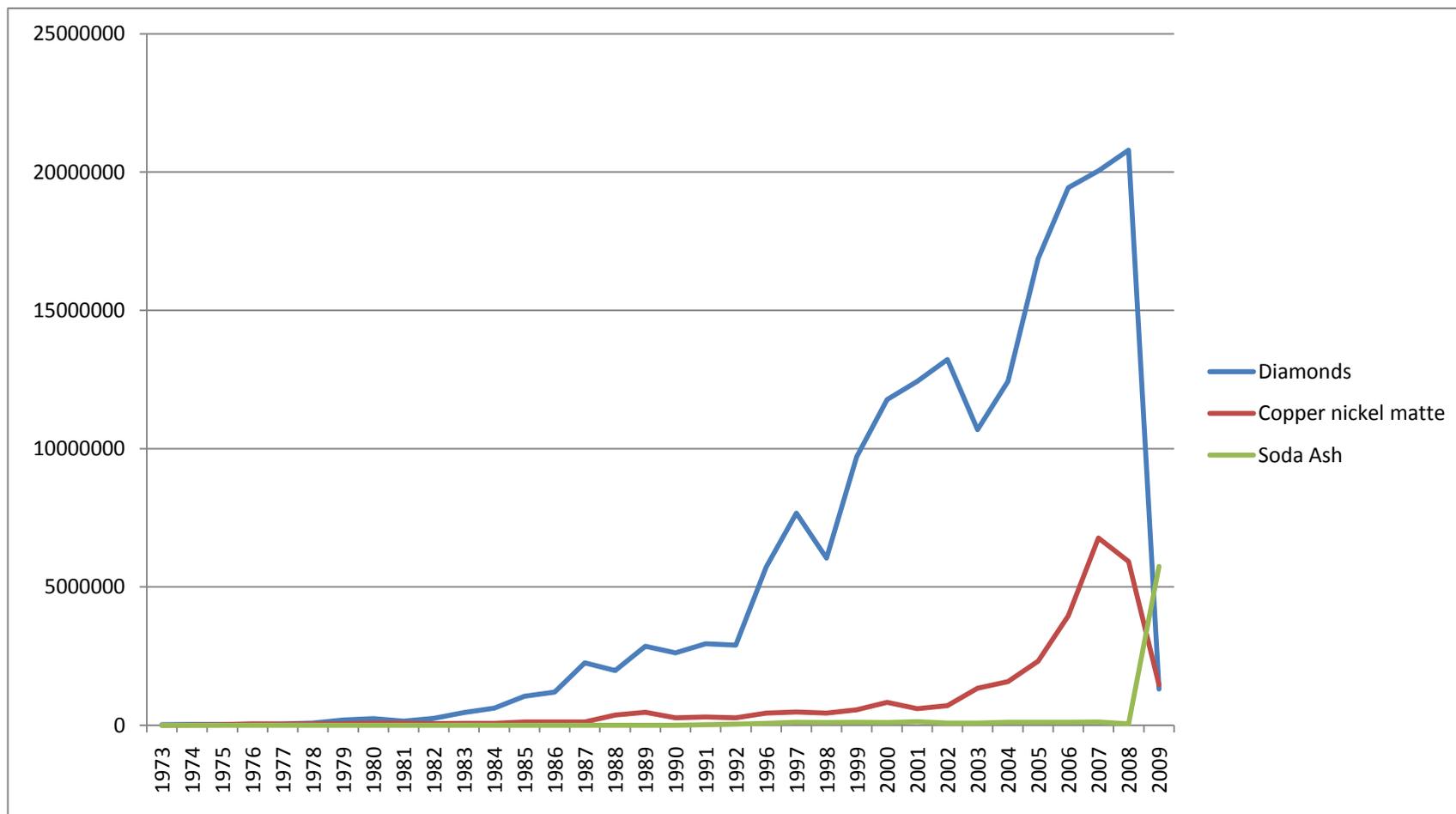
Source: Statistical Bulletin (1976; 1982; 1988), Bank of Botswana (1999; 2007; 2008), Stats Brief (2009).

Table 4.1 Continued

1985/86	1986/87	1987/88	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1999/00	2000/01	2001/02	2002/03	2003/04
4.1	3.3	2.9	4.9	4.7	4.8	5.3	4.6	4.3	4.0	3.6	3.2	2.5	2.2	2.3	2.3	2.4
41.1	40.5	43.0	46.3	43.3	40.8	36.6	37.4	34.4	35.3	38.1	39.0	43.1	48.2	43.3	39.0	37.3
5.5	5.6	4.9	5.2	5.1	5.4	5.4	4.8	5.1	5.1	5.1	5.0	4.6	4.0	4.1	4.1	4.1
2.5	2.7	2.5	2.1	2.1	2.2	2.5	2.3	2.3	2.0	1.9	1.9	2.1	2.0	2.2	2.5	2.6
2.7	2.6	3.3	7.6	7.8	8.4	7.3	6.8	6.6	6.4	6.0	5.9	5.2	4.6	5.0	5.2	5.2
18.2	19.1	18.7	7.3	7.2	6.0	5.9	8.7	11.4	12.0	12.1	11.7	10.1	9.5	10.5	11.7	12.0
2.4	2.2	1.9	2.9	3.2	3.7	4.2	3.9	4.1	4.1	4.0	4.0	3.4	3.1	3.3	3.4	3.5
6.2	6.0	6.0	7.2	7.8	8.4	10.4	10.6	11.4	11.3	10.7	10.5	10.2	9.5	10.5	10.9	11.2
14.3	15.1	14.4	12.8	14.8	15.8	17.5	16.3	15.9	15.4	14.6	14.8	15.1	13.5	15.2	17.1	17.9
2.9	2.8	2.5	3.8	4.0	4.5	4.9	4.5	4.6	4.4	4.0	4.0	3.7	3.3	3.6	3.7	3.9

2004/05	2005/06	2006/07	2007/08	2008/09
1.8	1.9	1.7	1.9	2.1
41.0	41.8	43.5	40.7	37.1
3.8	3.5	3.6	3.8	3.8
2.6	0.7	2.9	2.8	2.8
4.8	4.5	4.2	4.4	4.5
10.8	11.3	10.9	11.8	12.6
3.2	3.8	3.9	4.0	4.2
11.0	10.9	10.1	10.9	11.8
17.2	17.5	15.6	16.0	17.1
4.0	4.2	3.6	3.7	4.0

Figure 4.9: Mineral Exports (million Pula), 1973 to 2009



Source: Statistical Bulletin (1976; 1988), Bank of Botswana (1999; 2007; 2008), Stats Brief (2009).

Table 4.2 Percentage Contribution of Commodities to Exports, 1973 to 20099

Commodities	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Meat and meat products	52.0	38.9	44.2	28.1	27.2	14.8	18.0	7.1	17.8	17.0	11.3	7.3	7.0	7.4	3.1	4.2	3.6	3.2
Live animals	0.2	0.1	0.1	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hides and skins	3.3	2.0	1.4	2.0	2.3	1.2	2.5	0.8	1.3	1.5	0.8	1.3	0.8	0.6	0.3	0.4	0.4	0.6
Diamonds	33.9	36.8	30.6	24.5	30.9	41.1	51.6	60.0	42.1	52.7	65.9	71.8	75.7	74.5	84.6	73.9	76.4	78.7
Copper nickel matte	0.0	10.1	20.9	33.8	26.3	27.3	17.1	20.4	23.4	13.8	9.4	8.0	8.7	7.5	4.4	13.9	12.6	8.2
Textiles	2.5	2.0	2.4	4.0	4.0	4.4	3.6	4.0	4.8	5.9	4.7	4.7	2.1	2.6	2.2	2.3	2.1	3.4
Soda ash	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Vehicle parts	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
All other goods	8.7	10.1	9.9	7.5	8.9	11.0	7.0	6.4	10.6	9.7	7.0	6.9	5.6	0.7	5.4	5.4	4.8	5.9

1991	1992	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
3.3	3.5	2.5	2.2	3.4	1.8	1.8	2.5	1.7	2.1	1.5	1.7	1.8	2.2	1.9	13.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4
0.5	0.5	0.4	0.3	0.4	0.2	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.1	11.2
78.7	78.9	70.4	73.8	69.5	79.4	82.6	84.8	82.1	76.8	75.4	75.0	73.5	63.2	65.2	3.9
7.9	7.2	5.5	4.6	5.0	4.6	5.8	4.1	4.4	9.6	9.6	10.3	15.0	21.4	18.6	4.4
3.3	2.1	2.4	2.4	3.5	2.0	1.7	1.3	1.8	1.8	3.4	5.0	3.5	6.9	5.7	7.2
0.6	1.2	0.8	1.1	1.1	0.9	0.7	0.9	0.5	0.6	0.6	0.5	0.4	0.4	0.1	17.2
x	x	14.1	11.4	11.1	5.5	2.1	2.0	3.3	3.5	3.5	2.5	0.7	0.5	0.7	12.5
5.7	6.5	4.0	4.2	6.0	5.7	5.0	3.9	6.0	5.4	5.9	4.9	4.9	5.3	7.6	16.9

*X represents no production recorded in that year.

Source: Statistical Bulletin (1976; 1988), Bank of Botswana (1999; 2007; 2008), Stats Brief (2009).

4.10 CONCLUSION

The chapter has outlined key features of the mineral sector in Botswana and outlined the reasons behind nationalising mineral rights to derive maximum benefits from resources. Minerals highlighted in this chapter include diamonds, coal, copper and nickel, soda ash, gold and salt. The mining industry has contributed an all time high of 48 percent to GDP and a high of 90 percent to exports in the period between 1973 and 2009.

CHAPTER 5- GENERATION AND UTILISATION OF MINERAL RENT IN BOTSWANA

5.1 INTRODUCTION

Generating adequate mineral rents and maintaining investment in the mining sector can be complex for policy makers (Auty, 2001b). Botswana's partnership with the De Beers Mining Company has been the country's ticket to generating substantial mineral rent. This was made easy by the fact that De Beers made it a priority for Botswana to benefit more from diamond output than the company did (Auty & Mikesell, 1998; Auty, 2001; Magang, 2008). In anticipation of high revenues from mining, Botswana introduced fiscal means of allocating rent among various development priorities (Masire, 2006). Fiscal instruments include; Vision 2016, National Development Plans (NDPs), the annual budget and the Sustainable Budget Index (SBI) (Auty & Mikesell, 1998; Auty, 2001a).

Although much of what transpired in the generation and use of mineral rent in Botswana generates mixed views among scholars, there is no denying their fascination with the topic. This stems from the fact that although there is a general conception that Botswana has successfully generated mineral rent and managed their expansion more effectively, not many researchers, except Harvey & Lewis (1990), Auty & Mikesell (1998) and the Centre for Applied Research & Department of Environmental Affairs (2007) have been successful at estimating them. The main reason is that in the past components that make up mineral rent, especially tax components were not made public (Auty, 2001a). This has not changed much, published data is still not comprehensive and most of the information remains confidential. Only total revenues are published in the annual national budget and by the Central Statistics Office. In this chapter, rent is estimated using statistics presented by the Centre for Applied Research & Department of Environmental Affairs (2007), as well as mineral revenue statistics in the national budget and the Department of Mines reports. The focus is on the period between 1979 and 2009 where the information is available. For the purpose of this chapter, where mineral rent is mentioned it is mostly rent generated from diamonds. Other minerals either generate little or no rent, while some receive subsidies. An example of minerals that receive a subsidy is copper and nickel. Coal also receives an indirect subsidy through the deliberate setting of prices above the international market prices (Hamilton, Hassan & Lange, 2003).

On the use of mineral rent in Botswana, it is clear that the Pula Fund's source of revenue is diamonds. However, when linking the use of mineral rent to the provision of social services and the amount of services provided, there are some limitations. It is not easy to quantify whether the revenue utilised to provide social services is all part of mineral rent as it may come from non-mineral sources. The justification for attributing the provision of social services to mineral rent is derived from the fact that minerals contribute largely to the country's earnings and by extension, most economic projects are financed using mineral revenue. Also, from the view point that before minerals took centre stage the economy of Botswana only relied on aid to finance its budget, means that all things being equal, mineral rent stimulated most of the economic activity in Botswana.

The chapter is divided as follows. In the following section the composition of mineral rent in Botswana is reviewed. An outline of the means of allocating that rent can be found in section 5.3. Section 5.4 assesses the utilisation of mineral rent and a conclusion is provided in section 5.5.

5.2 COMPOSITION AND AN ESTIMATE OF MINERAL RENT

Botswana's mineral rent is collected through royalty payments, profits tax and withholding tax on remitted dividends (Good, 2009). Royalty payments on mineral output are not clearly explained in the Minerals Act of 1999, but one can assume the broader definition of royalties which is payment for the use of minerals expressed as a percentage of total revenues. Royalties are mainly charged on the output and sale of minerals (Mupimpila, 2005). From 1967 to 1999, royalties were charged at 5 percent of total mineral production and this value was high given the fact that some countries did not charge royalties at all (Moori, 1999). Since the revision of the Minerals Act in 1999, 3 percent royalties are charged for all minerals except precious stones and metals which are charged 10 percent (Mupimpila, 2005; Matshediso, 2005).

Mineral extractive companies are governed by terms stipulated in the mining licence, as well as section 55 of the income tax which accompanies these licences. A non-negotiable taxation formula of 1998 is used, it replaced the old formula where income taxes were charged after the discovery of minerals. The new formula is pre-determined and operates such that

government revenue from taxes increases as mines gain profitability. On an annual basis the formula varies between 35 percent and 55 percent on output (Mupimpila, 2005). Although mineral taxes can create a dis-incentive to potential investors, they account for substantial revenues in Botswana and this is evident in most mineral-rich countries where there is a higher tax/GDP ratio (Matshediso, 2005). Botswana's tax/GDP ratio was 38 percent in 1987 and 1999, but declined to 30 percent in 2005 (Mupimpila, 2005).

Debswana is charged income tax according to the 12th schedule of the income agreement (Botswana Gazette, 2009). This constitutes a 40 percent tax on company profits, as well as a 15 percent withholding tax on remitted dividends (Mupimpila, 2005). For other minerals, the variable income tax applies (Matshediso, 2005).

Table 5.1 estimates resource rent from all mining activities from 1979 to 2009. Resource rent generated has been substantial, increasing considerably overtime in nominal terms from P160 million in 1979 to P10.56 billion in the 2008/09 financial year. The highest recorded value was in 2006/07 when rent was estimated at P11, 39 billion (Ref. Table 5.1).

Table 5.1: Resource Rent from all Mining Activities (millions of Pula) 1979 to 2009

YEARS	RESOURCE RENT
1979	160
1980	131
1981	66
1982	196
1983	278
1984	563
1982	918
1986	981
1987	1,441
1988	2,690
1989	2,492
1990	2,582
1991	2,552

1992	2,281
1993	3,156
1994	3,211
1995	3,782
1996	5,781
1997	6,416
1998	5,362
1999	6,977
2000	8,535
2001	10,302
2002/2003	8,49
2003/2004	8,14
2004/2005	8,07
2005/2006	9,93
2006/2007	11,39
2007/2008	10,89
2008/2009	10,56

Source: Centre for Applied Research & Department of Environmental Affairs (2007)²⁷; Budget Speech (2001; 2002; 2003; 2004; 2005; 2006; 2007; 2008)²⁸.

Table 5.2 shows the contribution of different resources to rent from 2004 to 2009. The style of presenting data by the Department of Mines is inconsistent. From 2004 to 2005, percentage contributions are presented on a yearly basis i.e. from January to December, but from 2006 data is on a financial year basis i.e. April 1st to 31st March. For the former, inference will not be made based on the percentage contribution of different resources to rent as data presentation is different. Nonetheless, the breakdown of resource rent in table 5.2 shows that most rent was generated by diamonds. In the 2006/07 financial year, diamond royalties generated P8.54 billion and royalties generated P2.46 billion. The remaining P390 million in rent was generated by other resources not mentioned. Percentage estimates show

²⁷ 1979 to 2001.

²⁸ 2002 to 2009.

that diamond dividends contributed 77.23 percent, diamond royalties 21.18 percent, copper/nickel 1.34 percent, industrial mineral and others 0.04 percent and gold 0.19 percent to the P10.89 billion total resource rent recorded in 2007/08. In numerical terms, of the total resource rent that year, diamond dividends generated P8.41 billion, royalties P2.31 billion and the remaining resources share the remaining P170 million (Ref. Table 5.2).

In the 2008/09 financial year, diamond dividends generated P8.27 billion and diamond royalties P2.06 billion of total resource rent. All in all, diamonds have generated around 99 percent of rent from dividends and royalties from 2004 to 2009. Rent generated by copper nickel has been volatile, significant in some years, but low in others. Coal, soda ash, salt and industrial minerals have generated very little rent in all the reference years.

Table 5.2 Percentage Contribution to Resource Rent from 2004 to 2009

Years	Diamond Dividends	Diamond royalties	Others	Copper/ Nickel	Industrial Mineral and Others	Gold	Soda Ash and Salt
2004	76.83	22.52	0.65	1.34	-	-	-
2005	80	19	1	-	-	-	-
2006/07	75	21.62	0.95	-	-	-	-
2007/08	77.25	21.18	-	1.34	0.04	0.19	-
2008/09	78.27	19.54	-	1.03	0.12	0.36	0.69

Source: Department of Mines (2002; 2003; 2004; 2005; 2006; 2007; 2008).

5.3 MEANS OF ALLOCATING MINERAL RENT

Botswana has a set of national and fiscal instruments that guide the utilisation of mineral rent. These instruments are outlined below;

5.3.1 VISION 2016

Vision 2016 does not numerically allocate mineral rents, but it is an important tool that guides their utilisation. The vision forms a framework and shows commitment on the part of government to think ahead and map out priorities that the country would like to have attained. The year 2016 was selected as the target year and will represent the country's 50th anniversary of independence (Masire, 2006).

The framework for Vision 2016 was launched by the second president of the Republic of Botswana Sir Ketumile Joni Masire in 1996 and a document titled '*Long Term Vision for Botswana (Vision 2016): Towards Prosperity for all*' was published in September 1997 (Aquah, 2005. In Akinkugbe. et al., 2005). It outlines national principles used as a guide to achieve sustainable development. National principles are democracy, development, self-reliance, unity and the recently added principle of Botho (a Setswana word that means humaneness, courteousness and being highly disciplined) (Gaolatlhe, 1997). These national principles are embedded in the seven pillars of Vision 2016. Pillars were developed in line with what Botswana aims to be and are as follows;

'An Educated, Informed Nation

A Prosperous, Productive and Innovative Nation

A Compassionate, Just and Caring Nation

A Safe and Secure Nation

An Open, Democratic and Accountable Nation

A Moral and Tolerant Nation

A United and Proud Nation' (Gaolatlhe, 1997).

Although Vision 2016 is a framework and not particularly binding, its principles and objectives hold some ground. Pillars prescribe areas of development that the country should embark on. Looking at the pillars, education is emphasised, productivity and innovativeness are also highlighted as important areas of development. The innovative sector is closely tied to economic diversification as it introduces new products and technologies in the market and education is important for developing entrepreneurship skills. On a positive note, Botswana are enthusiastic in attaining vision 2016 as the main questions relating to the vision have not been whether it is an important tool, but what can be done to achieve it (Siphambe, 2003). It

is therefore fitting to say the existence of Vision 2016 creates accountability and unity between the government, communities, farmers, business people, employers, employees and various stakeholders in Botswana (Aquah, 2005).

5.3.2 NATIONAL DEVELOPMENT PLANS

Among other priorities, National Development Plans allocate mineral rent across various stakeholders in Botswana.

As an effective economic management tool, NDPs were adopted to guard against market failures. They unify citizens in the quest to curb poverty, inequality and negative externalities in the economy (Aquah, 2005). Like Vision 2016, NDPs in Botswana address national principles of democracy, development, self-reliance, unity and Botho. Plans also aim for sustained economic development through rapid economic growth, economic independence and social justice for all (Aquah, 2005). Objectives are equally important to national development even though they tend to overlap in terms of results and execution (Auty, 2008).

Development planning using NDPs can be traced to the years after Botswana gained independence. The first stage of development planning kicked off with a five year National Development Plan from 1966 to 1969. The plan identified priority areas of development and organisation of resources to attain them. The main development priorities at the time were the promotion of agriculture and the provision of social services. However, as priority areas became intense the country overlapped plans and developed the second NDP before the first one was complete (from 1968-72). The overlapping plans were called the 'rolling plans' and were discontinued in the 1970s only to be replaced by the current six year plans coupled with a three year mid- term review (Masire, 2006).

In recent years, NDPs have continued to prescribe development projects and the level of expenditure in each year, depending on the available revenue (Basdevant, 2008; Akinkugbe, et al., 2005). The Ministry of Finance and Development Planning (MFDP) formulates NDPs and does so by engaging in complex consultations with relevant stakeholders. Stakeholders include government ministries and the Economic Committee of Cabinet (ECC). Consultations involve the submission of development priorities in the form of development

proposals by different ministries for consideration by parliament. Alongside submitted proposals, the ECC assesses what is often called the ‘issues paper’. This paper proposes macroeconomic issues pertinent in the execution of the development plans, over and above the needs of individual ministries. Assessments are mainly based on the performance of the economy in the previous time periods, its shortcomings and the amount of revenue needed to carry out the set objectives. If parliament approves the ministry proposals the items are included in the NDP, and if not, they are left out (Aquah, 2005). Currently, Botswana is on her 10th NDP which began in April 2009. Like the previous NDPs, NDP 10 aims for economic growth coupled with increased economic diversification away from diamonds. It outlines constraints that Botswana faces in achieving comparative advantage in some sectors such as manufacturing and encourages the growth of sectors like services to address Botswana’s economic challenges.

In addition to NDPs, Botswana uses the annual budget to allocate national funds. The budget period runs from the 1st April to the 31st March every year. Recurrent budget is linked to the objectives and priorities laid out in NDPs. As such, allocates financial resources for the development projects included in the NDPs. The annual budgetary allocations distribute revenue generated largely from minerals to different government ministries (Ministry of Finance and Development Planning Website- last accessed 15th October, 2009). The bulk of the revenue is used to provide social services such as healthcare, education, infrastructure and social security benefits to Botswana (De Beers, 2007a). Botswana’s annual budget is discussed in greater detail in section 5.4.2 where the utilisation of mineral rent is explained.

5.3.3 SUSTAINABLE BUDGET INDEX AND THE ACCUMULATED INVESTMENT SURPLUS

In 1994, the government developed the Sustainable Budget Index (SBI) and the Accumulated Investment Surplus (AIS) as policy instruments aimed at avoiding fiscal deficit (Aquah, 2005; Lange & Wright, 2002).

SBI measures monitor the extent of use of mineral rent to ensure that is invested productively and economically. The index is calculated as the ratio of recurrent spending to recurrent revenue (non-mineral) where recurrent expenditure constitutes of non-investment consumption spending and recurrent revenues are the remainder value after deducting

mineral revenues from total revenues (Aquah, 2005). In simpler terms, the SBI measures the ratio between consumption expenditures and non-resource revenues. Alongside the SBI, mineral rent should be re-invested in foreign financial assets, infrastructure, human capital and basic services while ensuring that expenditure does not exceed recurrent revenue (Lange & Wright, 2002). In given financial year, the SBI should be less than or equal to total revenue, if not then it would exceed total revenue which implies that government expenditure is financed by borrowing or the sale of other important assets in the economy. As long as the SBI is less than one, government can be sure that resource capital is not being consumed or misused.

Achieving SBI targets in Botswana has not been easy (World Bank, 2006). Public investment has often gone into low growth sectors such as defence and agriculture therefore crowding out private investment and slowing economic diversification plans. On overall the fiscal strategy has been somewhat successful as government has avoided excessive spending in times of high revenues and drastic fiscal cuts when diamond prices have fallen, for example in the early 1980s and 1991 (World Bank, 2006). During those years, SBI depicted an expenditure value less than and in some instances equal to recurrent revenue. Unfortunately from 1993 until 2001, recurrent expenditure exceeded recurrent revenue, prompting the government assess the way it spends its mineral rent (Aquah, 2005).

The AIS assesses the sale of assets in the economy. The sale can be a result of a counter measure to finance recurrent expenditure, in particular the unspent revenues from the sale of government assets. Since these revenues are considered productive investment, if unspent they should not be re-used as recurrent expenditure (Aquah, 2005; Lange & Wright, 2002).

5.4 UTILISATION OF MINERAL RENT

The use of fiscal and national means to allocating mineral rent to Botswana's development priorities has culminated in them being divided across various objectives. These objectives bring immediate and long-term rewards for Botswana. The bulk of rent has been used to buy foreign reserves abroad, finance government ministries to provide infrastructure and social services to Botswana. In addition, economic diversification is promoted and financed using

these rents. However, it is not the intention of this section to dwell on economic diversification; this will be discussed at length in chapter 6.

5.4.1 FOREIGN RESERVES

Sections 3.5.3 explained the importance of using rent to set up Sovereign Wealth Funds (SWF). In 1996, Botswana set up a SWF under the name: *Pula Fund*. The fund is long-term oriented and ensures that mineral rent is not utilised for current consumption, but is put aside for the future generation (Page, 2008; Lange & Wright, 2002). The administration of the fund is done separately from Bank of Botswana's official reserves although they are still part of total national reserves. The main source of revenue for this fund is diamonds and the fund has grown in leaps and bounds over the years. In 2007, accumulated assets totalled about US\$5 billion, but in 2009 total assets were estimated at US\$6.9 billion (Global Financial Stability Report, 2007; Gaolatlhe, 2009; Botswana Export Development and Investment Authority Website- last accessed on the 13th October, 2009; Sovereign Wealth Funds Institute Website- last accessed on the 18th April, 2010)

At the end of 2008, Botswana's total foreign exchange reserves stood at P72.4 billion, compared to P58.5 billion in 2007, representing a 23.7 percent increase. In US Dollar terms, they declined from US\$9.8 billion to US\$9.2 billion, and in SDR terms, reserves remained at SDR6.1 billion (Gaolatlhe, 2009). These reserves are a great contingency plan for the economy, they were particularly helpful in 2009 when the global financial and economic crisis led to a reduction in revenue (Botswana Review, 2009).

5.4.2 SOCIAL SERVICES

In this sub-section, the 2008/09 and 2009/10 budget allocations will be used to demonstrate how social services are an outlet for mineral rent. These allocations are made according to annual revenue, taking into account extenuating circumstances such as the economic crisis' and economic growth forecast (Kempe, 1997; Gaolatlhe, 2009). Annual allocations are made in the recurrent budget²⁹ and development budget³⁰. The recurrent budget covers the

²⁹ Covers the maintenance and upgrading of existing government projects.

³⁰ Covers new and upcoming developments.

maintenance and upgrading of existing government projects. The development budget covers new and upcoming developments in the country. Botswana's 2009/10 recurrent budget is estimated at P27.36 billion and the development budget is estimated at P10.56 billion.

Education is one of the social services the Botswana provides using mineral rent, as part of the mandate of the Ministry of Education and Skills Development (MESD) (Ministry of Education and Skills Development Website- last accessed on the 5th December, 2009). MESD was allocated P1.14 billion in the 2009/10 recurrent budget to develop the education system (Gaolatlhe, 2009). With only a few educated people at independence, it came as no surprise that Botswana wanted to develop the education system and ultimately improve human capital to contribute to overall development. This is why the first NDP which ran from 1966 to 1969 formed a nexus for planning in all aspects of the economy including education (Bakwena, Narayana, Siphambe, 2005). Since then, the government felt that every child deserves at least ten years of basic education. After the basic ten years, education is granted on academic merit, including at tertiary level where students receive loans and grants depending on areas of study (Masire, 2006).

Notable education developments include the establishment of the University of Botswana (formerly the University of Basutoland, Bechuanaland and Swaziland) in the late 1960s, as well as the second university, the Botswana International University of Science and Technology (BIUST) in 2009. The government has also built primary, secondary and senior secondary schools around the country. In 2009 alone, government built senior schools in Goodhope, Mmadinare, Mogoditshane, Nata and Shakawe villages. In the same year, primary school curriculum was adjusted to focus more on technical subjects such as entrepreneurship, science and mathematics (Gaolatlhe, 2009).

Education developments in 2009 also include the establishment of a Vocational Training Fund aimed at bridging the gap between skills demand and supply, as well as the completion of the Oodi College of Applied Arts and Technology. On human capital development, Botswana calls for a holistic approach, as such in the 2009 financial year, it has utilised unspecified amounts of revenue was utilised for work related skills development. The National Human Resource Development Plan (NHRDP) will work on matching skills development with labour market deficiencies (Gaolatlhe, 2009).

Health services in Botswana are provided through the Ministry of Health (MoH). Just like the desire to attain high levels of education, the health sector is developed using mineral rent to Botswana. Through the health sector, Botswana have access to essential medicines provided through hospitals and clinics built around the country. In the 2009/10 financial year, financed health related programs include the introduction of the telemedicine program which is envisaged to become operational in 2012. Another financed programme is the management of HIV/ AIDS. The high levels of HIV/AIDS prevalence in Botswana have resulted in large sums of revenue being allocated to fight the scourge. Most of the revenue is spent on education campaigns based on effective methods of avoiding infection and caring for the already infected. Revenue is also spent on providing anti-retroviral drugs free of charge to citizens. It is on this note that the 2009/10 budget allocated P838.8 million to the HIV/AIDS programme. On a positive note, HIV/AIDS prevalence declined by 0.7 percent, especially among the age group 15-49 years (Gaolatlhe, 2009).

Infrastructure development is undertaken through the Ministry of Works and Transport (MWT). In the 2009/10 national budget, the ministry received about P1.54 billion from the recurrent budget (Gaolatlhe, 2009). This allocation, as well as past allocations has been used to upgrade the once poor infrastructure that Botswana inherited at independence. Currently, there are tarred roads in all the major parts of the country, as well as improved building structures to match. Major roads such as the Molepolole road were upgraded mainly because of the economic spillovers expected from the 2010 world cup hosted by South Africa.

Other annual budgetary allocations in the 2009/10 financial year include the following ministries; Agriculture at P913.1 million; Finance and Development Planning at P1.17 billion; Minerals Energy and Water Resources at P609.2 million; Communications, Science and Technology at P640.8 million; Lands and Housing at P643 million; Labour and Home Affairs at P625.2 million; Trade and Industry at P426.8 million; Foreign Affairs and International Cooperation at P332.7 million; Environment, Wildlife and Tourism at P443.5 million and Youth, Sports and Culture at P297.4 million (Gaolatlhe, 2009). The above ministries ensure that the economy is vigilant, not only for economic purposes, but for social development as well, hence bordering requirements needed for sustainable development.

5.5 CONCLUSION

This chapter examined the generation and utilisation of mineral rent in Botswana and established that rent is generated through dividends on diamond production, royalty payments, profit taxes and withholding tax on remitted dividends. In the 2007/08 financial year, diamond dividends stood at P8.44 billion, diamond royalties at P2.31 billion and copper nickel, industrial minerals, gold have generated the remaining P170 million. From 2004 to 2009, diamonds alone have generated between 98 percent and 99 percent of total resource rent.

Mineral rent generated from diamonds is used to acquire financial reserves abroad. Although the chapter acknowledges the difficulty in wholly attributing the revenue used to provide social services to mineral rent, it cannot be disputed that social services largely depend on mineral rent and the economic linkages that it stimulated. As such had mineral rent not existed, Botswana would not have had the level of social spending that exists today, and this means that some of the schools, hospitals and infrastructure that is available today would not exist, both in terms of numbers and quality.

CHAPTER 6- THE ECONOMIC DIVERSIFICATION OF BOTSWANA

6.1 INTRODUCTION

Looking back there is no denying the fact that mineral rent has been driving Botswana's development plans. Avoiding the resource curse and the economic growth tragedies prevalent in Africa has ensured that rent is utilised for economic development (Botswana Excellence, 2008; Easterly & Levine, 1997). This is evident looking at what Botswana has achieved economically and socially, although the limitations of such development have been somewhat apparent when measuring economic diversification (Good, 2009). Nonetheless, Botswana has been immune to the fashionable changes in economic policy and has stuck to long-term economic diversification initiatives (Harvey, 1993), even though one is not certain if this is a good thing.

Chapter 6 will measure economic diversification in Botswana, but will first assess economic diversification initiatives as the drivers of the process. Initiatives range from direct to indirect ones. Direct initiatives include targeted interventions through organisations that stimulate the export sector by encouraging grass root sectors such as the Small Micro Medium Enterprises (SMMEs). Direct initiatives also include the private sector and government financial intermediation organisations. Indirect initiatives include those that encourage the stability of the economy by creating an enabling environment for economic diversification to take place. Such initiatives include; the maintenance of low inflation, stable exchange rates and good quality institutions already mentioned in chapter 2 (Botswana Review, 2009). This chapter will only concentrate on direct economic diversification initiatives.

By discussing economic diversification initiatives, there will be an elaborate interest on their internal performance. However, there is a difference between positive outreach activities by these organisations and what they really do to stimulate economic diversification. Their contribution and effectiveness will be shown by the level of economic diversification in Botswana, a level that will be arrived at using a concentration measure (Ogive Index) in section 6.3.

Critically analysing diversification initiatives was a challenging exercise as there is an acute shortage of scholarly work in this area. The chapter had to rely more on organisational reports, which do not necessarily provide a critical review. The chapter is divided as follows.

Section 6.2 analyses economic diversification initiatives and section 6.3 measures economic diversification in Botswana. Section 6.4 provides concluding remarks.

6.2 ECONOMIC DIVERSIFICATION INITIATIVES

Botswana has used mineral rent to develop targeted economic diversification initiatives. The obvious initiative was to look towards diversifying the mining sector through the discovery of new minerals, as well as the beneficiation of existing mineral resources, especially diamonds (Magang, 2008). Other economic diversification initiatives are geared towards export development, investment promotion and the development of SMMEs through organisations like the Botswana Export development and Investment Authority, Local Enterprise Authority, Botswana Development Corporation. The government is also engaged in financial intermediation through various institutions such as the Citizen Entrepreneurial Development Agency and the National Development Bank.

6.2.1 BENEFICIATION OF THE MINING SECTOR

Beneficiation refers to the downstream economic activities that add value to locally mined rough minerals, in Botswana's case, it's mostly diamonds (De Beers, 2007a; Botswana Export Development and Investment Authority, 2008). These activities entail sorting, valuing, cutting and polishing of rough minerals, as well as the manufacture and selling of mineral products such as jewellery.

Beneficiation of diamond activities in Botswana was first advocated for by parliamentarians in the 1980s, although with a lot of resistance from others (Magang, 2008). Furthermore, De Beers did not favour the possible cutting and polishing of diamonds in Botswana citing cost issues (Good, 2009). Despite the resistance, in recent years, beneficiation gained momentum and De Beers finally came on board. Jewellery making was identified as an important beneficiation prospect (National Export Strategy, 2010), despite the fact that Botswana might not possess the necessary skills needed to engage in the production of secondary mineral products.

With the heightened enthusiasm, De Beers and Botswana developed beneficiation opportunities through the relocation of the Diamond Trading Company (DTC) from London

to Gaborone in 2008 (Good, 2009). DTC houses a majority of the diamond industry in a state of the art facility that is geared toward stimulating diamond related activities in general. The complex also houses businesses such as banks, courier companies, machinery suppliers, IT providers, security companies and restaurants that provide support services to the diamond industry (Botswana Review, 2009). DTC drives diamond beneficiation through a wide range of partner companies, some of which are subsidiaries of overseas companies. In the beginning of 2008, DTC's global network of clients consisted of 79 diamond cutting and polishing companies, 16 of which have been licensed to operate in Botswana. One of the 16 partners companies, the South African Diamond Corporation (SAFDICO), was instrumental in setting up the diamond technology park in Gaborone, which is a central place for diamond activities. The company also provides training on diamond manufacturing (De Beers Report, 2007b).

It has been 2 years since DTC moved offices to Botswana, and it is perhaps too early to evaluate the progress made by the company. However, in the 2009/10 financial year, DTC has sold diamonds worth about US\$550 million to the sorting and polishing companies as part of its downstream activities. The diamonds sold to these companies in 2009/10 are against the US\$360 million worth of diamonds that were earmarked for 2008. The sale will ensure that highly valued diamonds are processed locally, potentially turning Botswana into a world diamond hub (Diamond Trading Company Website- last accessed on the 29th November, 2009).

Currently, DTC has world class diamond sorting technologies such as the BORIS and IBIS machines, but labour will need to be trained to put the machines to good use (Botswana Review, 2009). New technologies and the newly formed cutting and polishing companies have created the need for institutional infrastructure, as well as an increased monitoring and control of the diamond industry by the state (Botswana Review, 2009). This will entail a great deal of political will and accountability reforms which are currently in question given the recent political turmoil and corruption scandals involving De Beers and some government officials (see Kelebonye, 2010; Modise, 2010; Mmegi, 2010a) The increased vigilance on standards, coupled with the enthusiasm by citizens to apply for cutting licenses, is expected to bring in downstream service opportunities and make Botswana one of the top four diamond

manufacturers in the world. About 3500 jobs are expected from the downstream activities by the end of 2010 (Botswana Review, 2009).

Beneficiation of diamond resources is not the only mineral related economic diversification initiative by De Beers and Botswana. Both parties are involved in enterprise development through Debswana. Debswana has invested in Peo Venture Capital Company's equity funding of citizen owned companies. In return, the company creates employment opportunities for Botswana (Botswana Review, 2009; De Beers, 2007b).

6.2.2 EXPORT DEVELOPMENT: BOTSWANA EXPORT DEVELOPMENT & INVESTMENT AUTHORITY, BOTSWANA CONFEDERATION OF COMMERCE, INDUSTRY AND MANPOWER, BOTSWANA EXPORTERS & MANUFACTURERS ASSOCIATION

The Botswana Export Development Investment Authority (BEDIA) was formed through an Act of Parliament of 1997. The organisation develops green field investments and promotes exports and investment opportunities to local and foreign investors by working hand in hand with the government to ensure a conducive investment climate. BEDIA identifies market opportunities abroad for locally produced goods and services in countries where Botswana has preferential trade agreements. The plan is to develop merchandise trade by variety and in some instances, by volume despite the fact that the manufacturing industry in Botswana has declined from 7.3 percent of GDP in 1974/75 to 3.8 percent in 2008/09 financial years (Botswana Export Development and Investment Authority Website- last accessed on the 10th November, 2009; Bank of Botswana, 2007; Stats Brief, 2009).

Export development objectives are met through local and international exhibitions despite the fact that the cost of doing business remains rather high as evidenced by Botswana being ranked the 43rd in the world (Doing Business Report, 2010). Locally, the organisation hosts the annual Botswana Global Expo in the nation's capital city of Gaborone. The expo is multi-sectoral with attendance by importers, wholesalers, retailers, international buyers, governments and companies from around the world (Invest, 2009). In the years that it has been running, the expo has culminated in a reasonable and steady growth in business generated activities and the number of exhibitors continues to increase. Business activities generated from the expo have increased from 17 in 2006 to 35 in 2007 and reached 50 in

2008. The number of exhibitors increased from 107 in 2006 to 156 in 2007 and to 182 in 2008, although this does not necessarily translate into economic activity (Invest, 2009).

To identify investment opportunities, BEDIA identifies locally available raw materials or their easy access, and recommends to government and the business community sectors that can be developed. This begs the question of whether local availability of raw materials necessarily means comparative advantage on secondary goods. Nonetheless, BEDIA has identified textiles, garments and accessories, leather products, glass products, information technology, jewellery and tourism sectors as areas of potential investment. Leather and textiles, garments and accessories products fall into the 6500 AGOA product lines that Botswana is advised to take advantage of (Kolantsho, 2010). It is not difficult to understand why tourism is promoted; it is a tradeable service globally with immense potential to stimulate other sectors in the economy, especially given Botswana's tourist attractions such as the Okavango Delta and the Kalahari Desert (Maswabi, 2010). So far BEDIA has assisted; 70 textiles, apparels and garments; 37 furniture; 4 arts and handicrafts; 75 building construction and hardware products; 5 leather and leather products; 7 paper and stationery products; 5 hardware and building material; 6 motor vehicle accessories; 69 food stuff; 6 pharmaceutical products and 4 miscellaneous companies to start up (Botswana Manufactures Directory, 2007).

Although BEDIA has adopted various strategies to execute its objectives, the 2008/09 financial plan outlined a different strategy to attracting FDI and stimulating exports. The strategy carried out an audit of goals set in the past and markets that can be accessed. The organisation also delved on product differentiation and market streamlining (Gaolatlhe, 2009). In the same year, BEDIA attracted about P539 million in capital investment, exceeding the set target of P500 million (Invest, 2009). Out of the aforementioned investments, P323.4 million was attracted between April and December 2008 (Gaolatlhe, 2009). In addition, the organisation raised about P187 million in exports, again exceeding the set target of P120 million. BEDIA also developed a total of 2344 jobs, although the organisation is 166 jobs short of the set target (Invest, 2009). Cumulatively, in the five years leading to the 2008/09 financial year, BEDIA has created a total number of 9 363 jobs coupled with P971 million worth of capital investments in green field projects and the existing investments (Gaolatlhe, 2009). However, it would be interesting to compare the costs

that the organisation incurs in holding exhibitions and fairs locally and overseas, as well as maintaining BEDIA offices in London, India and South Africa, to investment generated. The cost component judged against the generated investment will give an idea of whether more money is generated than it is being spent by the organisation; unfortunately the information is not public.

On a negative note, the tendency by economic diversification organisations to focus on developing the manufacturing industry when the sector has not been doing well for years is pulling the economy back (Grynberg, 2010). This is particularly the case with the likes of Local Enterprise Authority and Citizen Entrepreneurial Development Agency, as well as the Botswana Export Development and Investment Authority and the International Financial Services Centre. This is a great deal of overlap in duties (Jefferies, 2010a). Even though there is an overlap in many economic diversification organisations, BEDIA's focus on consultations with different sectors to address problems that hinder growth in investment promotion and export activities is important for information sharing and bringing producers on board (Invest, 2009).

Still on export development organisations, the Botswana Exporters & Manufacturers Association (BEMA) is a non-governmental trade organisation which operates from Gaborone. The organisation facilitates the export growth of its clientele by encouraging the production of non-traditional goods and services (Investment Incentives, 2009). The organisation's clientele includes existing exporters and potential exporters (Botswana Exporters & Manufacturers Association Website- last accessed on the 5th December, 2009). To identify export markets and potential investors, BEMA joins forces with the likes of BEDIA to hold fairs and exhibitions around the country and abroad (Botswana Review, 2009). Currently statistics on services offered by BEMA and its clients are not documented and this makes it difficult to assess the organisation's performance. This is one of the many cases of Botswana organisations that do not document their activities. Nonetheless, BEMA has been involved in raising awareness on constraints faced by the private sector through its membership to the National Committee on Trade Policy Negotiations (NCTPN) (Trade Law Centre for Southern Africa, 2010). However, one is not sure if the contribution is informed.

The Botswana Confederation of Commerce, Industry and Manpower (BOCCIM) acts as a voice for the private sector in promoting export oriented activities. BOCCIM was formed in 1971 and registered through the Trade Union and Employers Act of 1983 (Botswana Confederation of Commerce, Industry and Manpower, 2008). Just like BEMA, BOCCIM operates on behalf of its exporting clients. Over the years, BOCCIM has provided dialogue between government and stakeholders on pertinent economic issues. As such, its clients are able to speak with one voice to influence public policy. Such lobbying has culminated in the institutionalisation of the High Level Consultative Council (HLCC) which is a forum where government officials and captains of the private sector meet to deliberate on economic development issues. HLCC is not the only forum; the BOCCIM council is attended by different sectors in the economy such as education, construction, engineering, finance, transport, mining and tourism. These sectors deliberate on export related matters (Botswana Confederation of Commerce, Industry and Manpower Website- last accessed on the 11th January, 2010).

6.2.3 ENTERPRISE DEVELOPMENT: SMALL BUSINESS PROMOTION AGENCY, DEPARTMENT OF INDUSTRIAL AFFAIRS, LOCAL ENTERPRISE AUTHORITY, ENTERPRISE BOTSWANA

Enterprise development was an integral part of the activities of the government of Botswana through its departments and parastatals. The Small Business Promotion Agency (SBPA), was one of the five departments of the Ministry of Trade and Industry (MTI). The department was responsible for the SMME process by developing cross-cutting policies that incorporate all economic sectors (Small Business Promotion Agency Website- last accessed on the 16th December, 2009). Although SBPA has developed SMME policies that are currently in use, these policies have not been effective in generating consistent data on the entire SMME sector, especially the small enterprises and this makes it difficult to monitor their activities (Mukras. et al., 2005).

The Department of Industrial Affairs (DIA) through its Integrated Field Services (IFS) Division is another government department that has played a role in enterprise development in Botswana. DIA provided enterprise training through specialised training materials and tailor-made courses in collaboration with institutions of higher learning. DIA also

collaborated with other entrepreneurship organisations to develop the business skills of semi-illiterate people (Ministry of Trade and Industry Website- last accessed on the 16th December, 2009). However, in 2004, the Local Enterprise Authority took over the responsibilities of the SBPA and DIA.

Hailed as one of the most active parastatals for enterprise development (Botswana Review, 2009), the Local Enterprise Authority (LEA) was established through the Small Business Act of 2004, mainly to promote entrepreneurship development through a series of targeted interventions (Local Enterprise Authority Website- last accessed on the 23rd November, 2009). Interventions include business planning services, advisory services, access to information and business development services for its clients (Botswana Review, 2009). The strategy is to develop skills and augment capacity of local entrepreneurs through a series of business enhancing training courses. So far key sectors have been identified and these are manufacturing, tourism, agriculture and other related sectors that citizens can tap into. Just like BEDIA, sectors are not just promoted for the benefit of the domestic economy and consumers, the organisation facilitates market access for local producers even though the organisation currently lacks capacity in this area (Trade Law Centre for Southern Africa, 2010).

In its outreach programs, LEA targets the often neglected groups in the economy such as the women, youth and unemployed people. As of 2008, the organisation has thirteen branches to reach out to the target market in all corners of Botswana. LEA has also facilitated change in standards, regulations and infrastructure, as well as SMME finance in Botswana. However, the organisation is expected to produce momentous results. This is because the organisation's five year strategic plan which began in 2007/08 outlined a somewhat fierce approach at reaching out to aforementioned sectors. The strategy also aligns services with the needs of the market and this is reflected by the number of entrepreneurs that LEA has assisted. Although LEA has had some limitations in reaching out to entrepreneurs (Conteh, 2008), to date the organisation has trained a total of 2 771 entrepreneurs. Of the number of trained entrepreneurs, 1 548 were trained in 2007/08 and 1 223 were trained in the 2008/09 financial year. In 2009, 8 371 entrepreneurs applied for the organisation's services, but only 5 725 passed the screening process. Of those who passed the screening process, 51 percent are in

the agricultural sector, 24 percent in the manufacturing sector, 15 percent in the services sectors and 10 percent in the tourism sector (Gaolatlhe, 2009).

In the short time that the organisation has been in operation it has received both positive and negative reviews. Positive reviews are mainly focused towards the organisation's outreach initiatives, which are somewhat aggressive given its many branches across the country, not necessarily its overall contribution to the economy of Botswana (Kaiser Associates, 2009). The scope of the organisation's reviews based on total contribution to economic activity is limited. On the other hand, negative reviews come from commentators who question the duplication of services carried out by other organisations such as BEDIA, Enterprise Botswana and CEDA (Jefferies, 2010a). This wastes government resources and makes coordination difficult. However, new developments indicate that LEA will merge with CEDA as their mandates are somewhat similar (Botswana Gazette, 2010).

Apart from LEA, Enterprise Botswana provides mentoring and training services to entrepreneurs around Botswana. Although a relatively small player in SMME promotion, sometimes Enterprise Botswana teams with the likes of BEDIA to promote entrepreneurship in Botswana (Ministry of Trade and Industry Website- last accessed on the 16th December, 2009). On a general note, the performance of this organisation is not documented.

6.2.4 FINANCIAL INTERMEDIATION AS AN ECONOMIC DIVERSIFICATION TOOL

Financial intermediation is closely linked to private sector performance. Finance makes it possible for businesses to start up and remain operational. It is on this note that Botswana provides financial incentives to the export sector by transferring mineral rent through parastatals and some private sector organisations for borrowing (Harvey, 1993). Private sector and government financial intermediation organisations are mentioned below.

6.2.4.1 PRIVATE SECTOR FINANCIAL INTERMEDIATION THROUGH COMMERCIAL BANKS

Financial intermediation through the private sector includes the transfer of rent from central banks to commercial banks for re-lending to the business community. At independence,

Botswana only had two commercial banks, namely; Barclays Bank and Standard Chartered Bank. Both operated from South Africa. Both banks did not offer much financial assistance locally as they did not anticipate enough returns on their investments. However, after they fully settled in the country, they lacked financial resources to cover their operations. Even though their credit-worthiness can allowed them to borrow large sums of money abroad for finance, their operation became the concern of the central bank. The government then transferred unspecified amounts of revenue to these commercial banks as loans (Harvey, 1993). In return, commercial banks have been offering loans to Batswana for social, as well as business needs. Currently, some banks have aligned their services SMME banking. Standard Chartered Bank (SCB) offers SMME loans amounting to 75 percent of the present value of business property at competitive prices. Loans are approved within 72 hours and can be supplemented with business credit cards (Standard Chartered Bank, 2009). Unfortunately, SCB is the only bank that is offering SMME targeted products. However, the main problem with loans offered by commercial banks is their short term (Mogotsi, 2005).

6.2.4.2 FINANCIAL INTERMEDIATION BY GOVERNMENT

Parastatals that fall into this category include the Financial Assistance Program (FAP), which was later merged with the Citizen Entrepreneurial Agency (CEDA). Other organisation are; the Botswana Development Corporation (BDC), the National Development Bank (NDB), the Botswana Cooperative Bank and the Botswana Savings Bank (BSB). Although the International Financial Services Centre (IFSC) and the Botswana Export Credit Insurance and Guarantee Agency do not offer loans, because of the financial incentives they provide they are discussed under this umbrella.

6.2.4.2.1 FINANCIAL ASSISTANCE PROGRAMME AND CITIZEN ENTREPRENEURIAL DEVELOPMENT AGENCY

The Financial Assistance Program (FAP) was formed in 1982. It provided residents with grants to start-up or expand existing businesses. Start-up costs were open to citizens only. For medium to large-scale projects, funding was available to citizens and non-citizens (Masire, 2006). Loans offered were on a five year basis and were mainly towards the cost of capital equipment, sales augmentation, as well as training of unskilled labour (Harvey, 1993). Although the program had professed that it would not provide indirect subsidies, businesses

were provided with the option of acquiring financial incentives by opting for reduced taxes. In many respects, FAP provided easy money as the requirements for acquiring loans were not stringent (Good, 2009). People acquired loans for bogus businesses, and some people who were not citizens acquired loans for which they did not qualify (Harvey, 1993). As Good (2009) puts it, the organisation provided ‘cowboy capitalists’ with money which they acquired and left soon after. As a result, the program was marred by allegations of abuse by senior officials and in the end; it became too political (Harvey, 1993; Masire, 2006). In the end, costs incurred by FAP were very high. Between 1980 and 1990, total revenue invested by government in FAP was P48 million and the cost of maintaining FAP grew by 69 percent and 73 percent in 1991 and 1992 respectively. By 1998, FAP had utilised about P5 billion in its entire operations and at that point the organisation was in trouble. The programme had a high failure rate and in the late 1990s, it was merged into the Citizen Entrepreneurial Development Agency (CEDA) (Conteh, 2008).

The transition from FAP to CEDA was an easy one. Just like FAP, CEDA is controlled by the Ministry of Finance and Development Planning and encourages citizen entrepreneurship and empowerment by funding the formation of local enterprises (Entrepreneur, 2007). Funding is available for sectors such as agriculture, tourism, mining and any other potentially viable business. CEDA also provides support services such as training and mentoring programmes to the businesses they fund.

To achieve a desired level of entrepreneurial development and employment creation, CEDA has created a variety of vanguard products. One is the Young Farmers Fund of 2007 which targets young people who want to venture into farming. At the end of the 2008/09 financial year, 88 farming projects to the tune of P51 million were approved despite the fact that farming in Botswana is very risky due to the nature of the climate (Good, 2009). Another CEDA product is the Development Fund, which is traditionally the main CEDA product that covers all sectors. In 2008, CEDA funded 190 projects to the value of P119 million under this fund (Mmegi, 2010b). Another CEDA product is the Credit Guarantee Scheme (CGS) which has funded 112 projects amounting to P27.2 million in 2008 (Citizen Entrepreneurial Development Agency, 2008, 2009; Mmegi, 2010b).

As part of diversifying its portfolio, CEDA has created a subsidiary Venture Capital Fund, presently managed by Venture Partners Botswana. The company provides equity fund to citizen and non-citizen owned companies engaged in green field and early stage projects, as well as established companies. Companies that benefitted from the CEDA Venture Capital Fund include; the Tannery Industries Botswana (TIB)³¹ formed in 2004, Delta Dairies³² formed in 2007, Latex medical Products³³ and Fabulous Flowers³⁴ (Entrepreneur, 2007; Citizen Entrepreneurial Development Agency, 2008).

Even though CEDA has promoted the growth of local enterprises, the organisation is continually facing financial challenges (Hanson, 2008). The agency is burdened by non-performing debtors, as well as high failure rate of businesses due to inadequate skills of its clientele. Currently, the organisation's arrears amount to P152.4 million (Mmegi, 2010b). These problems continue to obscure the original mandate of this organisation and present additional financial costs (Citizen Entrepreneurial Development Agency, 2008).

6.2.4.2.2 INTERNATIONAL FINANCIAL SERVICES CENTRE

The International Financial Services Centre (IFSC) was established in 2003 with the sole purpose of transforming Botswana into a world class hub for finance and business investments in the continent and the rest of the world. This is achieved by creating sustainable employment opportunities for Botswana, enhancing skills base, fostering innovation and sophistication in financial and business services in Botswana (International Financial Services Centre, 2009; International Financial Services Centre Bulletin, 2009). IFSC invites financial and business services investors from abroad with the purpose of setting up companies locally or investing in the already existing ones. In return, they enjoy a sustainably low tax environment (International Financial Services Centre, 2009). Table 6.1 shows exclusive advantages of IFSC listed companies and shows that these companies are exempted from paying capital gains tax and withholding tax, while domestic companies are charged 15 percent. IFSC listed companies also pay 15 percent corporate taxes and 25

³¹ A leather finishing plant located in Phakalane.

³² The company manufactures UHT long life milk.

³³ The company is one of the three condom manufacturers in Africa.

³⁴ A floriculture business.

percent is charged to domestic companies. Lastly, value added tax is zero rated for IFSC companies, while 10 percent is charged to domestic companies. These tax incentives are not meant to discourage domestic companies, rather it is to encourage foreign companies to invest in Botswana (International Financial Services Centre, 2009). However, Molaodi (2005) asserts that these tax incentives are part of the sacrifices by IFSC as the country lacks comparative advantage in financial services.

Table 6.1: Exclusive Advantages of IFSC Companies

Tax	IFSC company	Domestic company
Capital gains tax	exempt	15 percent
Withholding tax	exempt	15 percent
Corporate tax rate	15 percent	25 percent
Value added tax	Zero rated	10 percent

Source: International Financial Services Centre (2009).

In addition to a low tax environment, IFSC listed companies are included in the Double Taxation Avoidance Treaty network comprising of countries such as South Africa, Sweden, Mauritius, Seychelles, India, UK, France, Mozambique, Namibia, Barbados and Zimbabwe. A few more countries are in the process of joining. Under this arrangement, countries do not pay taxes when they invest in fellow member countries (International Financial Services Centre, 2009).

IFSC activities have resulted in a notable investment increase in Botswana. More than 20 companies have been attracted since the organisation's inception. A total of eight IFSC companies were certified in 2009, bringing in a cumulative capital investment of P6 billion and the total tax contribution of IFSC listed companies in the year under review is P87 million (Mosinyi, 2009). New IFSC companies acquired include Bourse Africa, Vantage Mezzanine Investment Fund II (a South African based private equity firm) and PTA Solutions (an international call centre). Business from ABN AMRO International Diamond and Jewellery Group is currently in the pipeline (International Financial Services Centre, 2009).

6.2.4.2.3 BOTSWANA DEVELOPMENT CORPORATION

The Botswana Development Corporation (BDC) was established in 1970 to promote the country's economic diversification objectives through the organisation's Industry Division. The division provides loan financing, property development, equity participation and invoice discounting to Botswana companies (Botswana Review, 2009; Masire, 2006). Equity participation involves BDC entering into partnerships with investors like it is a private sector company and the organisation carries a portion of the financial burden of operating a business. Such participation can be relinquished when the company is doing well. BDC has been involved in commercial developments in and around Gaborone. In the 1970s, it developed a block of flats in Gaborone although they were of poor quality and had to be demolished or renovated (Masire, 2006). Other BDC partnerships include the collapsed Hyundai car assembly of 2000 (Good, 2009). In addition, Gaborone International Convention Centre (GICC) of 2000 and the newly built Lion Park Resort is a result of a partnership between BDC and foreign investors.

In the 2007/08 financial year, BDC invested close to P300 million in property, agric-business and industrial development activities. The refurbishing of the Cresta Marakanelo Hotels cost a total of P33 million, Phase 2 of the Fairground projects cost P200 million. Ten factory units in Gaborone cost BDC P26 million. BDC has also invested in the newly created Botswana Innovation Hub (BIH). In the year under review, BDC invested about P183 million on Can Manufacturing Company and Fengyue Glass Manufacturing. Pipeline projects, a joint venture between BDC and a private company, is envisaged to cost about P500 million combined (Gaolatlhe, 2009).

6.2.4.2.4 BOTSWANA EXPORT CREDIT INSURANCE AND GUARANTEE AGENCY

The Botswana Export Credit Insurance and Guarantee Agency (BECIGA) was established in 1996 as a subsidiary of Botswana Development Corporation. The organisation is a strategic export insurance partner in Botswana's economic diversification exercise as insurance is part of the soft infrastructure needed to facilitate international trade. The extent of insurance covers the commercial risk of importing goods, which is mainly in the form of non-payment

by buyers, as well as the sovereign risk, which is mostly political. Sudden liquidation of buyers, economic downturns and a shift in political, as well as economic pre-dispositions in importing and exporting countries is also covered by the insurance (Botswana Export Credit Insurance and Guarantee Agency Website- last accessed on the 11th January, 2010). BECIGA has also evolved to provide other services such as construction guarantees and other related guarantees that the organisation feels they can cover. Currently, BECIGA manages CEDA's Credit Guarantee Scheme (CGS) (Botswana Export Credit Insurance and Guarantee Agency Website- last accessed on the 11th January, 2010).

6.2.4.2.5 NATIONAL DEVELOPMENT BANK

The National Development Bank (NDB) is an economic diversification oriented financial intermediation by government. The organisation was formed under an Act of Parliament in 1963, and is governed by a Board of Directors nominated by the custody Ministry of Finance and Development Planning. NDB provides financial products and services to entrepreneurs in the form of loan financing. The financing is provided for new or already existing businesses in the agriculture (game farming), commercial (retailing, service industry and tourism), industrial (industrial, manufacturing, processing and mining), real estate (for office space, commerce & retail space, industrial space, commercial residential space) and human development sectors (National Development Bank, 2009). From 1968 to 1979, the real value of lending did not increase despite the varied products and services that NDB finances (Harvey, 1993). Currently, the lending minimum amount is P10 000 and the maximum is not specified. However, NDB has given loans for up to P60 million, with the repayment period of up to twenty years (National Development Bank, 2009; Botswana Review, 2009).

NDB has been an important development organisation, especially to agricultural development in the 1980s, even though there were problems encountered with this development (Masire, 2006). The more liberal the organisation became in lending its services to farmers, the more they became indebted to it by borrowing more than what they could afford (Good, 2009). The Arable Land Development Programme (ALDEP) which provided small loans under the management of NDB also dished out loans to farmers. The loans were later converted to grants in the 1985 to 1991 financial plan (Masire, 2006). Although the government was quick to realise problems NDB posed for farmers, there was not much it could do to address them

as farming is a financial gamble in Botswana's climate (Harvey, 1993; Masire, 2006). The organisation's financial losses reached a total value of P41 million in 1993 and unpaid loans totalled a whopping P91 million in the same year. As the seriousness of the situation escalated, it became clear that there were citizens who sought loans for which they were not qualified to take. Furthermore, the loan fund was utilised by the elite few (Good, 2009). Financial problems and risks that NDB experienced continued in the following years until 1997. As a result, commentators asserted that the organisation's mandate is misplaced, particularly the financing of agriculture in a drought prone country (Harvey, 1993).

Contrary to unsatisfactory performance of NDB in the 1990s, the 2008/09 financial results show momentous performance. Year profits grew by 51 percent from P33.6 million in 2008 to P50.7 million in 2009. Most profits were generated from the interest charged on loans. Although the number of people who receive loans from NDB, as well as the respective amount remains secretive, loans and advances to customers have increased by 28.67 percent from 2008 to 2009. The bank's portfolio keeps increasing because of the different products introduced. For example, the newly introduced Nthatosa and Temo Bokamoso schemes increased the bank's agriculture loan book from 33 percent to 45 percent of total loans issued. Human development sector loans increased by 1 percent, and the property sector loans by 2 percent in 2009. On the other hand, the retail sector and the industrial sector lending declined to 5 percent and 2 percent respectively (National Development Bank, 2009). In terms of geographic regions, portfolios by sector are distributed as follows; Gaborone 68 percent, Maun 12 percent, Francistown 15 percent and the newly opened branch in Palapye 5 percent (National Development Bank, 2009). Recently, there has been a call to privatise NDB and make it an independent organisation (Direng, 2009)

6.2.4.2.6 BOTSWANA CORPORATIVE BANK

Botswana Corporative Bank (BCB) was dubbed another 'NDB', obviously not in a good way. BCB was set up to accept deposits from, and provide loans to cooperative societies who owned the bank (Harvey, 1993). As in the case of NDB, BCB's mandate was difficult to carry out. Most of the customers could not afford to service loans taken. On the other hand, the bank could not refuse to lend to its own members, hence the whole process was self-defeating. In turn, the bank incurred a series of financial losses and this culminated in the bank

facing extreme financial problems (Bank of Botswana, 1991). As a counter measure, the bank altered its mandate and sought to include financial lending under Botswana's motor vehicle and home loan guarantees (Harvey, 1993).

Soon after introducing the new loan system, BCB faced many hurdles. Initially borrowers were given low loan instalments provided they paid within a short time, but that did not happen. Instead, clients defaulted on loans and some took about 10 years to pay for loans that were supposed to have been cleared in 5 years. The performance of the bank was worrying and began to deteriorate. In 1995, the bank was put under liquidation under the liquidation Act of Societies (Harvey, 1993). Finally in 2008, the liquidation of the bank was complete.

6.2.4.2.7 BOTSWANA SAVINGS BANK

Botswana Savings Bank (BSB) represents one of the economic diversification financial intermediation by the government of Botswana. BSB was originally established as far back as 1911, to provide post office banking for Botswana and operated under the Department of Postal Services (Botswana Review, 2009). Under this arrangement, BSB only provided lending services as part of the government car and house scheme, but contributed almost nothing to business development in Botswana (Harvey, 1993). In 1982, BSB seized to be under the control of the Department of Postal Services and was allocated to the Ministry of Finance and Development Planning. During this time, BSB provided not only car and housing loans, but loans for small business start-up as well. Although BSB does not provide mentoring and training programmes for businesses, it currently fills the finance constraint that exists in Botswana (Botswana Review, 2009).

6.3 MEASURING ECONOMIC DIVERSIFICATION

It is widely held that a diversified economy is not vulnerable to the ups and downs associated with a particular industry as the risk is spread more evenly across a variety of industries. Scholars such as Conteh (2008) and Auty & Mikesell (1998), who in addition to advocating for economic diversification in general, have outlined the danger of relying on the mining industry due to the transitional nature of mineral revenue.

As the importance of economic diversification is evident, measuring it is a logical step, especially as a stocktaking exercise. The nature of the business cycle fluctuations is such that

in some years, economic diversification reaches highs and lows, hence the need to generate an economic diversification metric and map the way forward given the economic dynamics.

Different theories have resulted in different measures of economic diversification. The industrial organisation theory specifies that a more diverse economy will have less concentration of economic activity on a few sectors or commodities (Research & Economic Division of Hawaii, 2008). The Ogive index, the Entropy index and the Herfindal index are therefore the relevant measures of economic diversity (McLaughlin, 1930; Smith & Gibson, 1988). According to the economic base theory, the final demand, represented primarily by exports, is the main driver of regional economic growth. Then basic industries, (which contribute to exogenous demand) and non- basic industries (which mainly contribute to endogenous demand) are compared against one another and a location quotient is generated. The location quotient is then used to compare regional share of economic activity against the quotient generated at the national level. The sum of the location quotient generated from industry shares gives the Hachmann index of economy diversification (Research & Economic Division of Hawaii, 2008).

To measure economic diversification in Botswana, this study will use the Ogive Index.

6.3.1 THE OGIVE INDEX

Following studies such as the one conducted by McLaughlin (1930), Tress (1938) and the Research and Economic Analysis Division of Hawaii (2008), the Ogive Index will be constructed for sectors (GDP) and commodities (exports) in Botswana. The index is as follows;

$$\text{Ogive Index} = \sum_{i=1}^n \frac{(S_i - \frac{1}{n})^2}{\frac{1}{n}}$$

Where; n is the number of sectors/commodities. For GDP n=10, and for exports n= 7 for the years before 1996³⁵ and from 1996 n=9³⁶.

³⁵ For these years, principal export commodities are; meat and meat products, animals, hides and skins, diamonds, copper nickel matte, textiles and all other goods.

S_i is the share of economic activity for the i^{th} sector, expressed as a percentage.

The outcome of the index will be interpreted as follows; given the amount of sectors/commodities in the Botswana economy (n), an equal distribution implies that the share of economic activity (S_i) will be equal to $1/n$ and the index will then equal zero, implying perfect diversification. If the value acquired from the index is higher than zero, then it means that sectoral/commodity activity is not balanced. As such, the higher the Ogive Index, the more unbalanced economic diversification is. To achieve a value of the index that is equal or close to zero, no sector has to decrease in size, but there should be that sectoral and commodity convergence in contribution to GDP and exports earnings, with the size of the economy increasing.

6.3.2 GROSS DOMESTIC PRODUCT AND EXPORT DIVERSIFICATION INDEXES

The general perception among most scholars is that economic diversification in Botswana has not been successful, or at least not successful enough, despite the different initiatives that are in place. Using the Ogive index, figure 6.1 and 6.2 show the trend of economic diversification using GDP and exports indexes. The record of exports and GDP indexes is certainly more complex. In general, both GDP and exports have achieved some level of economic diversification although it has not been consistent. GDP was at its most diverse point in 1991/92, when the index was 0.3. From 1992/93 to 1995/96, the index is still low, but the value of the index is increasing and moving away from the perfect diversification value of zero. The trendline shows that on overall, diversification in the years under review (1973 to 2009) has exhibited a steady movement away from the zero point of perfect diversification.

Exports have also had some level of diversification, especially in 1976 and 1977 when the ogive index was 0.8 for both years. Just like the GDP index, the export index trendline for the years under review (1973 to 2009) has exhibited a divergence from the perfect diversification

³⁶ In addition to meat and meat products, animals, hides and skins, diamonds, copper nickel matte, textiles and all other goods, two other sectors reflect in Botswana's exports, these are; soda ash and vehicle parts.

point, which is zero. This shows that although exports have shown up and down movements, as far as economic diversification, the index values have generally exhibited an upward trend.

When comparing GDP and exports indexes, there is certainly a difference, and there are points worth noting. Although both the GDP and export indexes have exhibited up and down movements, the exports index exhibits high values, the highest being 6.14 in 2001. The highest GDP index value is 2.3 in 2000/01. This shows that when export are not diversified, it is to the highest extent. This is because during those times, diamonds hold very high percentages of total exports. Case in point, in 2001 diamonds had an 85 percent share of total exports, while the remaining eight commodities (Meat and meat products, live animals, hides and skins, copper nickel matte, textiles, soda ash, vehicle parts and all other goods) accounted for only 15 percent of total exports. On the other hand, when GDP is diverging from positive diversification, it is not to the extent shown by exports. In 2000/01, the highest sectoral share of GDP was in the mining sector with 48 percent.

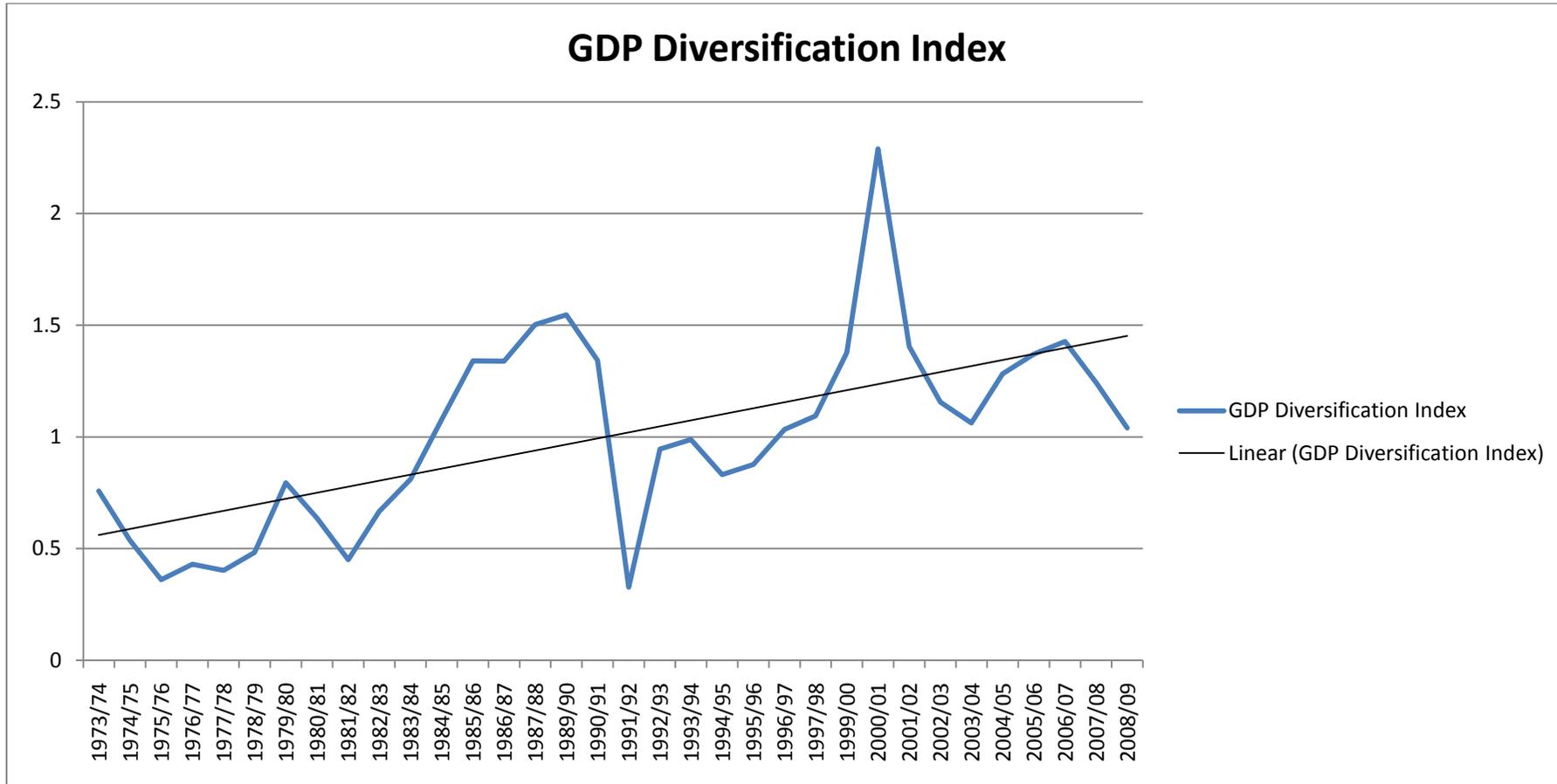
Looking at both exports and GDP in the last ten years, it is clear that exports have been moving towards the point of perfect economic diversification (which is zero) faster than GDP. From 1999 to 2009, the export diversification index dropped from 5.3 to 0.21, a drop of 5.09 points, while the GDP diversification index dropped from 1.4 to 1.04. This shows that exports have become significantly more diversified between 1999 and 2009. In both GDP and exports, the economic diversification observed in the last 2 years (2008 to 2009) is merely a reduction in the mining sector and diamond exports as a result of the halting of mineral production to align it to the global demand when the global financial and economic crisis was at its peak. This is not the economic diversification this paper is advocating for.

The slow and inconsistent state of economic diversification raises the question of whether government has done enough in terms of proving the right policy framework and incentives for the private sector to flourish, or whether the private sector has done enough to expand economic activity in general. The fact that economic diversification has been complex is a good indicator that economic diversification initiatives are not very effective, or at least not effective enough. It is perhaps time for government to review these initiatives. Nonetheless, changes in Botswana's economic diversification initiatives is currently in progress. The highly anticipated merger between IFSC and BEDIA has already begun and key elements are

expected to be complete before the end of 2010 (Mguni, 2010). LEA and CEDA are also going to be merging (Lute, 2010).

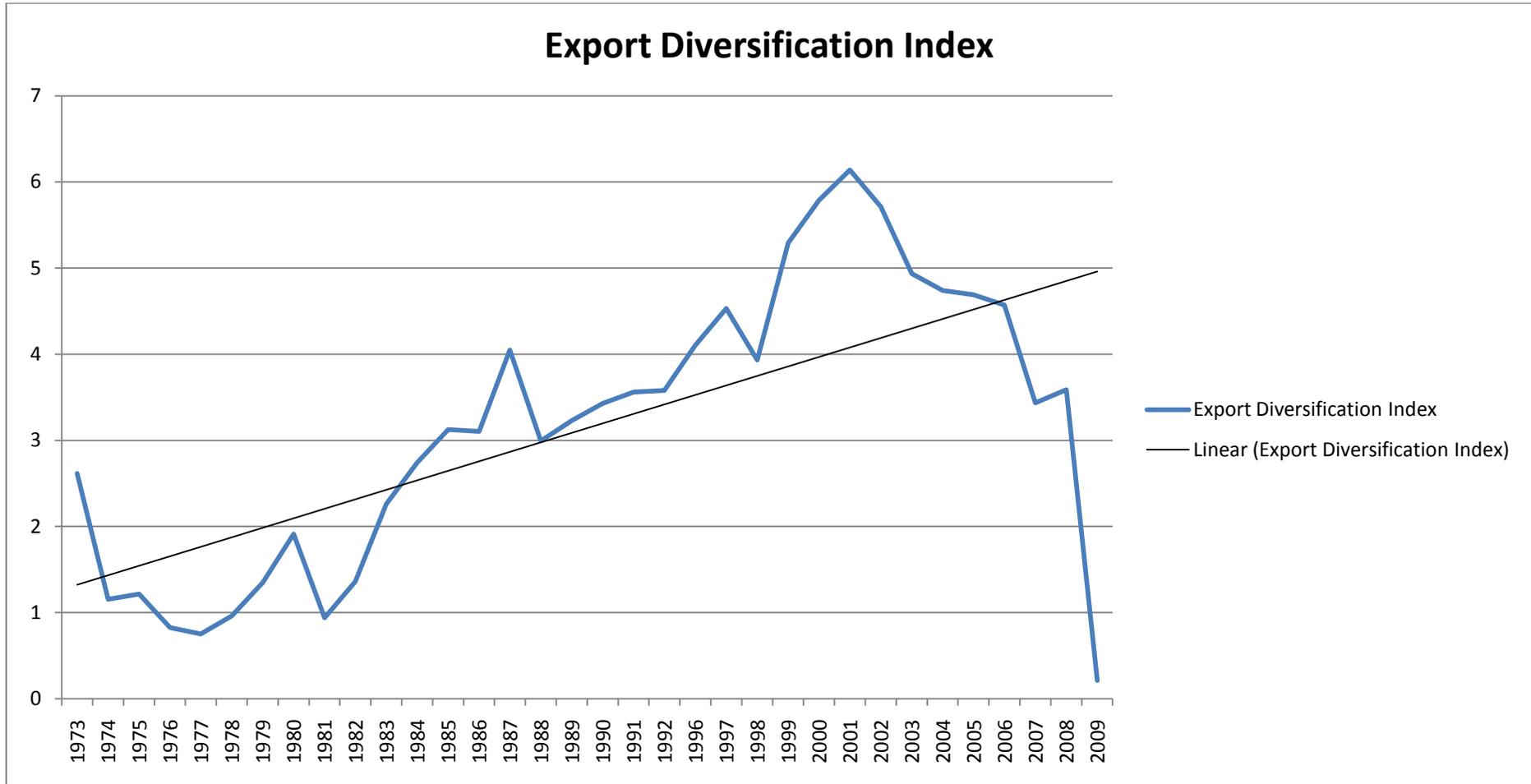
GDP diversification index and export diversification index are attached as appendix B and C respectively.

Figure 6.1: Gross Domestic Product Diversification Index, 1973 to 2009



Source: Own calculations using data from: Statistical Bulletin (1976;1988), Bank of Botswana Annual Report (1999;2007; 2008), Stats Brief (2009)

Figure 6.2 Export Diversification Index, 1973 to 2009



Source: Own calculations using data from: Statistical Bulletin (1982; 1988), Bank of Botswana Annual Report (2009).

6.4 CONCLUSION

This chapter outlined initiatives that Botswana developed to stimulate growth of the SMME sector, stimulate investment and the export industry as a whole. The paper has also outlined financial economic diversification initiatives which address the finance constraints that businesses encounter. Even though initiatives have been put in place, this chapter has illustrated that Botswana's diversification spectrum has not been rapid. It is characterised by years of very high concentration of mining on GDP and high concentration of diamonds on exports, although concentrations fluctuated over the years. In the last ten years, exports have become more diversified compared to GDP.

The general perception is that economic diversification initiatives in Botswana have not been successful enough; therefore they need to be reviewed. There is need for both government and the private sector to work towards expanding economic activity as the two are not mutually exclusive.

**CHAPTER 7: CONSTRAINTS FACED BY BOTSWANA IN
DIVERSIFYING THE ECONOMY AND WAYS OF
ADDRESSING THEM**

7.1 INTRODUCTION

The previous chapter measured economic diversification in Botswana and concluded that although there has been some diversity in GDP and exports, the process has not been rapid and has shown an upward trend (away from the perfect diversification value of zero) . This implies that economic diversification initiatives have not been entirely successful due to some constraints and challenges they face. To investigate the constraints and challenges faced by Botswana in diversifying its economy, interviews with the relevant people on the topic were carried out and the response from interviews is used as the basis for this chapter. The interview responses will not be used in isolation, they will be supplemented with the relevant literature on the topic. Interview questions and people interviewed are attached as appendix D.

Some constraints and challenges discussed in this chapter are not directly related to mineral abundance. The country's landlockedness is one of them, as well as the country's inability to fully benefit from regional trade. On the other hand, high labour costs and problems posed by the economic crisis' are a result of the presence of minerals in the Botswana economy. On a positive note, there is a general realisation in Botswana that economic diversification is important and the momentum towards departing from dependence on mining is still present (see National Development Plan, 2010; Direng, 2010). Even though there is a realisation that substantial economic diversification is urgent, policies should be well designed, as the notion of urgency has been detrimental to economic diversification in the past as some initiatives were focused on the shortterm results (Sentsho, 2010). This chapter is outlined as follows. Section 7.2 outlines constraints to economic diversification in Botswana and how they can be addressed and section 7.3 provides concluding remarks.

7.2 CONSTRAINTS TO ECONOMIC DIVERSIFICATION IN BOTSWANA AND WAYS OF ADDRESSING THEM

Although Botswana has a good track record of sound macroeconomic policies and has generated substantial mineral rents and managed their expansion phase positively, the country has not been effective in attaining substantial economic diversification. Economic diversification constraints and challenges are discussed below.

7.2.1 LANDLOCKEDNESS

Botswana's geographical location has been identified as a major constraint (Mosinyi, 2010). The country is landlocked and is surrounded by two countries with access to the sea namely; South Africa on the South and East, as well as Namibia on the West. The long distance to arrive to the nearest port presents an investment challenge as in most cases the sourcing of raw materials and the delivery of finished goods to markets takes place by sea. In this regard, Botswana has high transport costs for merchandise trade (National Development Plan, 2010). The transportation costs undermine the profitability of a pricing decision by manufactures, making local goods uncompetitive in the international market. This makes Botswana one of the least preferred investment destinations compared to the likes of South Africa. It may be surprising that a matter that has received thorough attention in economics such as costs is at the centre of Botswana's diversification problems. More so, when the problem has been there for many years and addressing it should have been at the centre of government policy. Intellectual evidence on the problem of transportation costs leads to the question of why there is a push to develop the manufacturing sector in Botswana given this dynamic (Grynberg, 2010). This is also taking into consideration the fact that the manufacturing sector has been declining in its contribution to GDP, more predominantly in the last ten years (Bank of Botswana, 2007; Stats Brief, 2009). The basic decision to which Botswana should base the development of the manufacturing sector should depend on whether competitiveness of merchandise goods can be gained given the country's landlocked nature.

On addressing this problem, there is little that Botswana can do to change the fact that it is landlocked. Although countries such as Namibia have offered part of their entry ports for Botswana to use, transportation costs are not entirely phased out. To address this, Botswana can strategically shift emphasis on exports of goods to exports of services. The latter is less dependent on road, rail and air transport and has negligible transportation costs, especially once the initial infrastructure has been created (National Development Plan, 2010). To export services, the country will have to liberalise competitive sectors under the General Agreement on Trade in Services (GATS) and make concessions in the schedule of commitments. However, Botswana has to be wise in scheduling such commitments to avoid external competition from crowding out the domestic market.

7.2.2 HIGH LABOUR COSTS

Botswana has high labour costs as a result of the large public sector (Charalambides, 2010; Marobela, 2008). This is because government is the main exporter due to the state's control of diamonds. Government is also the largest employer and has an average wage rate that is higher than the rest of the economy (Iimi, Basdevant & Kim, 2007). The government wage bill is representative of the size of the public sector, it increased from P700 million in the beginning of 2010 to P1 billion in October 2010 (Botswana Gazette, 2010). Given the fact that most of the country's revenue is used to maintain this high government wage bill, economic commentators are putting pressure on the government to reduce the civil service (Kgangkenna, 2010).

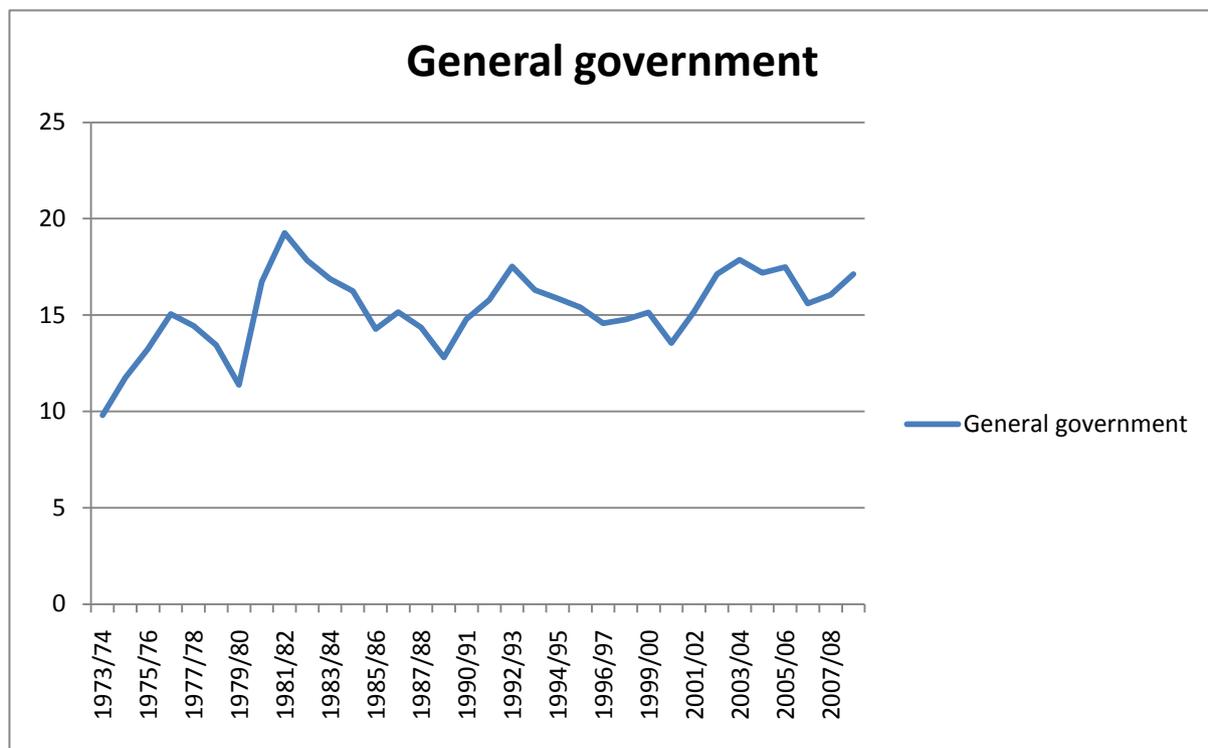
Botswana's high labour costs are an area where the presence of rich mineral resources has contributed to the problem. The obvious is true, rich diamond reserves have enabled some level of economic development, but they have enabled the public sector to be large and in the process crowd out the private sector as the private sector is unable to match government wage rates and incentives. For example, the government provides subsidised education for undergraduate studies at university level and most students feel indebted to the government and opt to join the public service rather than the private sector. The government also has an in service training for postgraduate studies, an arrangement that is seldom there in the private sector. After completion of studies, officers are bonded to work for government for a period not less than two years. By doing so, the cream of the labour force is retained in government and this contributes to the shortage of skills in the private sector (Charalambides). In addition to providing funding for further studies, government provides a subsidised medical aid scheme and guaranteed pension packages to officers.

Essentially, the higher wage rate set by the government of Botswana has two dimensions. Firstly, the private sector is unable to match those wage rates and incentives. As a result, skilled labour is skewed towards the government. Secondly, Botswana is part of a global market where competition is the order of the day and attracting Foreign Direct Investment (FDI) is what sets apart developed countries from less developed ones. In the same competition bandwagon of the world, is countries like China. China's booming economy is mostly based on low wages, long hours and high productivity, all of which make the country

one of the most preferred investment locations when investors are mostly interested in low labour costs and increased profit margins.

Figure 7.1 shows the growth in the size of the government sector in Botswana, measured by percentage contribution to GDP. The government sector was at its highest in 1981/82 when it had a 19.3 percent share of GDP, but has increased and declined a lot over the period from 1973 to 2009. The government is also the custodian of the mining sector.

Figure 7.1: Size of Government Sector from 1973 to 2009 (As a Percentage Contribution to Gross Domestic Product at current prices)



Source: *Statistical Bulletin (1976,1982,1988)*; *Bank of Botswana (2009)*.

In lieu of the fact that the public sector is too large and it crowds out the private sector, one cannot in any way advocate for a reduced and less powerful government, but rather a strong private sector that will be competitive. To make it easier for the private sector to grow to a competitive level, especially one that will elevate the level of economic diversification to greater heights, government should find ways of subsidising or bearing the costs incurred by producing companies so that they are able to achieve economies of scale before they can compete on their own. The Botswana Development Corporation's mandate is on point on this

endeavour as the organisation deals with loan financing and equity financing (Botswana Review, 2009). BDC can seek partnerships with companies in order to engage in export-oriented activities and provide support to companies until they are weaned off their infancy. Currently, BDC is in talks with five public sector unions³⁷ to establish a multi-million dollar hotel resort (Matambo, 2010). These are the kind of partnerships that can contribute to growing the private sector.

To supplement efforts by the government, the private sector and government can develop an operational strategy on how to benefit from the World Trade Organisation's (WTO) aid for trade initiative since Botswana is a member of the WTO. One of the Aid for Trade categories is geared towards building productive capacity by supporting the private sector to exploit their comparative advantages and diversify their exports (World Trade Organisation & Organisation for Economic Co-operation Development, 2009). In this regard, government can work hand in hand with the private sector to develop projects that will stimulate economic diversification.

7.2.3 DECLINING ECONOMIC BENEFIT OF MINERAL RENT

One of the major problems for economic diversification in Botswana is the fact that mineral rent is continually being used for activities that generate less economic benefit, but guarantee greater social rewards, political rewards, as well as dependence on government subsidies (Jefferies, 2010b). Mineral revenue is currently utilised to build roads in remote parts of the country, to provide electricity connections, provide 'free' education and other social services. In 2006 alone, 20 percent of the budget was spent on education (Gaolatlhe, 2006). Economically speaking, most of these developments were justified in the years preceding independence when the country was still poor and did not have the necessary infrastructure. To make things worse, some developments such as the building of some roads have been marred by corruption issues and abandonment of projects by contractors where the government has invested millions of Pula. Again, citizens are not paying back government

³⁷ These are Local central Government and parastatal Workers Union, Botswana Public Employees Union, Botswana Teachers Union, Botswana land Board Local Authorities and health Workers Union and Botswana Secondary School teachers union.

loans that they acquired for education (Mmegi Online, 2007). This scenario is bringing in less economic benefits and comes at the expense of economic diversification.

An area that Botswana is not giving attention to is Information and Communication Technology (ICT) (Jefferies, 2010b). ICT needs to be incorporated in many tiers of any economy that aims to diversify as it increases inter-connectedness and makes global markets accessible. Botswana has insufficient internet connections compared to the likes of South Africa. In assessing the ICT situation in Botswana, it is clear that not enough is being done to help develop Botswana into a knowledge-based society with an industry that thrives on ICT (Benza, 2009b). Although, legislations and regulatory frameworks are in place, government is not doing enough to drive the private sector as the limited information bandwidth makes the exchange of information difficult.

The HIV/AIDS scourge is one of the areas where mineral revenue does not generate economic benefits. Botswana's high prevalence of HIV/AIDS tends to require a large chunk of revenue that could be for economic diversification (Auty, 2008). Even though some scholars would say fighting HIV/AIDS is one way to preserve the labour force and reducing the number of orphans in the country, from an economic diversification standpoint this diverts money that could have been used to stimulate export sectors and finance the private sector. Case in point, the 2009/10 national budget has allocated a development budget of P838.8 million to the HIV/AIDS programme (Gaolathe, 2009). This is the money that could have been used for economic diversification priorities. This does not in any way advocate that Botswana should back out of its social responsibilities, but there is need for balance. Government should utilise policy to ensure that mineral revenue is utilised in activities that will guarantee greater economic benefits.

7.2.4 SMALL MARKET

It is almost a cliché that Botswana has a small economy (Charalambides, 2010; Sentsho, 2010). To interrogate this further what does this really mean? Smallness of an economy can be measured by its production capacity or its purchasing power. In the case of Botswana, the country seems to be achieving twin problems (Makgoabone, 2005; Makgapha, 2010). As

mentioned in the previous chapters, production capacity especially in merchandise trade has been lacklustre and Botswana has relied heavily on South African imports (Hanson, 2008).

On the other hand, Botswana's small population has resulted in companies being reluctant to set up in the country due to fear of making losses. Companies that do set up in Botswana end up moving to other countries, more especially South Africa (Good, 2009). For example, although the relocation of Hyundai was blamed on South Africa's dominant control of the region, the company was reportedly making losses and saw it economically becoming to settle in South Africa (Botswana Guardian Online, 2010)

Given the small size of the economy, Botswana can take advantage of its immediate market, which is the regional market, and export most of its products there. The country can also use the region as a source of raw materials and labour. Botswana is already a member of the Southern African Customs Union and the Southern African Development Community and the two organisations have an umbrella framework on how they will address economic development in the region. However, countries need to be in a position to express their economic development needs which will be translated into operational strategies for the region. Only when Botswana develops an effective regional trade strategy will regional trade provide a solution to existing problems of a small economy.

In assessing the how countries with small markets have addressed their economic development, the results are varied; countries such as Mauritius, Costa Rica, Dubai and Singapore have achieved economic diversification despite the size of their markets (Conteh, 2008). Singapore has achieved productive capacity through a state capitalist mixed economy. Botswana should benchmark from these countries and use their experience to deploy its factors of production and produce significant exports to the rest of the world, even if it means forming clusters to meet export quotas.

7.2.5 NOT FULLY BENEFITTING FROM REGIONAL TRADE

One of the challenges that Botswana faces concerns the fact that the country does not fully benefit from the regional market as it does not have an effective strategy (Charalambides, 2010). The country promotes trade in general and has a trade policy, but the policy is silent

on how to approach the regional market. By not taking advantage of the regional market as a destination for Botswana products and as a source of skills to supplement capacity problems in the country, Botswana is foregoing the potential benefits that can be generated from the region.

However, there are reasons that are attributed to Botswana not fully exploiting the opportunities presented by regional trade. One of them is the challenges and economic imbalances posed by the presence of South Africa in the region. Both countries' economic fate was sealed during the time when Botswana was a British colony and was administered from Mafikeng in South Africa. However, since independence Botswana has put at the centre of its development objectives the desire to break dependence from South Africa and build its own industries (Good, 2009). South Africa has competitive advantage mostly in service based industries compared to other countries in the region (Hanson, 2008). As a result, Foreign Direct Investment and most economic activities have been diverted to South Africa instead of other countries in the region.

In addition, South Africa has been accused of setting tariffs and excise rates, not for the benefit of other members, but to protect its own industry at the expense of other industries in the region. South Africa has prevented widespread protection of local producers in the region from its competitive firms (Hartzenberg, Charalambides & Jakobeit, 2007). This has given South African firms the upper hand, and they have been able to conquer the region, and other industries in the region have lagged behind.

In an ideal world, both countries should have a symbiotic relationship; both are mineral-rich and share a membership of SACU and SADC, in addition to sharing borders. Botswana should enjoy the investment and technological spillovers from South Africa and both countries should have potential markets in each other.

When Botswana does develop a regional trade strategy, the country should tap into the skills sector in the region to supplement the existing labour in the market, rather than replace it (Charalambides, 2010). This should be sooner than later as competition is expected to get tougher in the region because the common external tariffs in SACU are being reduced. Furthermore, the SADC Free Trade Area has been partly operational since 2008 and the

European Partnership Agreement negotiations between SADC member states and the European Union are at an advanced stage.

7.2.6 TRANSITIONAL CONSTRAINTS SUCH AS THE ECONOMIC CRISIS

Although economic crises are transitional they continue to undermine economic diversification efforts due to the volatile nature of minerals. In 1981/82, Botswana incurred some revenue losses due to the economic crisis at the time (Kempe, 1997). Similarly, the last global financial and economic crisis had extreme consequences for the economy of Botswana. The crisis began in the United States of America and became apparent in the late 2007. It started as a result of banks issuing mortgage loans to low income earners who had a limited ability to re-pay the loans. An increase in the incentives of borrowing such as relaxed payment terms made it easy to acquire such mortgage loans. The excessive borrowing was also encouraged by the fact that housing prices had shown an increasing trend in the past, giving hope to borrowers that taking higher amounts of loans would be easy to re-finance at more favourable prices. In the end, too much money circulating in the economy led to speculative behaviour and mal-investment by borrowers. As prices of housing began to decline, the amount of loan defaulters began to increase. This was followed by banks foreclosure (Bernanke, 2008; Market Oracle Online, 2009). Since the United States of America serves as a market for most of the world's commodities, it was inevitable that the crisis would affect Botswana. In February 2009, all the Debswana mines had been closed in an effort to re-align production with demand. This had negative consequences on the fiscal environment of Botswana and several development projects were put on hold (Nsingo, 2009).

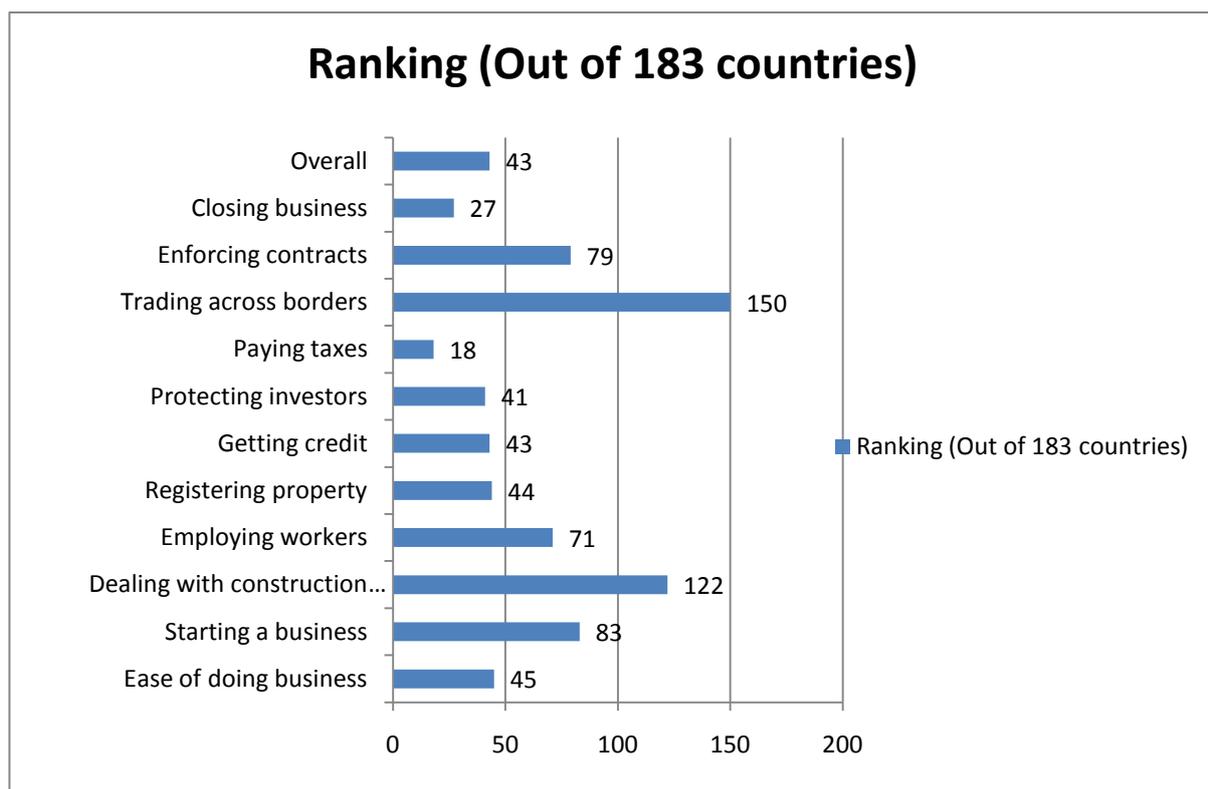
In this context, ways of preventing a disruption in economic activity due to the effects of economic crisis is what this study is advocating for, economic diversification. The presence of other economic sectors in Botswana will cushion against external shocks.

7.2.7 HIGH COST OF DOING BUSINESS

Economies around the world take different approaches to the entry of new businesses. However, the cost of doing business in Botswana has been regarded as burdensome in some ways (Jefferies, 2010b). This pushes away private investment and people tend to venture into the informal sector of the economy. The Doing Business Report (2010) ranks 183 countries

around the world according to ten stages of doing business. A focus is placed on; ‘starting a business, dealing with construction permits, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing business’ (Jefferies, 2010a). Botswana was ranked 43rd out of 183 countries around the world and is ranked behind South Africa and Mauritius. Indicators used in the case of Botswana include; procedures involved in setting up businesses, obtaining required permits, registering company property, obtaining credit to finance businesses, availability of land and the facilitation of border procedures (Doing Business Report, 2010). Botswana received a low ranking for trading across borders (at 150) and dealing with construction permits (at 122). Availability of land is also particularly restrictive for foreigners (Charalambides, Elago & Jefferies, 2009). Botswana’s rankings are illustrated in figure 7.1 below.

Figure 7.2: Doing Business Rankings for Botswana, 2010.



Source: Doing Business Report (2010).

Trade facilitation measures have been a major factor in reducing most of Asia’s trade costs, therefore expanding the level of trade (Brooks & Stone, 2010). This is because improved an quality of infrastructure and border services leads to a significant reduction in marginal costs

and an increase in economies of scale (National Board of Trade, 2008). In the same fashion, to improve doing business in Botswana and increase the level of inter and intra-regional trade, the government should pay special attention to lessening cumbersome border and trade procedures within SACU, more especially in border posts with South Africa as the country imports most of its food items there. Simplification and harmonisation of trade facilitation procedures such as practices and formalities involved in collecting, presenting, communicating and processing data and other information required for the movement of goods will expedite the movement of goods within SACU and SADC, especially if Botswana identifies the region as a potential destination for its goods. Trade facilitation procedures include a wide variety of customs or licensing procedures, customs valuation, technical standards, health and safety standards and administrative procedures on paperwork and information submission. Payment mechanisms, other financial requirements, as well as infrastructure development initiatives including ports, railways and roads should also be developed to improve trade within SACU and SADC.

7.2.8 EDUCATION

One of the factors attributed to Botswana's limited economic diversification is the fact that for a while the country's education system has been lacking in terms of technical and business related subjects (Charalambides, 2010). These subjects have been instrumental in developing entrepreneurship skills in Taiwan and Singapore. In the case of Botswana, these subjects are limited in the curriculum of primary and secondary schools. Furthermore, tertiary students have been more engaged in non-technical and business related subjects. This accounts for a mismatch in qualifications acquired and the skills needs of the job market.

Over the past three years the curriculum of primary and senior schools in Botswana has been incorporating more business related courses and the momentum is expected to ensure that students are equipped with skills that could help diversify and develop the country (Gaolatlhe, 2009). Although this could take time to bring in results, it is a step in the right direction for Botswana. In the meantime, the country can fill the skills gap by importing skills from the SADC region, as well as the European Union, through the currently negotiated trade in services chapter of the SADC- European Partnership Agreement. This can be done by

signing specific agreements on Mode 4 (Movement of natural persons), to fill the labour gap that exists in Botswana.

7.2.9 'WISH LIST' APPROACH TO DIAGNOSING ECONOMIC DIVERSIFICATION

Organisations such as BEDIA have identified jewellery making and leather manufacturing as one of economic activities that Botswana can engage in (National Export Strategy, 2010). Again, LEA and BEDIA have identified manufacturing as an important sector for Botswana despite the fact that the growth rate in the sector has been disappointing. Looking at the performance of manufacturing for one, is this really an area where Botswana should channel its resources towards, looking at the high transportation costs that the country incurs in merchandise trade? (Grynberg, 2010).

The 'wish list' approach to economic diversification in Botswana can be identified through key economic diversification institutions such as BEDIA, IFSC, CEDA, LEA and BDC (Charalambides, 2010). The effectiveness of these institutions is still questionable as none of them has a mining orientation and that is the sector that is doing well. Not to dwell on their effectiveness, there is a great of overlap and an evaluation of some of these institutions will save the government a lot of revenue (Jefferies, 2010a).

Botswana should re-define economic diversification in the context of what is feasible taking into consideration the fact that producing raw materials and finished goods involves different skills sets (Charalambides, 2010). Attention should also be paid to the market that consumes such goods as being rich in diamonds does not necessarily make the country the best jewellery maker in the world. Dimensions of jewellery consumers involve a great deal of interest on brand names. On this basis, Botswana will have to diagnostically evaluate economic diversification on what it really means for Botswana and spend less revenue on manufacturing endeavours that are doomed to fail.

7.3 CONCLUSION

The chapter has outlined constraints faced by Botswana in diversifying the economy beyond the mining sector. The chapter also provides ways of addressing them. Botswana faces problems of high transportation costs, a small landlocked economy, transitional constraints and declining economic returns to its mineral rent. Most of these constraints can be addressed by developing a regional trade strategy, as the regional market provides more economic and infrastructural linkages. The country should also refrain from utilising its revenue for economic diversification initiatives that are coordinated and informed.

CHAPTER 8- CONCLUSION

8.1 INTRODUCTION

This study set out to establish how Botswana has utilised its mineral rent for economic diversification. The proceeding chapters explained the exhaustibility of minerals as a subject study in economics with the purpose of establishing what theory prescribes on the best approach to mineral development. This was supported by country examples. The study also spent some time outlining the main features of the Botswana economy and assessed how mineral rent is divided according to development objectives in Botswana. Lastly, the study outlined Botswana's economic diversification initiatives and provided a measure of economic diversification, after which constraints to economic diversification were outlined.

The purpose of this chapter is to identify and provide further elaboration on some important aspects of the study, even though these issues may already have been mentioned in the chapters of this study. Where appropriate, recommendations will be provided. Some of the issues raised are relevant to the quality of information that was available to the researcher in undertaking this study and issues pertaining to policy in Botswana.

8.2 INFORMATION AVAILABLE TO THE RESEARCHER

Matters relating to the availability of information regarding the many aspects of this paper have been mentioned in some parts of the paper. There are some cases where information on certain issues was not available, for example scholarly work analysing economic diversification initiatives is not available. Furthermore, some organisations mentioned in this study had websites that were not up to date. Another problem that persists with regards to timely access to information in Botswana is that annual reports are published late, for example most organisations have not released their 2009 annual reports, but we are well into 2010. Publishing ethic in Botswana, especially on economic issues, is very low. When publications are prepared, there is a tendency to over emphasize the positive aspects of the Botswana economy, while the other side of the story is not told. In a sense, most publications present a 'sugar coated' story, but on economic shortcomings or economic blunders there is little to no information, hence reliance on a few sources. This is one area that scholars have to address.

One other problem is the leeway that organisations have when it comes to reporting on issues of the economy. In most cases, disaggregated data on economic issues are not available and that limits the quality of the presentation. Regarding the availability of economic data, organisations, including statistics authorities in Botswana show inconsistent presentation of data, hence confusion as to which values to go with. However, this problem does not only concern the information needs of this paper, but it shows that the longstanding problem of inconsistent data in Botswana still prevails. This problem was mainly pertinent in chapter 4, 5 and 6.

8.3 POLICY ISSUES

Botswana has been actively trying to diversify its economy since minerals were first discovered. However, in the course of time economic diversification has been modest, the country's GDP is mostly concentrated in the mining industry and Botswana's exports constitute mainly of diamonds. It has become clear that high concentration, especially in the mining industry, exposes the country to external shocks and overall volatility that can spill over into other components of the economy. The volatility was more recently exposed in 2009, when the global financial and economic crisis was at its peak. The resulting factor was loss of jobs, reduced productivity and less accumulated revenues.

Botswana's economic diversification challenges are common in mineral-rich countries. However countries such as Chile have shown that economic diversification through resources is possible and Botswana can learn from this. Despite differences in policy, other countries that Botswana can learn from are Mauritius, Costa Rica, Dubai and Singapore, all of which have shown that economic diversification is possible despite the size of the market.

Botswana can learn a lot from the experiences of these countries because now more than ever the country has to focus on making economic diversification a priority as diamonds are left with less than twenty years before they are depleted. Policy makers should rigorously monitor the pace of economic diversification through the encouragement of new technologies in the industry in order to stimulate production in the goods and services market. New technologies can be acquired through the country's strategic connections with well developed countries, or the country can go for a more rewarding method of stimulating the development of new

technologies through the innovation sector. However, it should be noted that premature reliance on innovation sectors can expose the country to external shocks.

Regarding low productivity of the export sector, Botswana can opt to follow the transformation that was acquired by countries in a similar disposition by encouraging clustering. Clustering encourages firms in a market to agglomerate and benefit from shared resources such as infrastructure and support services, while taking advantage of the synergies and the economies of scale the partnership offers. Regarding diversification that can take place from the international trade synergy, Botswana should speed up the pace of regional and global economic integration as there are positive spillovers that can be acquired from its trading partners. On a regional level, economic integration is gaining momentum, in 2008 the SADC region was declared a Free Trade Area and Botswana should poise herself to take advantage of this. The presence of South Africa in the region should not be considered a threat to Botswana, in fact South Africa proves to be an important ally in Botswana's economic development. One can think of investment, labour and technological spillovers from South Africa that Botswana can enjoy as both countries have rich diamond deposits.

At a global level, Botswana should harness rewards from its membership to the World Trade Organisation. The country can actively participate on international trade and coordinate its efforts to acquire the knowhow and identify export markets that are competitive internationally. Botswana should also enjoy the utilisation of aid for trade initiatives and the Special and Differential Treatment from the WTO, but desist from the dependency syndrome on aid and technical assistance that characterises most developing countries. Taking into account the fact that developing countries are late comers on international trade, Botswana should carve its own competitiveness and work along that.

Even though Botswana's economy is small, it is very complex. From observation, the presence of minerals in the economy of Botswana has done more than to suppress the non-mineral sector in the economy. Minerals have led to a high dependency on the government for education and the supply of social services, which in many countries citizens have to work hard for. The resulting factor is a low work ethic and this is translated into the lack of entrepreneurship. However, the winds of change are currently blowing in Botswana since the current president of Botswana Ian Khama was inaugurated in 2008. Even though, this

statement is not easy to evaluate now, the president is working towards restoring the ethic of hard work and is doing away with rent-seeking behaviour in Botswana.

To conclude this chapter, arguments have been put forward to convey the urgency of economic diversification in Botswana and offer some recommendations, which are not necessarily new, but are still highly relevant. Whatever policy options Botswana comes up with, it is not the intention of this paper to suggest that the country reduce its mineral sector because without mineral rents, the country would not have the financial sway it enjoys now. However, the government should improve its non-mineral sector, while using the mineral sector as leverage. The study therefore, encourages the government of Botswana to improve its investment climate, gear its education more towards technical skills, work towards improved economic integration and offer financial incentives for the export sector, direct investment, as well as the innovation sector to increase the overall performance of the economy to achieve economic diversification.

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APPENDICES**Appendix A: Botswana's Mineral Production, 1980 to 2008**

years	Diamonds (Million carats)	Copper (tones)	Nickel (Tones)	Coal (Tones)	Soda ash (Tones)	Salt (Tones)	Gold (Kg)
1980	5.1	15533	15442	371395	-	-	
1981	5	17819	18278	380698	-	-	10
1982	7.8	18375	17756	414778	-	-	15
1983	10.7	20261	18216	395127	-	-	11
1984	12.9	21471	18604	392851	-	-	18
1985	12.6	21692	19565	437053	-	-	13
1986	13.1	21337	18972	499373	-	-	25.2
1987	13.2	19000	16528	579409	-	-	31.7
1988	15.2	24428	22539	612873	-	-	21
1989	15.3	23403	21309	663045	-	-	67
1990	17.35	22000	19022	794041	-	-	46
1991	16.541	20576	19294	783873	62000	2600	20
1992	15.978	20413	18873	901452	123600	53708	165
1993	14.731	20132	21621	890000	126000	98000	192
1994	15.54	22780	19041	900298	174000	186000	234
1995	16.674	20461	18088	898383	201657	208126	86
1996	17.707	23299	22095	763240	119137	93886	5
1997	20.151	19820	20157	776917	199990	184533	28
1998	19.693	22124	22851	928100	195500	199300	1
1999	20.965	20960	22898	945316	233643	233069	8
2000	24.554	18722	21446	946900	191000	184800	4
2001	25.583	19209	22454	930374	251231	178646	2

2002	28.412	21590	23896	953081	283197	315259	8
2003	30.371	24289	27400	822780	234520	229432	9
2004	31.037	21195	22292	913087	263358	208319	162.15
2005	31.832	26704	28212	984876	279085	243945	2708.8
2006	34.293	24225	26762	962427	255677	151595	3020
2007	33.839	19996	22844	828164	279625	165710	2722
2008	32.595	23146	28940	909511	263566	170994	3175.6 3

Source: Statistical Bulletin (1976, 1988); Department of Mines (2002, 2008).

Appendix B: Gross Domestic Product Ogive Index, 1973 to 2009

Sectors	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84
Agriculture	0.558	0.357	0.199	0.178	0.095	0.025	0	0.001	0.001	0.008	0.018
Mining	0.002	0.002	0.005	0.01	0.029	0.156	0.412	0.233	0.036	0.28	0.42
Manufacturing	0.021	0.007	0.005	0.004	0.011	0.003	0.035	0.015	0.002	0.007	0.015
Electricity and water	0.068	0.045	0.035	0.05	0.053	0.061	0.063	0.058	0.054	0.052	0.057
Construction	0	0	0.01	0.027	0.028	0.035	0.024	0.028	0.017	0.033	0.022
Wholesale retail trade	0.025	0.038	0.031	0.055	0.096	0.093	0.144	0.137	0.155	0.121	0.117
Transport and communicati	0.036	0.041	0.029	0.039	0.034	0.055	0.066	0.063	0.057	0.051	0.057
Financial institutions	0.008	0.01	0.011	0.005	0.003	0.001	0	0.012	0.006	0.011	0.012
General government	0	0.003	0.01	0.025	0.02	0.012	0.001	0.045	0.086	0.061	0.047
Household, social and comi	0.04	0.034	0.026	0.037	0.034	0.042	0.05	0.044	0.036	0.042	0.045
GDP Ogive Index	0.758	0.537	0.361	0.43	0.403	0.483	0.795	0.636	0.45	0.666	0.81

Source: Own calculations using data from; *Statistical Bulletin (1976, 1988)*; *Bank of Botswana Annual Report (1999; 2007; 2008)* and *Stats Brief (2009)*.

Appendix B continued

1984/85	1985/86	1986/87	1987/88	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
0.026	0.035	0.045	0.051	0.026	0.028	0.027	0.022	0.029	0.033	0.036	0.042	0.046
0.706	0.968	0.928	1.091	1.316	1.106	0.095	0.706	0.754	0.6	0.638	0.79	0.842
0.023	0.02	0.019	0.026	0.023	0.024	0.021	0.021	0.027	0.024	0.024	0.024	0.025
0.056	0.056	0.054	0.057	0.063	0.062	0.061	0.056	0.059	0.06	0.064	0.066	0.066
0.038	0.054	0.054	0.045	0.006	0.005	0.002	0.007	0.01	0.012	0.013	0.016	0.017
0.074	0.068	0.083	0.076	0.007	0.008	0.016	0.017	0.002	0.002	0.004	0.004	0.003
0.059	0.058	0.061	0.065	0.051	0.046	0.04	0.034	0.037	0.034	0.035	0.035	0.036
0.012	0.014	0.016	0.016	0.008	0.005	0.002	0	0	0.002	0.002	0	0
0.039	0.018	0.027	0.019	0.008	0.023	0.033	0.057	0.04	0.034	0.029	0.021	0.023
0.045	0.05	0.052	0.057	0.039	0.036	0.03	0.026	0.03	0.03	0.031	0.036	0.036
1.078	1.341	1.339	1.503	1.547	1.343	0.327	0.946	0.988	0.831	0.876	1.034	1.094

1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
0.0567	0.6	0.06	0.06	0.058	0.067	0.066	0.068	0.065	0.062
1.096	1.456	1.11	0.843	0.744	0.958	1.014	1.125	0.94	0.734
0.029	0.036	0.035	0.035	0.035	0.039	0.042	0.041	0.039	0.038
0.063	0.063	0.061	0.057	0.055	0.055	0.086	0.051	0.052	0.052
0.023	0.029	0.025	0.023	0.023	0.027	0.031	0.034	0.031	0.03
0	0	0	0.003	0.004	0.001	0.002	0.001	0.003	0.001
0.043	0.047	0.045	0.043	0.043	0.046	0.039	0.036	0.036	0.033
0	0	0	0.001	0.001	0.001	0.001	0	0.001	0.003
0.026	0.013	0.027	0.051	0.062	0.052	0.056	0.031	0.036	0.051
0.04	0.045	0.041	0.04	0.037	0.036	0.034	0.04	0.039	0.036
1.3767	2.289	1.404	1.156	1.062	1.282	1.371	1.427	1.242	1.04

Appendix C: Export Commodity Ogive Index 1973 to 2009

Commodities	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
meat and meat product	0.994	0.425	0.627	0.133	0.116	0	0.009	0.036	0.009	0.005	0.006	0.034	0.036
Live Animals	0.138	0.14	0.141	0.141	0.135	0.141	0.142	0.142	0.142	0.142	0.142	0.143	0.142
Hides and skins	0.084	0.106	0.116	0.105	0.1	0.119	0.098	0.128	0.118	0.114	0.127	0.118	0.126
Diamonds	0.268	0.353	0.186	0.073	0.193	0.505	0.976	1.462	0.54	1.033	1.866	2.316	2.643
Copper nickel matte	0.143	0.012	0.031	0.266	0.101	0.118	0.005	0.026	0.058	0	0.016	0.028	0.022
Textiles	0.967	0.105	0.1	0.074	0.074	0.069	0.08	0.075	0.063	0.05	0.064	0.064	0.104
Soda ash	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle parts	0	0	0	0	0	0	0	0	0	0	0	0	0
All other goods	0.022	0.012	0.013	0.032	0.032	0.008	0.037	0.043	0.009	0.014	0.037	0.039	0.053
Export Ogive Index	2.616	1.153	1.214	0.824	0.751	0.96	1.347	1.912	0.939	1.358	2.258	2.742	3.126

Source: Own calculation using data from; *Statistical Bulletin (1982, 1988)*; *Bank of Botswana Annual Report (2009)*.

Appendix C continued

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.033	0.087	0.056	0.06	0.043	0.067	0.066	0.056	0.069	0.063	0.073	0.07	0.067	0.061	0.065	0.01								
0.142	0.142	0.1	0.1	0.099	0.1	0.1	0.099	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.012								
0.131	0.138	0.09	0.094	0.092	0.096	0.094	0.092	0.096	0.095	0.096	0.097	0.097	0.096	0.098	0.006								
2.54	3.457	3.642	4.073	3.535	4.813	5.265	5.6	5.197	4.46	4.28	4.227	4.036	2.833	3.044	0.037								
0.032	0.068	0.021	0.029	0.025	0.03	0.017	0.035	0.031	0	0	0.001	0.025	0.129	0.073	0.031								
0.095	0.102	0.058	0.058	0.043	0.063	0.069	0.075	0.068	0.068	0.044	0.025	0.043	0.01	0.019	0.008								
0	0.056	0.084	0.08	0.079	0.083	0.087	0.083	0.09	0.088	0.087	0.09	0.091	0.092	0.097	0.052								
0	0	0.017	0.002	0.001	0.021	0.063	0.063	0.045	0.042	0.043	0.055	0.087	0.091	0.086	0.006								
0.129	0	0.036	0.034	0.016	0.019	0.025	0.037	0.016	0.021	0.017	0.026	0.026	0.022	0.006	0.048								
3.102	4.05	4.104	4.53	3.933	5.292	5.786	6.14	5.712	4.937	4.74	4.691	4.572	3.434	3.588	0.21								

Appendix D: Sample of the interview questions and people interviewed

- 1) What is your understanding of Botswana's economic diversification?
- 2) How important is economic diversification for the economy of Botswana? How urgent is it?
- 3) How do you judge the progress made with economic diversification in Botswana?
- 4) What pattern of economic diversification could be regarded as most appropriate for the economy of Botswana? How does this compare to current patterns?
- 5) What role should Botswana's mineral resources play in the country's economic diversification?
- 6) Have the country's mineral resources been used for that purpose so far?
- 7) Could Botswana's mineral resources have been better used to encourage a diversified economic growth?
- 8) What are the principal constraints to economic diversification in Botswana?
- 9) Any suggestions to address these constraints?
- 10) Which of the abovementioned suggestions should be of priority for the economy of Botswana?
- 11) What are your views on regional integration and Botswana's economic diversification?
- 12) In your view, has the issue of Botswana's economic diversification been adequately researched?

NAME	ORGANISATION
Dr. K. Jefferies	Econsult
Mr M. Mosinyi	Botswana Export Development and Investment Authority
Dr. N. Charalambides	Imani Development
Dr. J. Sentsho	Ministry of Trade and Industry
Prof Roman Grynberg	BIDPA

