ASHESI UNIVERSITY COLLEGE

AN EVALUATION OF GOVERNMENTAL POLICIES USED IN THE MANAGEMENT OF NATURAL RESOURCES: A FOCUS ON BOTSWANA AND NIGERIA AND LESSONS FOR GHANA

By

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Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:………………………………………………………………

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I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by Ashesi University College.

Supervisor's Signature:………………………………………………………………..

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Abstract

This paper examines the theory of the resource curse in relation to Botswana and Nigeria, two countries in Africa abundant in natural resources. After reviewing existing literature relevant to the topic, this paper considers policies and regulations used in the management of natural resources from both countries in an attempt to find out how Botswana has managed to be identified as a country enjoying unmatched growth rates in Africa while Nigeria is barely taking advantage of the resources available to it. This analysis will serve as a reference point to the Ghanaian government on steps to take to avoid the resource curse in its enthusiasm to benefit from the Jubilee oil fields. With regards to Ghana, this paper reviews the Petroleum Revenue Management Act and its provisions for the collection and distribution of petroleum revenue in the country. The paper focuses on anti-corruption measures used in both countries to ensure the fair and equitable distribution of rent. The paper comes to the conclusion that transparency plays a key role in the growth and development of a country especially when it comes to resource revenue. It must therefore be noted that institutions play an important role in the management of resource revenue, and even though it is important to learn from other successful countries, policies used to combat corruption must be modified to suit the economic, political, social and legal environment of the particular country.

Keywords: natural resources, resource curse, institutions, corruption

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List of Acronyms

GDP	Gross Domestic Product
GNP	Gross National Product
IMF	International Monetary Fund
OECD	Organization for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
ICT	Information and Communications Technology
HDI	Human Development Index
SSA	Sub-Saharan Africa
NIE	Newly Industrializing Economy
FDI	Foreign Direct Investment
UNCTAD	United Nations Conference on Trade and Development
GNPC	Ghana National Petroleum Corporation
GRICS	Governance Research Indicator Country Snapshot
BHC	Botswana Housing Corporation
DCEC	Directorate on Corruption and Economic Crime
ICAC	Independent Commission Against Corruption
TICPI	Transparency International Corruption Perceptions Index
DDF	Domestic Development Fund
ICPC	Independent Corrupt Practices and Other Related Offences Commission
EFCC	Economic and Financial Crimes Commission
MoFEP	Ministry of Finance and Economic Planning
PRMA	Petroleum Revenue Management Act
PHF	Petroleum Holding Fund
BoG	Bank of Ghana

GRA	Ghana Revenue Authority
ABFA	Annual Budget Funding Amount
IAC	Investment Advisory Committee

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

According to the 2010 World Trade Report, natural resources are defined as "stocks of materials that exist in the natural environment that are both scarce and economically useful in production or consumption, either in their raw state or after a minimal amount of processing". Examples are oil and gas, gold, diamond, copper, nickel, emerald and uranium. Some countries are considered rich today due to the simple fact that they have effectively managed the natural resources which they have access to. Examples of these countries are Canada whose provinces like Alberta and Saskatchewan are endowed with coal, oil and gas, which have contributed to higher production in sectors like banking, retail and real-estate (Macquarie, 2011).

The same however, cannot be said for other countries who are abundant in some of these same resources but still find themselves in the undesirable category of low-income or developing countries. Gylfason (2001) points out that out of 65 countries which can be described as resource-rich, only four (Botswana, Indonesia, Malaysia and Thailand) have managed to achieve long-term investment of an average of more than 25% of Gross Domestic Product (GDP) from 1970 to 1998, and a per capita Gross National Product (GNP) growth of an average of more than 4% per year for the same period.

Sachs and Warner (1995 and 2001) (as cited by Carmignani and Chowdhury, 2010) describe this curious occurrence where resource-rich countries perform poorly as the resource curse. However, the criteria for determining why a country with resources will suffer the resource curse remains unclear in the literature.

Africa is ranked number one in the production of mineral resources like gold, platinum, cobalt and diamonds (Twerefou, 2009). This paper focuses on oil and diamond production in Africa because, as Twerefou (2009) points out, “the large deposits of mineral resources in Africa indicate that the continent has a wealth of natural capital which, if exploited sustainably, could turn the continent around”. This paper seeks to find out what oil and diamond rich African countries are doing to maximize the benefits they get from these minerals.

The table below shows some of the major oil producers in the world in 2009:

Table 1.1: Major producers of oil[1] in 2009

Country	**Number of barrels (in thousands)**	**Change[2] (2009 over 2008)**
Russian Federation	10032	1.50%
Saudi Arabia	9713	-10.60%
Iran	4216	-3.30%
China	3790	-2.80%
Nigeria	2061	-3.60%

(Source: BP Statistical Review of World Energy, 2010)

[1] Includes crude oil, shale oil, oil sands and NGLs (the liquid content of natural gas where this is recovered separately). Excludes liquid fuels from other sources such as biomass and coal derivatives.

[2] Annual changes and shares of total are calculated using million tonnes per annum figures. Growth rates are adjusted for leap years.

The table below shows the contribution of oil to the total export revenue of the 5 major oil producers in 2009 and their GDP per capita for the same year:

Table 1.2: Contribution of crude oil to total export revenue in 2009

Country	**Share of total exports**	**GDP per capita[3] in 2009**
Russian Federation	31%	$8,614.03
Saudi Arabia	73.94%	$14,744.61
Iran	78.17%	$4,334.13
China	0.18%	$3,738.95
Nigeria	84.50%	$1,111.75

(Source: International Trade Centre, 2010 and Economy Watch, 2011)

Table 2 shows that most of these oil producing countries are dependent on crude oil for a majority of their export revenue. With crude oil contributing almost 85% to Nigeria's export revenue, it is evident that with their low status of development, the country is not making good use of their revenue from crude oil exports.

Table 3 shows the 5 major diamond producers in 2008 and 2009:

[3] GDP per capita is expressed in current US dollars.

Table 1.3: Major producers of diamond in 2008 and 2009

Country	Diamonds[4] produced in 2008	Diamonds produced in 2009
Botswana	25000	32000
Russia	23300	21900
Canada	18000	12000
Angola	10000	8000
South Africa	6100	5200

(Source: USGS Mineral Commodity Summaries, as cited in geology.com)

The table below shows the contribution of precious stones to the total export revenue of the 5 major diamond producers in 2009:

Table 1.4: Contribution of precious stones to total export revenue in 2009

Country	Share of total exports	GDP per capita[5] in 2009
Botswana	64.85%	$6,436.95
Russia	0.40%	$8,614.03
Canada	3.34%	$39,682.89
Angola	1.15%	$4,081.98
South Africa	15.69%	$5,757.84

(Source: International Trade Centre, 2010 and Economy Watch, 2011)

The table above shows that out of the 5 countries, diamonds contribute the most to Botswana's revenue. In a public lecture at the Bank of Botswana in 2011, Naoyuki Shinohara, Deputy Managing Director of the International Monetary Fund (IMF), described Botswana as "a model for resource-rich

[4] The values above are estimated gem-quality diamond production per calendar year in thousands of carats.

[5] GDP per capita is expressed in current US dollars.

countries of how to manage resource wealth prudently." (Shinohara, 2011) It is therefore evident that Botswana is making good use of its revenue from natural resources.

It is not wrong to conjecture that the presence of natural resources in a particular country should result in economic development. Chenery and Strout (1966) argue with the two-gap model that resource wealth has to be properly allocated for success of the economy. Natural resources increase wealth and purchasing power in a country so resource abundance is expected to increase an economy's growth rates (Sachs and Warner, 1997). Sachs and Warner (1999) and Murphy, Shleifer and Vishny (2000) (as cited in Iimi, 2006) hold similar views on the importance of natural resources by explaining that resource wealth increases investment in economic infrastructure and develops human capital which helps to improve the economy. Resource wealth can also lead to an increase in the rate of savings and investment which, according to the Harrod-Domar model, will ultimately result in rapid growth of the economy (Todaro and Smith, 2006). This is however not always a reality. After gathering data from 89 countries, Iimi (2006) concluded that an abundance of natural resources in a country does not necessarily guarantee growth.

According to Sachs and Warner (1997), modern economic growth is characterized by resource-poor economies doing much better than resource-rich economies in terms of economic growth. This is evident with data collected from a sample of 95 countries from 1970 to 1990, where it was realized that countries which, in 1970, started by having a high proportion of natural resources to GDP experienced relatively slower growth than the other countries during the 20-year period.

However, Norway is an example of a country which challenges the resource curse theory of Sachs and Warner (2001). As the largest oil producer and exporter in all of Western Europe in 2010, Norway provided OECD (Organization for Economic Co-operation and Development) Europe with 12% of its crude oil imports and 18% of its natural gas imports (U.S. Energy Information Administration, 2010). The Norwegian government has used revenue from oil to not only increase investment in, among other things, environmental sustainability, provision of social welfare services and education, but also to give aid to developing nations like Tanzania, Zambia and Ethiopia (Encyclopedia of the Nations, 2011).

In spite of the abundant and credible information available on these countries and the effective strategies they used which helped them to use the resources to grow, good natural resource management seems still to be an incomprehensible notion. For most of sub-Saharan Africa, most people live in abject poverty and development is needed the most. For example, in her 2007 report entitled *Undermining development? Copper mining in Zambia*, Abi Dymond describes copper mining as the backbone of the Zambian economy with a 75% contribution to the country’s foreign exchange earnings. However, the people of Zambia experience high levels of poverty with 68% of the population living on less than US$1 per day (Dymond, 2007).

Several factors are responsible for this divergence from the norm where we would expect that the presence of resources in a country would result in an increase in wealth and a resulting increase in investment and growth rates (Sachs and Warner, 1997). Some of them are:

1. First, it is possible that a country which has an abundance of natural resources might end up depending on natural resource export for growth. This may lead its citizens to laziness as compared to people from “barren” lands who find that hard work is a necessity for survival. It is therefore important for a country to progress from a mentality of dependence on primary exports to one of manufacturing where more labour is needed and a higher standard of living is almost assured (Sachs and Warner, 1997).
2. Second, according to Sachs and Warner (1997), the Dutch disease model explains that a country rich in natural resources has the tendency to concentrate its factors of production (labour and capital) in the agricultural sector at the expense of the manufacturing sector. The “disease” here is the diminishing of the manufacturing sector which can lead to a slow growth rate because the economy will not enjoy the benefits of increasing returns to scale which is a major characteristic of the manufacturing sector. Cordon and Neary (1982) (as cited by Iimi 2006, p.5) also explain that sectors like

manufacturing are likely to suffer from the appreciation of the national currency which comes about due to the fact that earnings from natural resources are utilized by the 'domestic non-tradable sector.'

3. Also, Sachs and Warner raise the point that most young people go to school because they hope to obtain the skills they need to be employed in the manufacturing sector. If however a country invests heavily in its agricultural sector to the disadvantage of its manufacturing sector, then most people will choose to forgo education because they would expect to get higher wages from agriculture. This, in the long run, will lead to a largely uneducated and unskilled workforce.

Iimi (2006, p.4) also adds that natural resource wealth can also bring about conflict between stakeholders like politicians, mining companies, local groups and citizens who will be 'naturally motivated to seek unfair resource rents, quickly depleting natural resources and wasting resource revenue.' However, according to Mehlum et al. (2006), the primary reason for the differences in growth performance among resource-rich countries is the differences in the quality of the basic institutions in these countries.

This paper compares oil-rich Nigeria to diamond-rich Botswana because research indicates that no sub-Saharan African country produces crude oil equal to the magnitude that Nigeria does and still manages the resources from its export efficiently. Also, given that poor resource-rich countries can learn from rich resource-rich countries, Nigeria will be compared to Botswana instead of a European country like Norway which is also oil-rich because two sub-Saharan African countries provide a fair and equal platform for comparison.

1.2 COUNTRY BACKGROUND

1.2.1 BOTSWANA

1.2.1a Botswana Today

Current economic life:

Botswana is considered one of the fastest growing middle-income countries in the world. This is due to the rising prices of rough diamonds on the international market. In order to continue this growth the Batswana government has made the decision to diversify the economy from the mineral sector to the services sector by supporting growth in the private sector. This will reduce the effects of the global economic crisis and help with the government's overall objective to eradicate poverty in the country (IMF, 2011).

According to the IMF's 2011 staff report on Botswana, the government has to focus on the high unemployment rate in order to improve the quality of growth in the country.

General data:

- Name of President – Lt. General Seretse Khama Ian Khama
- Capital city - Gaborone
- Major cities – Francistown, Maun, Selebi-Phikwe and Kanye
- GDP per capita in 2010 (current prices, US Dollars) – US$ 7,627.46

- Population – 2,065,398 (July 2011 est.)
- Inflation rate (Average consumer price change % in 2010) – 6.95%
- Ranking:
    - Democracy – 39 (out of 150)
    - Media freedom – 49 (out of 150)
    - Internet penetration – 5.9%

(Source: Economy Watch, 2011 and World Audit, 2001)

1.2.1b History, Evolution and Development of Botswana

As at independence in 1966, Acemoglu et al. (2001) point out that conditions were not favorable in Botswana to promote much growth. The level of education was very poor with only two secondary schools in the country that offered the required five-year courses and only 80 Batswana in their final year. Also, an unproductive agricultural sector meant that at the time, 10% of GDP was used for the importation of food. These conditions led most economic analysts to describe Botswana as ‘a dependent underdeveloped labour reserve for South Africa’ (Acemoglu et al., 2001).

Despite these difficult initial conditions, in the last 35 years, Botswana has had the highest per capita growth rate of any country in the world and this, according to Acemoglu et al. (2001), can be attributed to the policies implemented in Botswana as a result of its solid institutional structure.

Acemoglu et al. (2001) explore the subject of institutions in Botswana by asking why, as compared with other African countries, Botswana end up with such good and effective institutions. They attribute this to a number of factors:

1. First, in the pre-colonial era, tribal institutions had a lot of influence and placed constraints on the activities of the political elite.
2. Botswana was not a major concern of the British in colonial times so the British did not have a significant effect on these tribal institutions.
3. After independence, the elites recognized that maintaining and reinforcing the established institutions of private property was in their best interest because they ensure political stability and encourage investment in the country.
4. Income from diamonds created enough rents for the main political actors that nobody wanted to incur the additional cost of looking for rents elsewhere.
5. Important decisions made by post-independence leaders like Presidents Seretse Khama and Quett Masire went a long to strengthen institutions in Botswana.

Since independence, Botswana's national development goals have been based on the following objectives: gender equality, environmental conservation, social justice and sustained economic growth and development. The government has made a lot of effort to achieve these objectives. There has been a lot of investment on social services including education, health and urban and regional development. Primary and secondary education is free while quality health care is either free or for a token amount. There has also been a decline in population growth due to the good policy choices and the decision of educated, urban women to use modern contraception (Fibaek, 2010).

Life in Botswana is however not all rosy. Botswana has one of the highest adult HIV/AIDS prevalence rates in the world and there are also incidences of inequality and high poverty and unemployment rates especially in the rural areas (The World Bank, 2010). Nevertheless, Acemoglu et al. (2001) claim that Botswana has enjoyed relatively successful economic policies which are reflected in its economic progress.

1.2.2 NIGERIA

1.2.2a Nigeria Today

Current economic life:

Nigeria is recognized for its major oil reserves whose benefits are not reflected in the standard of living of the citizens of the country. The government of Nigeria is making conscious efforts to direct Foreign Direct Investment (FDI) to sectors like agriculture, manufacturing and services. The government is also encouraging investment in the private sector and putting in measures to reduce the level of corruption in the country. These actions are intended to help eradicate poverty and create better opportunities for all Nigerians (UNCTAD, 2009).

General data:

- Name of President – Goodluck Jonathan

- Capital city - Abuja
- Major cities – Lagos, Kano, Ibadan, Kaduna and Port Harcourt
- GDP per capita (current prices, US Dollars) – US$ 1,389.31
- Population – 155,215,573 (July 2011 est.)
- Inflation rate (Average consumer price change % in 2010) - 13.72%
- Ranking:
    - Democracy – 89 (out of 150)
    - Media freedom – 69 (out of 150)
    - Internet penetration – 28.9%

(Source: Economy Watch, 2011 and World Audit, 2001)

1.2.2b History, Evolution and Development of Nigeria

Nigeria gained independence from the British on October 1st 1960 but did not become a Republic until 1963. Even after the first elections in 1964, the country went through thirteen years of military coups and two and a half years of civil war, characterized by, among other things disease and starvation which resulted in the deaths of one to three million Nigerians (Library of Congress, p.4)

Nigeria finally returned to civilian rule in 1979 under President Alhaji Shehu Shagari. This happened amid a lot of anticipation of limitless development since oil prices were high and revenues from this resource were rising steadily. The excitement however came to an end with the end of the oil boom in 1981 and the consequent recession. This led to a lot of uncertainty about the effectiveness of civilian rule and the country experienced another set of coups and military rule from 1983 to 1998. Corruption thrived in the country but especially under General Sani Abacha's rule (1993-1998) and in 2005 funds of as much as US$458 million was recovered from personal accounts in Swiss banks that Abacha had siphoned from oil revenues (ibid, p. 5-6).

Lieutenant General Olusegun Obasanjo finally took over as a civilian leader in 1999 but there were a lot of unexpected problems he had to deal with: Religious tensions grew fiercer in 2000, ethnic problems started a tribal war in 2001 in the South-East and riots occurred in the oil-rich Niger Delta against international workers (ibid, p. 6-7).

Nigeria is rich in minerals such as coal, gemstones, gold, marble, salt and uranium. The mining industry which contributed a lot to GDP in the 1960s accounts for only 1% of GDP now because of high production costs but low productivity. With oil reserves which make it the tenth largest in the world, Nigeria (a member of OPEC: Organization of the Petroleum Exporting Countries) has oil reserves of 36.2 million barrels and in 2006 it produced 2.4 million barrels per day of oil. Attacks on oil facilities and workers in 2006 have however led to a 25% reduction in Nigeria's oil exports and this continued into 2008 (ibid, p. 8-13).

The Nigerian economy is struggling to control the country's huge wealth in fossil oils in order to eliminate the poverty that affects almost 57% of the Nigerian population. The World Bank estimates that 80% of energy revenue helps only 1% of the population and economists call this occurrence of huge natural resource wealth and severe poverty in Nigeria and other developing countries the “paradox of plenty” or the “curse of oil” (Library of Congress, p.10). In 2004, the United Nations (UN) found that Nigeria had made progress in providing universal primary education and protecting the environment but had however failed to reduce poverty and hunger and child maternal mortality (ibid, p.11).

After coming into office in May 2007, President Umaru Musa Yar’adua adopted a policy known as Vision 2020 which hopes to transform Nigeria into one of the top-20 economies by the year 2020. Among other things, the policy aimed to deal with the problems of agriculture, employment, security and education (ibid, p.11).

In a country report for the World Bank (2011), Foster and Pushak claim that compared to most African countries, the Nigerian government has made a lot more effort to improve the infrastructure of the country and consequently, the lives of the people. Over the last few years, a lot of progress has been made in the areas of road and rail transport and the provision of power and information and communications technology (ICT) (The World Bank, 2011).

The electricity sector is being restructured to provide be a reliable source of power to many more people. The ICT sector has been privatized. This has resulted in Africa’s most active fixed-line service and a wider coverage of cheaper mobile services for the people. The domestic air transport sector has grown with the introduction of reliable private delivery services (ibid).

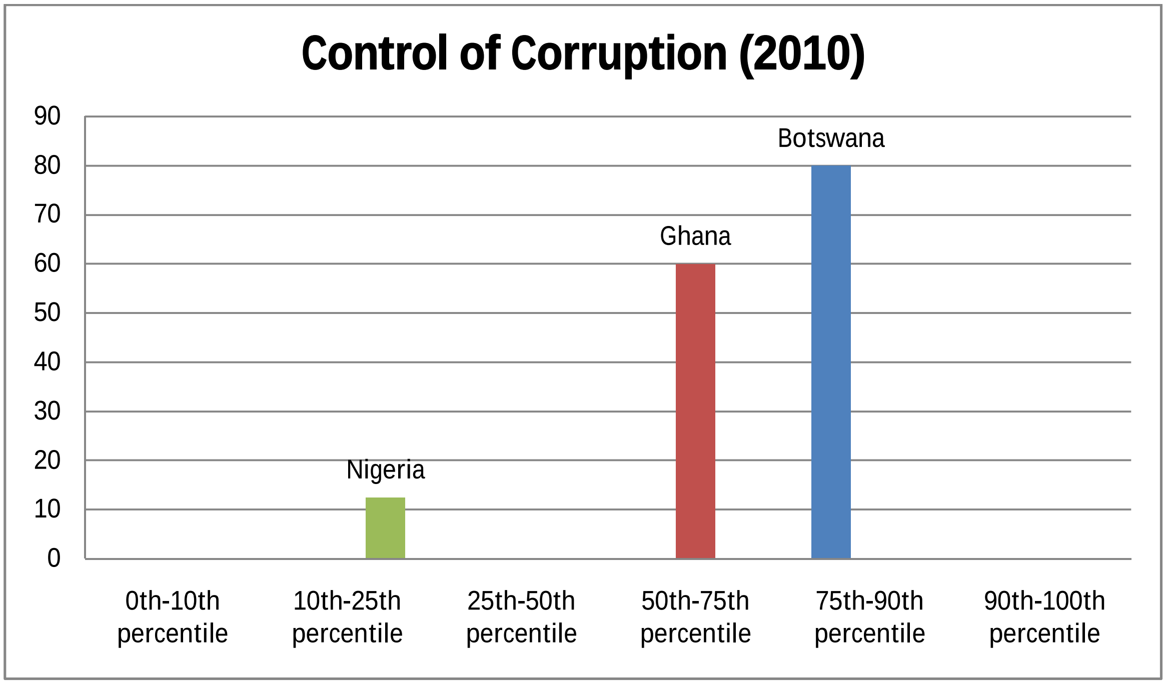
In spite of all these however, there still remain a number of challenges that the Nigerian government must deal with:

The lack of investment and the inability to produce efficiently and to full capacity means that supply of power is very unreliable and only about half the demand of power is being met. Health and sanitation is also another sector that needs urgent attention. Only a fraction of the nation has access to piped water and even this has been falling sharply in recent years. Despite the government's efforts to improve road transport, the roads in Nigeria are still in poor state which means that they are not being maintained adequately (The World Bank, 2011).

A lot more needs to be done to improve the effectiveness and efficiency of these different sectors to improve the well-being of the Nigerian people. In order to make any progress however, it is obvious that the problem of corruption for which Nigeria is so well-known has to be dealt with. In 2007, Transparency International ranked Nigeria 147 out of 179 countries in its Corruption Perceptions Index (Library of Congress, 2008).

Todaro and Smith (2006) explain that the removal of corruption is key to development because it increases investment and consequently, the growth of the economy.

Figure 1.1: A comparison of the level of control of corruption in Botswana, Ghana and Nigeria.[6]



(Source: Kaufmann D., A. Kraay, and M. Mastruzzi (2010), The Worldwide Governance Indicators Methodology and Analytical Issues (as cited by the World Bank, 2011)).

Figure 1.1 illustrates the fact that Botswana (75th – 90th percentile) and Ghana (50th – 75th percentile) are doing much better at controlling corruption than Nigeria who is in the 10th – 25th percentile. It is obvious then that corruption is a major problem that has to be dealt with in Nigeria since it could be a contributing factor to Nigeria's underdevelopment.

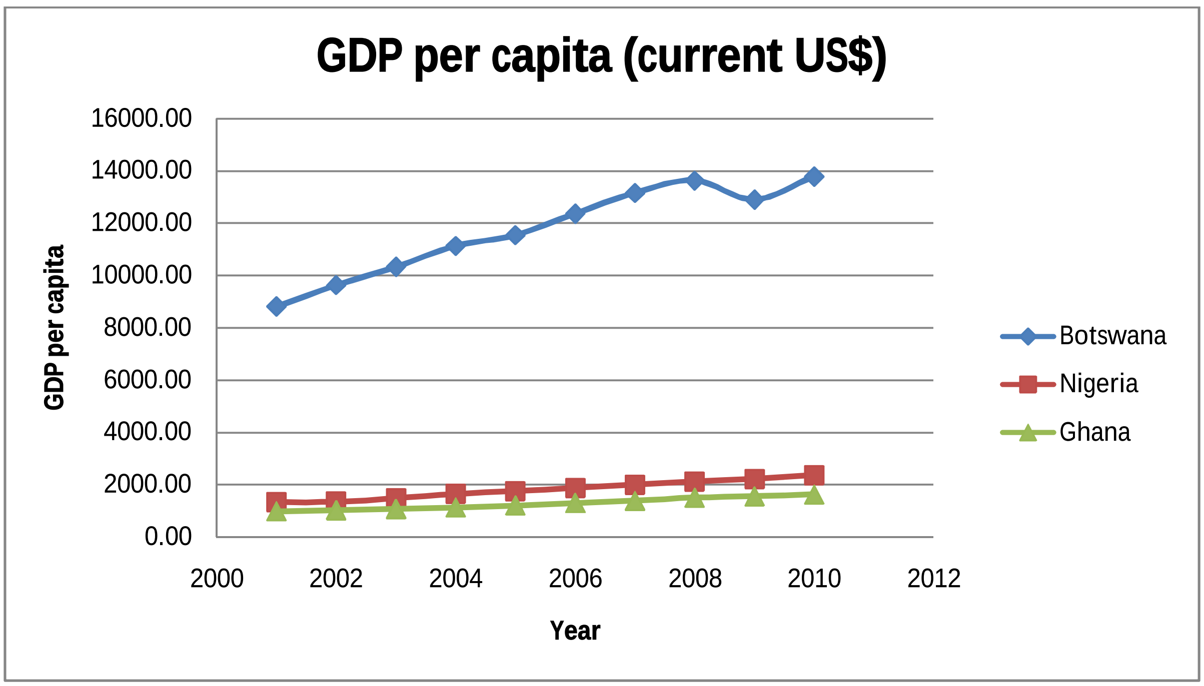
Gross Domestic Product or GDP is the market value of all goods and services

[6] The governance indicators presented here aggregate the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of institutes, think tanks, non-governmental organizations and international organizations.

produced in a country within a single year. GDP per capita is therefore calculated by dividing GDP by the total population in the country. It is therefore used an indicator of standard of living.

Figure 1.2 shows that Botswana has a considerably higher standard of living as compared to Ghana and Nigeria.

Figure 1.2: <u>A comparison of the GDP per capita of Botswana, Nigeria and Ghana.</u>

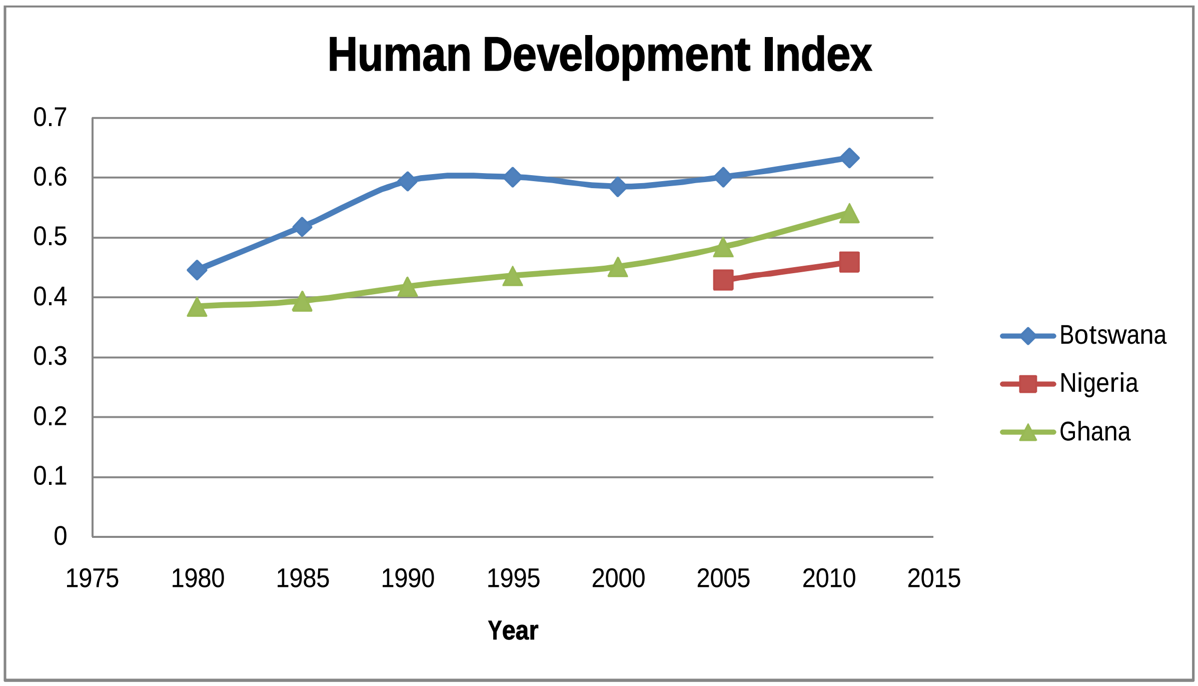


(Source: The World Bank, World Development Indicators)

The Human Development Index (HDI) is used to rank countries based on standard of living, life expectancy and literacy level.

Figure 1.3 shows that from 1980 to 2010 Botswana has enjoyed a relatively higher human development index as compared to Ghana and Nigeria with an index showing medium human development (0.50 to 0.799) (Todaro and Smith, 2006).

Figure 1.3: A comparison of the Human Development Index of Botswana, Nigeria[7] and Ghana.



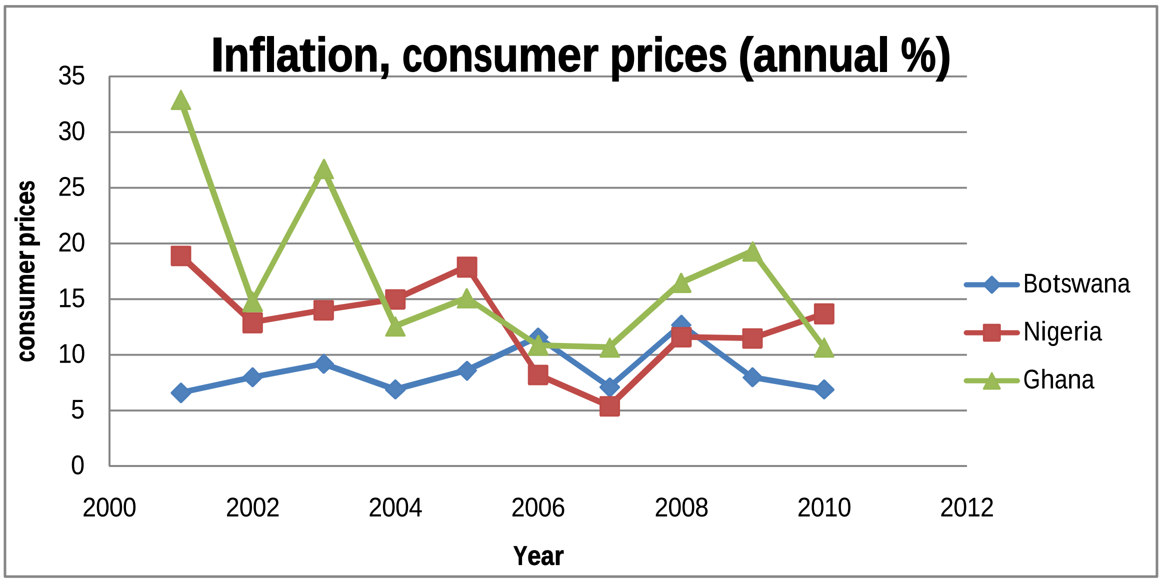
(Source: UNDP, International Human Development Indicators)

Inflation is the rate at which prices of goods and services are rising in a country. A high inflation rate means that the purchasing power of citizens is falling and they pay more today for less goods and services than they did when the inflation rate was lower.

[7] Data for Nigeria's Human Development Index is incomplete because there is no data for Nigeria's literacy level before the year 2005.

Figure 1.4 shows that Botswana has a had a generally low inflation rate, staying mostly in the single digit range while the inflation rates of Ghana and Nigeria lie mostly in the double digit range.

Figure 1.4: <u>A comparison of the inflation rates of Botswana, Nigeria and Ghana.</u>



(Source: The World Bank, World Development Indicators)

The above graphs illustrate the fact that in the past 30 years, as is the case of the Human Development Index, and in the past 10 years, as is the case of the GDP and inflation graphs, Botswana has done much better than both Nigeria and Ghana in terms of economic development. It is evident from the graphs that Botswana has moved far ahead of the other 2 countries in its attempt to provide a better life for the inhabitants of its country.

1.3 MOTIVATION

Botswana and Nigeria are two countries in sub-Saharan Africa that are rich in many different natural resources. Botswana, on one hand, has avoided the resource curse and is one of the fastest growing economies of the world, not to mention Africa, while Nigeria is characterized by corruption, inequality and high rates of unemployment. This suggests that either Botswana is doing something that Nigeria is not or Nigeria is doing something it should not be doing. The motivation for this research emerged from a genuine curiosity about what this 'something' is and with the finding of oil in Ghana, it is important to ask the question: "Is the mere presence of some natural resource or other sufficient to improve the lives of people in a country or do other factors come into play?"

Both countries discovered their natural resources while still under colonial rule. However, considering the fact that as compared to Nigeria, Botswana enjoyed relative political stability after independence, it will be interesting to determine whether media freedom and democracy have a direct or indirect effect on the management and distribution of resources since they foster political stability.

1.4 PROBLEM STATEMENT

It is evident that the presence of natural resources in a country and their effective management go a long way to improving the lives of the people in the country. The finding of oil in Ghana by Tullow Oil in June 2007 off Cape Three Points has caused a lot of buzz in the Ghanaian media and a lot of people are looking forward to the expected revenue that is estimated to be billions of pounds (Rice, 2007). This will finally give government the revenue it so desperately needs to improve the lives of Ghanaians by providing infrastructure and social amenities like good roads, hospitals and clinics, schools and quality teaching materials.

However there is ambiguity in the literature about the actual effect of resource wealth on the growth and development of a country. Unlike Nigeria, Ghana found oil after many years of democratic rule although Ghana's economic and political experience is close to Nigeria's. Unlike Botswana which is more homogenous in terms of tribal composition, Ghana has many tribes. Further, unlike Botswana, Ghana established media freedom before finding oil. However like Botswana, Ghana was democratic before oil as a natural resource became a big player in the economy. The research problem here concerns how well (or not) Ghana's economy will perform having found oil and in particular whether that performance will be closer to Nigeria's performance or Botswana's.

1.5 RESEARCH QUESTIONS

Considering the cases of both Nigeria and Botswana, Ghana's oil find has equal chances of going either way. It is crucial that in these beginning stages a path be chosen, and the right one at that, in order for there not to be any regrets in the future.

The research questions for this paper are:

1. How did the policies that the government of Botswana implemented make a difference in terms of development?
2. How did the policies that the government of Nigeria implemented make a difference in terms of development?
3. How will these serve as guidelines to the government of Ghana's own policies?

1.6 RESEARCH OBJECTIVES

The goals of this paper are:

1. To make a comparative analysis of Nigeria and Botswana's policy making and restructuring processes after the finding of their respective natural resources and the effect this had on economic growth and development.
2. To find out what policies have been put in place in Ghana since the oil find.
3. To make some recommendations to the Ghanaian government based on the comparison, on how to effectively utilize the oil find to the benefit of the whole country.

1.7 RELEVANCE OF RESEARCH

1. Since the oil find in Ghana is fairly new, there is a gap in literature addressing the effect of policies put in place to effectively manage the revenue from this resource.
2. Revenue from oil may be of little use if Ghana does not position itself to maximize gains.

3. Revenue from oil will fund developmental projects in the country.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

With regards to the reasons as to why resource-poor countries do economically better than resource-rich countries, existing literature is almost entirely consistent in its contention that the main reason is the lack of quality institutions in these resource-rich countries. In their 2010 article entitled *Why are natural resources a curse in Africa, but not elsewhere?*, Carmignani and Chowdhury (2010) tested the relationship between natural resources and growth in Sub-Saharan Africa (SSA) by studying the dependence on natural resources by SSA countries and its effect on GDP levels from 1960 to 2008. They found that in the almost 50 year period, SSA's GDP grew by an average annual rate of 0.74% while the proportion of natural resource export to total goods export declined minimally from 77% to 65.1% (Carmignani and Chowdhury, 2010). They therefore conclude that natural resources are not a curse in themselves but are dependent on some other conditions existing in the economy.

According to Sachs and Warner (1997), the unusual occurrence that we see today of resource-poor countries outperforming rich countries is not a new one. They claim that in the 17^{th} century, the Netherlands outdid Spain in terms of economic development despite Spain's wealth in silver and gold, in the 19^{th} century, Switzerland and Japan surpassed resource-rich Russia and even more recently it is obvious that the Newly Industrializing Economies (NIEs) of East Asia- Korea, Hong Kong and Singapore- are far outshining the oil-rich countries of Mexico, Nigeria and Venezuela (Sachs and Warner, 1997). Why is this so?

To fully answer this question, the literature reviewed will provide knowledge on the link between natural resource abundance and economic growth, that is, the effects that the presence of natural resources have on the economic growth and development of a country. Lastly, literature will also be reviewed on the concept of institutions and their importance in an economy.

2.2 THE EFFECT OF NATURAL RESOURCES ON ECONOMIC GROWTH

In their paper entitled *Natural Resource Abundance and Economic Growth*, Sachs and Warner (1997) address the issue of the negative relationship between resource abundance and growth. According to Sachs and Warner (1999) and Murphy, Shleifer and Vishny (2000) (as cited in Iimi, 2006), it is natural to expect that resource abundance should increase investments in an economy and hence, raise its growth rates. Sachs and Warner (1997) give an example of Britain, Germany and the U.S. in the late nineteenth century who used their abundance in coal and iron ore to build local steel industries that contributed to their quick industrial development. Chenery and Strout (1966) made the argument about the growth-stimulating power of resource wealth in an early paper in 1966 where they discussed the 2-gap model. According to their argument, resource poor countries need two factors to grow; savings and foreign exchange. These two factors (or gaps) can be provided by resource wealth or foreign aid so resource wealth is not inherently bad.

However, as Sachs and Warner (1997) show, from cross-country growth equations, that there was an inverse relationship between natural resource abundance and growth from 1970 to 1990 from a sample of 95 developing countries. Iimi (2006) holds similar views on this negative relationship between resource abundance and economic growth. In his paper, *Did Botswana Escape from the Resource Curse?*, Iimi (2006) agrees that the resource curse idea is a common one. He however cites Botswana as another example of a country that seems to be doing the opposite with an average growth rate of 7.8% since the 1980s that can be attributed to its abundance in diamonds.

From Sachs and Warner's (1997) findings they concluded that even though economies were booming in the 1970s and conditions were favorable for primary producers, countries rich in primary resources still grew slower than other countries. From their sample of 95 countries, they found only 2 countries – Malaysia and Mauritius – which had an abundance of natural resources but still maintained a high average per capita growth. This, they attributed to the fact that both countries encouraged open trade which drove their labour-intensive manufacturing exports. Their high levels of growth therefore came about because instead of basing their economies on their natural resources, they rather supported their manufacturing industries.

Iimi (2006) uses the linear growth regression model to find out the relationship between abundance in natural resources and governance and their combined effect on economic growth. Governance here comprises of accountability, the effectiveness and efficiency of government and anticorruption policies (ibid). Iimi (2006) found that in the short-run governance does not have a significant impact on growth. However in the very-long run, when natural resources are brought into the equation, governance has a hand in transforming resource abundance into economic growth and development. He therefore concludes that having an abundance of natural resources alone does not automatically result in growth but with the addition of effective management of resources by government this growth can be realized.

Gylfason, in his 2001 paper *Natural Resources and Economic Growth: What is the Connection?*, pointed out that from 1970 to 1998, Indonesia, Malaysia, Thailand and Botswana were the 4 resource-rich countries out of 65 that were able to obtain high average rates of GDP and GNP per capita growth. The 3 Asian countries - Indonesia, Malaysia and Thailand – did this by industrializing while Botswana did not. Iimi (2006) explains that Botswana's success can be attributed to its good governance and reliable institutions, especially in the area of private property.

Sachs and Warner (1997) also look into the issue of the quality of institutions, their effect on investment and hence, growth. They began by saying that there is an almost direct relationship between rule of law and the quality of institutions. Sachs and Warner (1997) therefore considered rule of law to represent the efficiency of institutions in a legal and political framework. They concluded that the quality of institutions in a country is directly related to growth while resource abundant countries tend to have lower quality institutions.

2.3 THE IMPORTANCE OF INSTITUTIONS

According to North and Thomas (1973) as cited by Acemoglu et al. (2004), contrary to traditional neoclassical growth models, the fundamental cause for the difference in economic growth and development among countries is the difference in institutions. Acemoglu et al. (2004) define good economic institutions as those that allow people to own property and also, provide equal access to economic resources to a majority of the people.

North (1990) defines institutions (cited in Acemoglu et al. 2004, p. 1) as "... the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction." The paper by Acemoglu et al. (2004) goes on to describe economic institutions as decisions like property rights and the presence of markets that determine economic outcomes. Economic institutions are important because they determine how resources are efficiently allocated. Individuals with no rights to property are not motivated to invest in human or physical assets which lead to these resources becoming redundant because their full potential is not taken advantage of. Also, when markets are absent or overlooked, more often than not, gains from trade are wasted and resources are not distributed fairly. Therefore, in order for a society to grow, it needs to encourage innovation and the efficient allocation of resources through its institutions. Consequently, differences in economic institutions are the major reason why countries have different levels of economic growth and prosperity (Acemoglu et al. 2004).

To support this claim, Acemoglu et al. (2004) undertook a number of experiments:

1. The Korean Experiment: This experiment aimed to contrast and compare North and South Korea on the basis of their equality in all aspects (culture, geography and history) except the quality of their institutions. While the North adopted the ideologies of the socialists by putting an end to property rights, the South encouraged free markets and the ownership of property. By 2000, South Korea had transformed into one of the world's leading economies with a level of income of $ 16,100 while North Korea's growth rate declined with an income level of $1,000.
2. The Colonial Experiment – The Reversal of Fortune: This experiment focused on the effect that European influence had on institutions in many different countries. The Europeans imposed very different institutions in these countries, evidenced by the different institutions that can be found in places like North-East America and the Caribbean. However, the Indians who were one of the richest people in 1500 are now one of the poorest while the poorer North Americans and Australians are now among the richest. Acemoglu et al. (2004) realized that it was common for densely populated areas to have bad institutions because their European colonizers did not respect the

property rights of the majority while in sparsely populated areas where the Europeans settled themselves, it was in their interest to establish good institutions. Therefore, the “reversal of fortune”, according to Acemoglu et al. (2004), was due largely to the differences in the quality of institutions.

Mehlum et al. (2006) hold similar views on the importance of quality institutions in an economy. In their article, *Institutions and the Resource Curse*, Mehlum et al. (2006) plotted 2 graphs: one with the average yearly economic growth from 1965 to 1990 on one axis with countries with bad institutions that have their resource exports contributing more than 10% to their GDP on the other axis. The second graph had the average yearly economic growth from 1965 to 1990 on one axis with countries with good institutions that have their resource exports contributing more than 10% to their GDP on the other axis. They found out that there was evidence of a resource curse in countries with bad institutions while the opposite was true for countries with good institutions. They describe good institutions as producer friendly institutions which use resources to raise income and bad institutions as grabber friendly institutions that, in spite of natural resources, have a low level of aggregate income. Producer and grabber friendly institutions are defined based on indices from Political Risk Services – “a rule of law index, a bureaucratic quality index, a corruption in government index, a risk of expropriation index and a government repudiation of contracts index” (Mehlum et al. 2006, p. 13) with the index running from one (high) to zero (low). Mehlum et al. (2006) go further to cite Botswana as an example of a resource-rich country whose good institutions (evident in its good score on the Gronigen Corruption Perception Index) has resulted in the country having one of the world's highest growth rates. They therefore conclude that economies with producer friendly institutions invariably do much better than economies with grabber friendly institutions.

I test this theory building on Sachs and Warner's influential works on the resource curse. My main hypothesis – that institutions are decisive for the resource curse – is confirmed. My results agree with the claims of Sachs and Warner that the quality of institutions in a country does have an effect on the growth of that country.

2.4 INSTITUTIONS IN SUB-SAHARAN AFRICA

In their 2010 article *Why are natural resources a curse in Africa, but not elsewhere?* Carmignani and Chowdhury explore the subject of the resource curse and conclude that this curse applies only to sub-Saharan Africa and not anywhere else and this is due to the relationship between institutions and natural resources.

Research by Carmignani and Chowdhury (2010) shows that between 1960 and 1980, the ratio of natural resource exports to total exports in sub-Saharan Africa declined insignificantly by 11.9% from 77% to 65.1% while the average annual growth rate for GDP per capita was a dismal 0.74%. They explain that recent research has gone a long way to show that a major reason why a high dependence on natural resources does not lead to economic growth and development is that, especially in sub-Saharan Africa, there is a weakness in institutions, the management of resources and consequently, a deficiency in the quality of education and health and public infrastructures. Hence, Carmignani and Chowdhury's (2010, p. 4) argument is that 'natural resources are not a curse per-se, but rather they are curse depending on some other initial conditions of the economy', and these conditions are, for the most part, the institutional development of the economy. Mehlum et al. (2006), Snyder (2006) and Boschini et al. (2007) (cited in Carmignani and Chowdhury, 2010) all hold similar views on this issue and state that the effect of natural resources on growth is dependent on the quality of basic institutions.

Carmignani and Chowdhury (2010) use a standard growth regression to understand why the natural resource curse is specific to SSA.[8] Using a sample of 109 countries, Carmignani and Chowdhury (2010) concluded that even though it will be easy to assume that the negative relationship between the presence of natural resources and economic growth is caused by the countries' dependence on resources that are not conducive for growth, the fact is only a few of the resources are not conducive for growth. Therefore,

[8] The table below compares the 5 largest non-African oil producing countries and their GDP per capita in 2009 with the GDP per capita in 2009 of the 5 largest oil-producing Africa countries to determine whether the resource curse is indeed specific to Africa:

African Country	GDP per capita (current prices)	Non-African Country	GDP per capita (current prices)
Algeria	US$ 3,925.92	United States	US$ 45,934.47
Angola	US$ 4,081.98	Russia	US$ 8, 614.03
Libya	US$ 9,371.31	Saudi Arabia	US$ 14,744.61
Nigeria	US$ 1,111.75	China	US$ 3,738.95
Egypt	US$ 2,455.83	Iran	US$ 4,334.13

(Source: Economy Watch, 2011)

the key to understanding the negative relationship is understanding the relationship between institutions and natural resources.

2.5 SUMMARY OF LITERATURE

In general, the literature on natural resources, institutions and economic growth suggest that the resource curse will be a thing of the past as long as countries invest in institutions that will promote property rights and equality before the law. This will give everybody an equal opportunity in society and therefore serve as an incentive for them to work harder to improve their lives.

It is pertinent to note also that although institutions have been accounted in a broad sense in the resource curse debate, the role of media freedom and its consequence for increasing transparency in a resource rich country has been largely ignored. Since Armah and Amoah (2010) find that media freedom reduces corruption and fosters political stability, an interesting line of enquiry is how media freedom will affect the resource curse debate especially in Ghana which enjoys media freedom.

Further, despite the recent oil find in Ghana, available literature provides little information on the quality of institutions in Ghana to manage this resource. The objective of this research is to fill in the gap in the literature on the policies that have been put in place since the oil find and determine whether their implementation will result in the economic growth and development that is so needed.

CHAPTER 3: METHODOLOGY

3.1 INTRODUCTION

This chapter discusses the research tools and methods of data collection used for this study. It explains the data collection methods used and the data sources. The primary objective of this study is to learn from the policies that Nigeria and Botswana used to manage their resource wealth, and determine and evaluate what policies the government of Ghana has put in place to prevent Ghana from experiencing the resource curse with its oil find. The major institution responsible for this is the national oil company, the Ghana National Petroleum Corporation (GNPC).

3.2 DATA AND METHODS

1. Scope: This study focuses on natural resources in Nigeria, Botswana and Ghana and the scope of the data considered ranged from the year the resources were discovered in the respective countries to date. Data on Ghana was from 2010 after extraction of oil first began, on Nigeria from 1956 after the first oil find and on Botswana from the early 1990s after the first major incidences of corruption.
2. Data collection: Qualitative techniques through interviews and the analysis of secondary data obtained from GNPC was the principal method of analysis employed. GNPC is the only institution that is authorized to monitor the collection and distribution of petroleum revenue in Ghana that is why it was the main source of information for the research.

3. Sampling Techniques: The purposive sampling technique was used because considering the topic, it was decided that key authorities on oil and governmental policies would have the knowledge and expertise to provide required information. Mr. Sam Addo Nortey, a principal auditor at GNPC was recommended. He provided a breakdown of the Petroleum Revenue Management Act (Act 815), the framework passed by Parliament for the collection and distribution of petroleum revenue.

   In order to get first hand information on Nigeria that will either support or challenge secondary data reviewed, two Nigerian students from Ashesi University College, Ms. Osarieme Thelma Osagie-Erese and Mr. Adesanya Oluwatomi Ayomide, were interviewed.

   Secondary data played an important role in the study because it provides already existing data on the structural policies of Botswana, Nigeria and Ghana and their effects on their respective economies. Sources of secondary data were Internet sources, Journals and the budget statements of all three countries.

4. Data Collection: Considering the nature of the topic, I decided to use unstructured interviews because they allowed me to use open-ended questions whose wording I could change at will. This made the interviews flexible and allowed me to probe into exactly what the government is doing and the concept behind the Petroleum Revenue Management Act.

5. Data Analysis Techniques: The analysis of the interviews was descriptive in nature and was used to find out if they agreed with my

findings from the secondary data. Findings from the interviews and secondary data were used to make suggestions and recommendations to the Ghanaian government on what to do to end up like Botswana not Nigeria.

6. Limitations of Research:

   a. There was a high possibility that the interviewee would be biased towards the government since he is employed in a state-owned institution.

   b. Some data requested were marked as confidential.

In spite of these limitations, data collected was sufficient to perform a thorough analysis.

CHAPTER 4: ANALYSIS OF PROJECT RESEARCH AND DISCUSSION OF RESULTS

4.1 INTRODUCTION

This chapter presents and discusses the findings from data collected. The first section addresses the question, "what policies did the governments of Botswana and Nigeria implement to ensure the equitable distribution of resource revenue and growth and development" was answered with a focus on corruption. The second section gives an overview of the policies the government of Ghana has implemented or is planning to implement in relation to the oil being extracted off Cape Three points in the South-Western part of the country.

Stapenhurst and Sedigh (1999) (as cited by Gbadamosi 2005) define corruption as 'the abuse of power, most often for personal gain or for the benefit of a group to which one owes allegiance'. Gbadamosi (2005) states that the problem of corruption has been oversimplified to mean financial exchanges between persons for favours. He however clarifies this by adding that it includes:

> the issues of exchange of gifts, requests for loans, conflict of interest, misuse of position by abusing ones office including: misusing confidential information, government property, and official time among others. (Gbadamosi 2005, p. 4)

Todaro and Smith (2006) highlight on corruption by explaining that its removal is key to development because it increases the rate of investment and consequently, boosts the growth of the economy. Gbadamosi agrees with this view in his 2005 paper *Corruption Perception and Sustainable Development: Sharing Botswana's Anti-Graft Agency Experiences*. According to him, good governance and transparency are essential in Africa to break the vicious cycle of poverty and the way to do this is to create a state free of mismanagement.

4.2 BOTSWANA AND CORRUPTION

Three Presidential Commissions of Inquiry, two in 1991 and one in 1992, uncovered major cases of corruption in the Botswana government. In the first case, laid down procedures for the supply of textbooks to primary schools were not followed and this resulted in the loss of P27 million (US$15 million at the time) to the state. In the second case, some Cabinet Ministers were found to be involved in unfair distribution of land. In the third case, the CEO of the government institution, Botswana Housing Corporation (BHC), was found to have embezzled the organization's funds (Gbadamosi, 2005).

Good (1994) describes corruption in Botswana as restricted to the elite and not an epidemic as is the case in Nigeria. Good (1994) however blames the corruption on the country's rapid growth which has intensified the inequalities in the distribution of property and income. He warns that corruption in Botswana might get out of hand if strict steps are not taken to improve morality and discipline the leadership of the country.

The Directorate on Corruption and Economic Crime (DCEC), modeled after Hong Kong's Independent Commission Against Corruption (ICAC), was therefore established in 1994 to focus on the eradication of poverty through public education, corruption prevention and detailed investigation for both the public and private sector. Botswana's impressive ranking as the least corrupt country in Africa from 2001 to 2004 is as a result of the efforts of the DCEC to, among other things, improve citizens' knowledge on the consequences of corruption and prevent corruption in government agencies by performing external audits (Gbadamosi, 2005).

4.2.1 THE GOVERNMENT OF BOTSWANA AND POLICIES REGARDING THE MANAGEMENT OF RESOURCE RENTS

Atsushi Iimi's 2006 paper *Did Botswana Escape from the Resource Curse?* seeks to discover how Botswana transformed its diamond wealth into economic growth and development that is unmatched by any other African resource rich country. According to him, the extent to which resource wealth can produce results is determined by the quality of governance in the country. He mentions that in developing countries the quality of governance is assessed by policies to combat corruption especially in the public sector and how often regulations are changed in the country.

Larry Diamond (as cited in Good 1994) described Botswana as an exceptional country whose leadership, made up of elite who restricted their interference in the economy, led to a low level of mismanagement and corruption and the creation of effective institutions. In his 2008 paper, *Policy and Institutional Dynamics of Sustained Growth in Botswana*, Maipose explains that Botswana's ready acceptance of foreign aid helped to finance a lot of investment in infrastructure and the mining sector. He goes on to say that domestic savings also went a long way to build infrastructure and develop human resource. Stevens (2003) explains that revenue from diamonds was used on mainly social services, that is, physical and social infrastructure. Also, an incomes policy was introduced to prevent among other things, prevent extreme income disparities (Stevens, 2003). Botswana's leadership understood that their reliance on one or two natural resources as their primary source of revenue left them vulnerable to recessions in the economy. They therefore set up the Domestic Development Fund (DDF) to serve as a reserve for future projects, payment of debts, lend to public companies and initial funding for private businesses. The government also used the Fund to diversify the economy and invest in the non-mineral sector (Maipose, 2008). Stevens (2003) described these actions as an attempt by the government to consciously restrict its spending in the abundance of diamond revenue but also encourage private investment and encourage market-driven sustainable development.

The Governance Research Indicator Country Snapshot (GRICS), a database developed by Kaufmann, Kraay and Mastruzzi (2003) (as cited by Iimi 2006), shows that Botswana has experienced a relatively good level of governance in terms of freedoms in the political process and political rights, the effectiveness of the government in the performance of public duties, relationships with private industries in the mining sector and the establishment of anticorruption policies. Concentration on these aspects of governance ensures that those in charge of resource extraction are held accountable for their actions, resource rents are not overexploited, government has control over private companies involved in resource extraction in the country and finally, activities are conducted in a fair and transparent manner.

4.3 NIGERIA AND CORRUPTION

Sam A. Aluko, at a lecture at the Centre for Democratic Development Research and Training, points out that after comparing corruption indices from Transparency International and the Human Development Index from 1998 to 2006, it is evident that there is a relationship between income, human development and corruption, that is, low income leads to low human development and a high level of corruption. This is means that a country has to improve in income and human development for corruption to decrease (Aluko, 2008).

In spite of Nigeria's size and resource endowment, it has failed to reach its full potential. Gosztonyi et al. (2009) attribute this to poor leadership, weak infrastructure and high levels of corruption which prevents foreign investment. They also blame the mindset of most Nigerians that government officials themselves satisfy their personal interests with government funds so there is nothing wrong with offering bribes for personal favours.

To deal with this endemic, the Nigerian government set up the Independent Corrupt Practices and Other Related Offences Commission (ICPC) in 2000 and the Economic and Financial Crimes Commission (EFCC) in 2004. However, there are doubts as to the EFCC's integrity and ability to withstand control by those in power. It is rumoured that former president Olusegun

Obasanjo used the EFCC to disqualify some of his opponents before the April 2007 elections (Gosztonyi et al., 2009)

4.3.1 THE GOVERNMENT OF NIGERIA AND POLICIES REGARDING THE MANAGEMENT OF RESOURCE RENTS

Agba and Obi (2006) explain that at independence, when the main source of Nigeria's foreign exchange was agricultural produce, the country operated a system where revenue was shared by derivation[9] for even development across the country and with minimum government interference. However, they point out that after the discovery of crude oil and extraction started in the Niger Delta in 1956, changes in revenue sharing led Nigeria from oil boom to oil doom.

Iledare and Suberu (2010) explain that the constitution of the First Republic made both offshore and onshore petroleum resources subject to the derivation principle but a 1970 military decree limited its application to onshore resources and this has been upheld even by the current 1999 Constitution. Requests and protests by the Niger Delta states for the application of the derivation rule to offshore resources led to the enactment of the "Allocation of Revenue Act of 2004". This stated that 'two hundred meter water depth Isobaths' adjacent to the states will be included in the derivation principle. The Act was however challenged by 22 of the non-oil producing states but the Supreme Court argued that the Act was in line with

[9] Derivation is a principle whereby a particular percentage of rents and royalties are retained by the regions where extraction or production occurred (Barkan and Gboyega, 2001).

the duties and responsibilities of the National Assembly (Iledare and Suberu, 2010).

After years of over-centralization under military rule, Nigerians are still not satisfied by the efforts of the ruling civilian government. This is because the country is experiencing considerable political and electoral corruption, the revolution in the Niger Delta and the uproar by the Southern states who want natural resource control to be decentralized (Iledare and Suberu, 2010).

Fiscal federalism calls for resources in a country to be distributed equitably through the competent functions of those in authority (Ndebio, 2004; Sharp and Olsen, 1978) (as cited by Agba and Obi, 2006). However, in their 2006 paper titled *Oil Rent Management and Fiscal Federalism: The Nigerian Experience*, Agba and Obi discuss how Nigerian fiscal policy with regards to management of oil rents has been modified to suit the elites who belong to ethnic groups who have control of the government. There are three separate levels of government in Nigeria: the Federal Government, the State Governments and the Local Government units. Agba and Obi (2006) explain that Nigeria's 1999 Constitution as per Section 162, Subsection 1 and 2, describes how financial resources are to be allocated so that the different levels of government can perform their functions. However, Agba and Obi (2006) point out that as a result of federalism, the State and Local Governments have become subordinates of the Federal Government and they find it difficult to perform their constitutional functions. Oil by law is owned by the Federal Government of Nigeria and this means that its sources of revenue include mining royalties, import and excise duties and company income tax (Agba and Obi, 2006; Iledare and Suberu, 2010). However, the average financial autonomy ratio[10] for Nigeria between 1993 and 2004 was 170.95% for the Federal Government, 17.12% for the State Governments and 6.6% for the Local Governments. This shows that the Federal Government had much more than it needed and this can be linked to wasteful spending, corruption in the government and lack of fairness and transparency in government activities (Agba and Obi, 2006).

The interviews conducted with Ms. Osagie-Erese and Mr. Ayomide revealed that even though the Nigerian government publicizes information on the collection and use of petroleum revenue in the annual national budgets, it is very rarely that actual development projects are completed or even started. They also explained that the recent national strikes on fuel subsidies that happened in December of 2011 can be attributed to corruption in the petroleum sector since Nigerians are supposed to be enjoying subsidies as producers of oil.

4.4 GHANA AND CORRUPTION

In Ghana, the constitution gives the President the power to fire the head of every public organization as soon as he gets into office. The constitution is regarded as inefficient especially with regards to the President being able to influence the actions of the Judiciary since he appoints the Superior Court judges (Mondo, 2011). With regards to the oil industry, the Board of

[10] The financial autonomy ratio shows the percentage of locally raised revenue from total sub-national government expenditure.

Directors of the GNPC is appointed by the government which also supervises the Corporation's activities (Ghana National Petroleum Corporation, n.d.). Dismissals and appointments of government officials have been politicized with new governments replacing boards of institutions such as the Ghana Commercial Bank, while appointments of local assembly members and district chief executives are the responsibility of the sitting President (Gyimah-Boadi, 2010) (as cited by Mondo, 2011). Such inefficiencies were addressed by the Constitutional Review Commission which was inaugurated in 2010 by current President, Mr. John Evans Atta Mills. In a final report to the President on December 21, 2011, the Chairman of the Commission, Prof. (Emeritus) Albert Kodzo Fiadjoe, stated that after using a 'highly participatory qualitative inquiry methodology', it has been recommended that the appointment power of the President should be limited by requiring him to make more consultations before making an appointment (Constitution Review Commission, 2011).

In order to combat corruption, the Whistleblower Act was passed in 2006, Ghana joined the United Nations Convention Against Corruption (UNCAC) in 2007. Ghana's central Anti-Corruption Agency is the Commission on Human Rights and Administrative Justice. Even though it is considered to function independently, it has no authority to prosecute which is a major restriction to its authority. Other institutions which deal with transparency are the Audit Service and the Economic and Organized Crimes Office. The responsibilities of the Attorney-General include being head of the prosecution service and chief legal advisor to the President, as well as having the authority to start or end prosecutions at any time without explanation (ibid, 2011). However, considering the fact that the Attorney-General can be fired and hired by the President and is therefore obliged to the President, this serves as another hindrance to independent and objective prosecution.

4.5 THE GOVERNMENT OF GHANA AND POLICIES REGARDING THE MANAGEMENT AND DISTRIBUTION OF RESOURCE RENTS

In spite of the fact that oil was discovered in Ghana in 2007, extraction did not begin until 2010 because the Jubilee field had to be appraised by Messrs KOSMOS Energy and Tullow Oil Ghana Limited (Ghana Budget, 2009). According to Dr. Kwabena Duffour, the Minister of the Ministry of Finance and Economic Planning (MoFEP), if the oil and gas resources are not managed properly, the wealth that all Ghanaians hope for will remain a dream (Ghana Budget, 2010). MoFEP plans to make sure that ‘Ghana benefits, to the greatest extent possible, from discovery and production of oil and gas’ (Ghana Budget, 2009).

According to the 2010 Ghana Budget, some of the plans that the government had regarding oil and gas included:

1. Starting oil production in the Jubilee field while appraising fields in the Deep Water Tano and West Cape Three Points Areas for possible oil fields.
2. Ensuring that natural gas resources are gathered and processed efficiently.

3. Developing the skills of locals to ensure their participation in development activities in the area.
4. Improving infrastructure for communities near the oil fields.
5. Developing Environmental Protection plans to protect the eco-system.
6. Ensuring a transparent and accountable Government.

Considering the fact that as at the last quarter of 2011 Ghana was enjoying a 13.6% growth rate, 8.4% inflation rate, interest rates of 9.1%, for the first time Ghana could boast of meeting all the four primary convergence criteria for the West African Monetary Zone programme and the well-being of Ghanaians have improved considerably, it seems that the policies the Ghanaian government have put in place are working for the benefit of all involved.

Regarding the oil and gas industry and revenues from it, the Petroleum Exploration and Production Law has been amended to encourage investment by making the process of obtaining production licenses less complicated and stressful for domestic and international investors (Zaney, 2011).

The government has also begun a hedging programme to protect oil revenue from fluctuations in oil prices on the world market (Ghana Budget, 2012).

In line with their promise for transparent and fair management of revenues from the oil and gas industry, the Petroleum Revenue Management Act (Act 815) (PRMA) was passed in April 2011 (Ghana Budget, 2012).

4.6 THE PETROLEUM REVENUE MANAGEMENT ACT, 2011 (ACT 815)

The PRMA was formed after intensive consultation with and requests for comments from the public and Civil Society Organizations before being presented for approval from Parliament. The PRMA was also based on experiences from around the world to ensure a solid legal basis for the effective and efficient utilization of petroleum revenues in Ghana. It is a framework for the 'collection, allocation and management of petroleum revenue in a responsible, transparent, accountable and sustainable manner' for the improvement of the lives of all Ghanaians (Petroleum Revenue Management Act, 2011).

As per the PRMA, a public fund, the Petroleum Holding Fund (PHF) has been established at the Bank of Ghana (BoG) to receive all petroleum revenue and distribute it by the authority of the Ghana Revenue Authority (GRA). To show transparency and accountability, data on petroleum receipts are to be published by the Minister of Finance in the *Gazette*, at least two state-owned daily newspapers and the website of MoFEP before presentation to Parliament.

The Ghana Stabilization Fund and the Ghana Heritage Fund (together known as the Ghana Petroleum Fund), have also been established. The purpose of the Stabilization Fund is to, during unforeseen shortfalls in petroleum revenue, sustain public expenditure capacity while the Heritage Fund is to serve as support for development projects for future generations after petroleum revenue reserves have been exhausted.

As part of his duties, the Minister of Finance is to prioritize 4 areas every 3 years for the use of the Annual Budget Funding Amount (ABFA). These areas, according to the Act, are:

1. agriculture and industry;
2. physical infrastructure and service delivery in education, science and technology;
3. potable water delivery and sanitation;
4. infrastructure development in telecommunication, road, rail and port;
5. physical infrastructure and service delivery in health;
6. housing delivery;
7. environmental protection, sustainable utilization and the protection of natural resources;
8. rural development;
9. developing alternative energy sources;
10. the strengthening of institutions of government concerned with governance and the maintenance of law and order;
11. public safety and security; and
12. the provision of social welfare and the protection of the physically handicapped, persons with mental disorders and disadvantaged citizens.

This year the ABFA is 70% of the Benchmark Revenue[11] and the 4 prioritized areas for 2012, according to the 2012 budget are:

1. pay back of loans for oil and gas infrastructure
2. road and other infrastructure
3. modernization of the agricultural sector
4. capacity building (including oil and gas)

The Minister, with the help of the Investment Advisory Committee (IAC), is to develop an investment policy for the Ghana Petroleum Fund which shall be reported by the BoG to Parliament and published on the Bank's website and two state-owned daily newspapers.

Internal and external audits shall be conducted by the Internal Audit Department of the BoG and the Auditor-General which shall be published and submitted to Parliament.

A Public Interest and Accountability Committee has also been established to monitor and independently evaluate the government and relevant institutions to ensure that they are following the provisions of the Act in terms of the management and use of petroleum revenue and provide the public with the opportunity to make their views known on the management and use of petroleum revenue.

[11] For each financial year the Benchmark Revenue = Expected current receipts from oil + Expected gas royalties + Expected dividends from the national oil company (Petroleum Revenue Management Act, 2011).

Finally, the government decided to intensify the fiscal decentralization process and transfer the responsibility and authority of allocation of resources to local authorities as a way of encouraging grassroot participation in the decision making processes (Ghana Budget, 2012).

4.7 SUMMARY

The general argument is that in order to deal with corruption in the public sector, government should focus on constant structural adjustment while concentrating on improving governance. However, it is evident from the cases of both Botswana and Nigeria that strategies and policies that deal with corruption, fairness and transparency must be tailored to suit the economic, legal, social and political contexts in which they are found (Doig and Riley, 1998).

Generally, Botswana’s homogenous tribal composition leads its government to centralize when it comes to resource revenue control. The central government has the power to implement fiscal policies and arrange the equitable distribution of revenue among the different regions (Iimi, 2006). Also, the government has established a transparent, independent agency to increase accountability in the management of natural resources in the country (Doig and Riley, 1998).

With Nigeria’s more tribalistic nature and its constant problem of lack of transparency, and bad governance, it is evident that federalism is not producing results. The government has to decentralize and transfer its administrative powers to local bodies to govern themselves (Agba and Obi, 2006). This also has the advantage of encouraging grassroots participation and building a democratic nation (Olken, 2007).

It is evident with the passing of the PRMA that the government of Ghana is doing all it can to ensure the fair and transparent collection and utilization of petroleum revenue. Currently, the government is in control of the collection and distribution of petroleum revenue but is however making efforts to decentralize the process in order to strengthen participatory democracy.

Chapter 5: Recommendations and Conclusions

At a conference in Ghana in November 2011, Professor Yinka Omorogbe of the Department of Public and International Law at the University of Ibadan, Nigeria stated that in order to avoid the resource curse, Ghana has to, among other things, build the right basis for industry by enforcing laws and regulations that are in line with national policies, transparency and good governance and develop institutions that are willing and capable of enforcing laws (Omorogbe, 2011).

Mr. Addo Nortey explained that good, strong policies are the underlying factor that is needed to transform a country's vision for its resources into socio-economic development. However, in order for these policies not to remain as idle philosophy they have to be 'operationalized' through a legislative framework which will be implemented through regulations by institutions (Nortey, 2011). In effect, the PRMA came about as a result of a National Policy Agenda for Shared Growth and Accelerated Development for a Better Ghana, Oil and Gas Policy, Oil Laws like the PRMA and the Petroleum Commission Act after which petroleum management institutions were then established (Omorogbe, 2011). It is the problems of the absence of regulations and/or weak institutions that have caused many resource endowed countries to encounter implementation challenges (Nortey, 2011).

5.1 RECOMMENDATIONS

After extensive research it is evident that a lot is being done by the Ghanaian government to ensure that revenue from the oil and gas industry is distributed equitably for the benefit of all Ghanaians. However there are still steps that have to be taken to ensure that distribution is done in a fair manner:

According to Adam (2011), the 2012 Budget Statement shows that there are discrepancies in oil receipts for 2011. He points out that the government predicted GH¢600 million as oil revenue from corporate taxes. However, according to the 2012 Budget Statement, they actually received GH¢ 506 million. He attributes this to the non-payment of corporate taxes by oil companies (Adam, 2011). It is important for the government to not be too enthusiastic and rush into relationships with private-resource developing companies. Strict regulations have to be designed and enforced to ensure that the activities of these companies fall within the requirements of the government.

The 2012 Budget Statement shows the regional distribution of oil revenue for 2011. Even though the revenue was not equally distributed among the different regions, the Western region was allocated 10% of the ABFA as per the demands of the chiefs and people of the region (Adam, 2011). In order to avoid the riots which are so prevalent in the oil-producing regions of Nigeria, the government has to ensure that there is a fair framework by which oil revenue is allocated among the regions. The justification for this framework should be made public to ensure that all stakeholders understand it to prevent confusion in the future.

In order to ensure that Ghanaians are benefitting from petroleum revenues, it is advisable that the government keep an eye on development indicators like HDI instead of on rates of economic growth and GDP which can be misleading and disguise high levels of inequality and suffering.

Gbadamosi (2005) explains how the media played a major role in helping the DCEC to reduce corruption in state-owned corporations. According to him, the print media encouraged the public to report any incidences of corruption and these leads were followed with enough publicity to serve as a deterrent to other public officials. Considering the fact that Ghana enjoys more media freedom than both Nigeria and Botswana, it is essential that the powers of the media be strengthened and taken advantage of to help expose the corruption that typically turns oil blessings into curses.

The government's plan to decentralize the revenue distribution process to encourage grassroot participation may not have the desired end result. As Acosta and Heuty (2009) point out, the practice of sharing revenue from the mining sector has not yielded visible optimistic outcomes. It might therefore be better to keep this distribution power in the hands of the central government while strengthening institutions and encouraging citizen participation so that they can demand accountability from the government.

However, in order for all these to work out, it is essential for institutions to be given a firm structure to make and implement regulations efficiently and effectively. This can be done through the provision of a strong administrative, technical, financial, legal, business and advisory capacity (Nortey, 2012).

5.2 CONCLUSION

The aim of the research was to find out the importance of governmental policies on the management of revenue from natural resources. Literature reviewed showed that there is a relationship between the quality of institutions and the level of economic growth and development of a country. This means that in order for a country to achieve a desired level of economic growth, their institutions have to be efficient, effective and transparent in the management and distribution of revenue.

My findings show that the government of Ghana, with the passing of the PRMA, has shown that it is committed to transparency and fairness in the collection and distribution of petroleum revenue for the present generation. It has also recognized that oil is a non-renewable resource that can run out at any time. It has therefore set up funds to ensure that part of the revenue is utilized effectively now and the rest saved for use by future generations.

Petroleum revenue is a just a means to an end therefore effective management by transparent institutions who use clear guidelines and regulations to guide their actions is necessary to transform the resource into growth and development.

WORKS CITED

ACEMOGLU, D., JOHNSON, S. and ROBINSON, J.A. (2001) *An African Success Story: Botswana.* Available from: http://www.colby.edu/economics/faculty/jmlong/ec479/AJR.pdf [Accessed 10/11/11].

ACEMOGLU, D., JOHNSON, S. and ROBINSON, J. (2004) *Institutions as the Fundamental Cause of Long-run Growth*. NBER Working Paper 10481.

ACOSTA, A. M. and HEUTY, A. (2009) *Can Ghana avoid the oil curse? A prospective look into natural resource governance*. Department for International Development. Available from: http://www2.ids.ac.uk/gdr/cfs/pdfs/Ghana_oil_curse_DFIDbriefing_May09.pdf [Accessed 03/04/12]

ADAM, M.A. (2011) *Oil and the 2012 Budget Statement – Reflections On The Ghanaian Economy*. Danquah Institute. Available from: http://danquahinstitute.org/news/1553-oil-and-the-2012-budget-statement-reflections-on-the-ghanaian-economy.html [Accessed 25/03/12]

AFRICAN DEVELOPMENT BANK (2009). *Botswana: 2009 – 2013 Country Strategy Paper*. Regional Department – South Region A. Available from: http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/BOTSWANA_2009%20%E2%80%93%202013%20COUNTRY%20STRATEGY%20PAPER.pdf [Accessed 20/03/12].

AGBA, A. V. and OBI, B. (2006) *Oil Rent Management and Fiscal Federalism: The Nigerian Experience*. Mimeo, Department of Economics, University of Abuja, Nigeria.

ALUKO, S.A. 2008. *Corruption And National Development*. May 31. [lecture] Nigeria: The Centre for Democratic Development Research and Training.

ARMAH S. E. and ADU-AMOAH, L. (2010) "Media Freedom and Political (In) Stability in Sub-Saharan Africa (SSA): A Panel Data Study" *Journal of*

Economic Development Management, IT, Finance and Marketing, 2(2), 41-67, September, 2010.

BARKAN, J.D. and GBOYEGA, A. (2001) State and Local Governance in Nigeria. *Public Sector and Capacity Building Program: Africa* Region. The World Bank. Available from: http://info.worldbank.org/etools/docs/library/5783/State_and_Governance_Nigeria.htm [Accessed 20/03/12].

BP (2010) *Oil* [Table]. BP Statistical Review of World Energy. June 2010. Available from : http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2010_downloads/statistical_review_of_world_energy_full_report_2010.pdf [Accessed 27/11/11].

CARMIGNANI, F. and CHOWDHURY, A. (2010) *Why are natural resources a curse in Africa, but not elsewhere?* School of Economics, The University of Queensland, Brisbane, Australia.

CHENERY, H., and STROUT, M. (1966). "Foreign Assistance and Economic Development." *American Economic Review* 56: 679-733.

CONSTITUTION REVIEW COMMISSION (2011). Final Report. In: *Presentation of the Final Report of the Constitution Review Commission to H.E. Prof. John Evans Mills, President of the Republic of Ghana*. Available from: http://www.crc.gov.gh/sites/default/files/Chair%20Speech-Presentation%20Ceremony%20%28For%20press%29%2020th%20December%202011%20Final.pdf [Accessed 11/04/12].

DOIG, A. and RILEY, S. (1998) Corruption and anti-corruption strategies: issues and case studies from developing countries. In: *UNDP, Corruption & Integrity Improvement Initiatives in Developing Countries*. New York: United Nations Development Programme.

DYMOND, A. (2007) *Undermining development? Copper mining in Zambia*. SCIAF, Scotland. Available from: http://www.actsa.org/Pictures/UpImages/pdf/Undermining%20development%20report.pdf [Accessed 29/11/11].

ECONOMIC COMMISSION FOR AFRICA - AFRICAN TRADE POLICY CENTRE (2009) *Mineral Exploitation, Environmental Sustainability and Sustainable Development in EAC, SADC and ECOWAS Regions*. Work in Progress, No. 79 [Accessed 20/02/12].

ECONOMY WATCH (n.d.) *Economic Statistics Database* [WWW] Available from: http://www.economywatch.com/economic-statistics/ [Accessed 20/02/12].

ENCYCLOPEDIA OF THE NATIONS (2011) *Norway – Economic Development*. Available from: http://www.nationsencyclopedia.com/Europe/Norway-ECONOMIC-DEVELOPMENT.html [Accessed 2/11/11].

FIBAEK, M. (2010) *Botswana's Modern Economic History since 1966 – Has Botswana reached the last stage of Modern Growth Regime?* Department of Economics, University of Copenhagen.

GBADAMOSI, G. (2005) Corruption Perception and Sustainable Development: Sharing Botswana's Anti-Graft Agency Experiences. *South Africa Journal of Economics and Management Studies*, 2, 262-276.

GHANA. MINISTRY OF FINANCE AND ECONOMIC PLANNING (2008) *Budget Statement and Economic Policy of the Government of Ghana for the 2009 Financial Year.*

GHANA. MINISTRY OF FINANCE AND ECONOMIC PLANNING (2009) *Budget Statement and Economic Policy of the Government of Ghana for the 2010 Financial Year.*

GHANA. MINISTRY OF FINANCE AND ECONOMIC PLANNING (2011) *Budget Statement and Economic Policy of the Government of Ghana for the 2012 Financial Year.*

GHANA NATIOANL PETROLEUM CORPORATION n.d., *Organisational Structure* Available from: http://www.gnpcghana.com/aboutus/orgStructure.asp [Accessed 11/04/12]

GOOD, K. (1994) Corruption and Mismanagement in Botswana: A Best-Case Example? *The Journal of Modern African Studies*, Vol. 32, No. 3 (Sep., 1994)

GOSZTONYI, K. et al. (...) *Facing up to Corruption in Nigeria* [WWW] Control Risks Group Limited. Available from: http://www.iesingapore.gov.sg/wps/wcm/connect/617e2800432dc8e08332a7b882eeabf0/Editorial_20100712_Control_Risks_Nigeria_corruption.pdf?MOD=AJPERES [Accessed 25/03/12]

GYLFASON, T. (2001) Natural Resources and Economic Growth: What is the Connection? *CESifo Working Paper No. 530* (Munich, CESifo Institute for Economic Research).

IIMI, A. (2006) Did Botswana Escape from the Resource Curse? *IMF Working Paper: African Department*, WP/06/138 (June). [Accessed 10/11/11].

ILEDARE, W. and SUBERU, R. (2010) Oil and Gas Resources in the Federal Republic of Nigeria. In: *The Management of Oil and Oil and Gas in Federal Systems*. *Black Auditorium, World Bank, March 2010*. Washington: World Bank and The Forum of Federations.

INTERNATIONAL TRADE CENTRE (2010) *Country Market Analysis Profile (Country Map) - Export Performance 2009*. Available from: http://legacy.intracen.org/menus/Countries.htm [Accessed 07/12/11].

LIBRARY OF CONGRESS – FEDERAL RESEARCH DIVISION (2008) *Country Profile: Nigeria*. Available from: http://lcweb2.loc.gov/frd/cs/profiles/Nigeria.pdf [Accessed 31/10/11].

MACQUARIE CAPITAL MARKETS CANADA LTD. (2011) Macro Strategy: The View from Up Here: Will the resource boom lead to a two-tiered Canada? Macquarie Private Wealth Inc. Available from: http://www.investorvillage.com/uploads/8056/files/blackmont45275.pdf [Accessed 26/11/11].

MAIPOSE, G.S. n.d. *Policy and Institutional Dynamics of Sustained Growth in Botswana*. University of Botswana, Gaborone.

MBAKU, J.M. (2008) Corruption Cleanups in Africa: Lessons from Public Choice Theory. *Journal of Asian and African Studies*, Vol. 43, No. 427, 2008.

MEHLUM, H., MOENE, K. and TORVIK, R. (2006) Institutions and the Resource Curse. *The Economic Journal*, 116 (January).

MONDO, B.V. (2011) *Control of Corruption: the Road to Effective Improvement – Lessons from six progress cases*. (MSc), Hertie School of Governance. Available from: http://www.againstcorruption.eu/uploads/norad/Control-of-Corruption-the-Road-to-Effective-Improvement-Lessons-from-six-progress-cases.pdf [Accessed 03/04/12]

NORTEY, S. A. Personal interview. 1 – 2 April 2011.

PARLIAMENT OF THE REPUBLIC OF GHANA (2011) *Petroleum Revenue Management Act, 2011*.

OLKEN, B.A. (2007) Monitoring Corruption: Evidence from a Field Experiment in Indonesia. *Journal of Political Economy*, Vol. 115, No. 21, 2007.

OMOROGBE, Y. (2011) Impacts of the Discovery and Exploitation of Oil and Gas in a Developing Country. In: *Conference on the Avoidance of the Oil Curse In Ghana*, *Koforidua*, 24 – 27 *November 2011*. Ghana.

RICE, X. (2007) Ghana enters oil age with wary eye on neighbours. *The Guardian*, 30th July, 2007, p. 1. Available from: http://www.guardian.co.uk/business/2007/jul/30/oilandpetrol.news [Accessed 31/10/11].

SACHS, J.D. and WARNER, A.M. (1997) Natural Resource Abundance and Economic Growth. *Center for International Development and Harvard Institute for International Development, Harvard University.* (November). [Accessed 09/11/11].

SALAMI, Y.K. (2009) The Political Economy of Nigeria and the Continuing Agenda of Recolonization: A Challenge for Critical Knowledge Production. *Journal of Pan African Studies*, 3 (3).

SHINOHARA, N. 2011. *Natural Resources and Development: Confronting Emerging Challenges in Botswana*. March 30. [lecture] Botswana: Bank of Botswana.

STEVENS, P. (2003) *Resource Impact: A Curse or a Blessing?* Draft working paper. Centre for Energy, Petroleum and Mineral Law and Policy, University of Dundee. Dundee: UK.

TWEREFOU, D. K. (2009) *Mineral Exploitation, Environmental Sustainability and Sustainable Development in EAC, SADC and ECOWAS Regions*. ATPC Work in Progress No. 79. Economic Commission for Africa.

U.S. ENERGY INFORMATION ADMINISTRATION. INTERNATIONAL ENERGY STATISTICS (2010) *Norway Country Analysis Brief*. Available from: http://www.eia.gov/countries/country-data.cfm?fips=NO [Accessed 2/11/11].

UNCTAD (2009) *Investment Policy Review Nigeria*. New York and Geneva: UNCTAD/DIAE/PCB/2008/1. Available from: http://www.unctad.org/en/docs/diaepcb20081_en.pdf [Accessed 21/02/12].

USGS Mineral Commodity Summaries (2010) *Estimated Diamond Production* [Table]. In: Geology.com (2010). *What Countries Produce Gem Diamonds? – Diamond Production Map* [Table]. Available from: http://geology.com/articles/gem-diamond-map/ [Accessed 27/11/11].

WORLD BANK (2011) AFRICA INFRASTRUCTURE COUNTRY DIAGNOSTIC. *Nigeria's Infrastructure: A Continental Perspective*. Washington: The World Bank, 62756, p. iii. Available from: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/06/22/000333037_20110622014321/Rendered/PDF/627560WP0P1242000public00BOX361491B.pdf [Accessed 31/10/11].

WORLD BANK (2011) *Worldwide Governance Indicators*. Available from: http://info.worldbank.org/governance/wgi/mc_countries.asp [Accessed 28/11/11]

WORLD TRADE ORGANIZATION (2011) *World Trade Report 2010 – Trade in Natural Resources*. Available from: http://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report10_e.pdf [Accessed 20/12/11].

ZANEY, G.D. (2011) *Ghana's Petroleum Revenue Management Bill*. Government of Ghana: Official Portal. Available from: http://www.ghana.gov.gh/index.php?option=com_content&view=article&id=5860:-ghanas-petroleum-revenue-management bill&catid=24:features&Itemid=167 [Accessed 27/03/12].

APPENDIX 1: Map of Botswana

APPENDIX 2: Map of Nigeria