

THE MISMANAGEMENT OF OIL AND GAS RESOURCE REVENUES IN AFRICA:
LESSONS FOR GHANA'S BUDDING OIL AND GAS INDUSTRY

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
General Studies

by

EKOW NKRANE MENSAH-YAWSON, MAJOR, GHANA ARMY
PGD, Ghana Institute of Management and Public Administration, Accra, Ghana, 2011

Fort Leavenworth, Kansas
2013-01

Approved for public release; distribution is unlimited.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 14-06-2013		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) AUG 2012 – JUN 2013	
4. TITLE AND SUBTITLE The Mismanagement of Oil and Gas Resource Revenues in Africa: Lessons for Ghana's Budding Oil and Gas Industry				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
				5d. PROJECT NUMBER	
6. AUTHOR(S) Ekow Nkrane Mensah-Yawson, Major				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
				8. PERFORMING ORG REPORT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301					
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT This thesis studied the mismanagement of petroleum resource revenues in oil-rich African countries to identify lessons for Ghana's nascent oil and gas industry. The countries studied were Nigeria in West Africa, Chad in Central Africa, and Angola in southern Africa. The research looked at the contribution of governance to the phenomenon, the effects of the mismanagement on the countries, and Ghana's laws for its oil industry regulation. The dissertation concludes that, the countries studied suffer the resource curse, caused mainly by weak institutions of state resulting in very high levels of corruption. After independence, these countries were unable to build state institutional capacity to handle the windfalls of the petroleum industry, predisposing them to classic resource curse problems. It has also been difficult for these countries to break the colonial legacy of being reentry states; their oil resources have only worsened this. On the contrary, Ghana had had half a century to develop its institutions before the oil find. It is thus much better placed to handle resource curse issues. Ghana should strengthen its state institutional capacity, diversify its economy and continue its efforts to reduce corruption in order to avoid the problems of other oil-rich African countries.					
15. SUBJECT TERMS Oil and Gas Resource Revenues, Nigeria, Angola, Chad and Ghana Governments, Resource Revenue Management					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT (U)	b. ABSTRACT (U)	c. THIS PAGE (U)			19b. PHONE NUMBER (include area code)
			(U)	93	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: Major Ekow Nkrane Mensah-Yawson

Thesis Title: The Mismanagement of Oil and Gas Resource Revenues in Africa: Lessons
for Ghana's Budding Oil and Gas Industry

Approved by:

_____, Thesis Committee Chair
Douglas E. Lathrop, M.A.

_____, Member
Michael D. Mihalka, Ph.D.

_____, Member
Michael J. Burke, M.Ed.

Accepted this 14th day of June 2013 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE MISMANAGEMENT OF OIL AND GAS RESOURCE REVENUES IN AFRICA: LESSONS FOR GHANA'S BUDDING OIL AND GAS INDUSTRY, by MAJ Ekow Nkrane Mensah-Yawson, 93 pages.

This thesis studied the mismanagement of petroleum resource revenues in oil-rich African countries to identify lessons for Ghana's nascent oil and gas industry. The countries studied were Nigeria in West Africa, Chad in Central Africa, and Angola in southern Africa. The research looked at the contribution of governance to the phenomenon, the effects of the mismanagement on the countries, and Ghana's laws for its oil industry regulation.

The dissertation concludes that, the countries studied suffer the resource curse, caused mainly by weak institutions of state resulting in very high levels of corruption. After independence, these countries were unable to build state institutional capacity to handle the windfalls of the petroleum industry, predisposing them to classic resource curse problems. It has also been difficult for these countries to break the colonial legacy of being reentry states; their oil resources have only worsened this. On the contrary, Ghana had had half a century to develop its institutions before the oil find. It is thus much better placed to handle resource curse issues. Ghana should strengthen its state institutional capacity, diversify its economy and continue its efforts to reduce corruption in order to avoid the problems of other oil-rich African countries.

ACKNOWLEDGMENTS

I am most grateful to God for His grace and for the inspiration to produce this work. I am indebted to the members of my thesis committee, Mr Douglas Lathrop (chair), Dr Michael Mihalka and Mr Michael Burke. I especially thank Mr Lathrop for his patience, guidance, and understanding of my many shortcomings and Dr Mihalka for pointing me in the right direction with my methodology and saving me a load of grief. My sincerest appreciation goes to my Staff Group Adviser, Mr Kurt VanderSteen for encouraging and challenging me to see this research through.

I owe a debt of gratitude to Mr Scott Porter, Dr Mark Gerges, Mr Patrick Beatty, Mr John Ukleya and MAJ John Wettack, my Staff Group professors.

My sincerest gratitude to the staff of the Graduate Degree Program department, especially Ms Venita Krueger and the staff of the Combined Arms Research Library for all their assistance. I also thank Mr Herbert Merrick my workshop seminar moderator. I thank the director and all the staff of the International Military Students Division for their perfect administration of international students. I am also thankful to the many authors and writers whose books, articles and papers I consulted and used for this thesis. On the social side, I thank my sponsors: Mr Lyle and Dr Jan Pishny, Ms Susan Patterson and Mr Dave Gunn for making my stay in the United States a very worthwhile and enjoyable experience.

I dedicate this work to my wife, Captain Nancy Aboagye-Bonsu, my son, Kweku, my daughter Kuukua and my mother, Mrs. Susanna Mensah Yawson. It is also to my siblings: Steven, Mercy, Jojo, Silas, and Jo Nunoo and to the memory of my father, the late Brigadier General Francis Kobina Mensah Yawson.

TABLE OF CONTENTS

	Page
MASTER OF MILITARY ART AND SCIENCE THESIS APPROVAL PAGE	iii
ABSTRACT.....	iv
ACKNOWLEDGMENTS	v
TABLE OF CONTENTS.....	vi
ACRONYMS.....	viii
TABLES	ix
CHAPTER 1 INTRODUCTION	1
Background.....	1
Research Questions.....	5
Assumptions.....	5
Definition of Terms	5
Limitations.....	8
Delimitations.....	8
Significance of the Study.....	8
Organization of the Study	10
Summary and Conclusions	11
CHAPTER 2 LITERATURE REVIEW	12
Nigeria	13
Angola.....	20
Chad.....	24
Ghana.....	27
Resource Curse Studies	29
The Role of the State.....	29
The Causes of the Oil Curse	32
Venezuela as a Case Study.....	37
Summary	43
CHAPTER 3 RESEARCH METHODOLOGY	46
Research Design	46
Data Collection and Sources.....	47
Data Analysis and Presentation	48

Reliability and Validity of Data.....	54
Summary and Conclusion.....	55
CHAPTER 4 ANALYSIS	56
Stability.....	57
Dependency	61
Corruption.....	64
Answers to Research Questions.....	66
Summary and Conclusion.....	68
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS	70
Introduction.....	70
Interpretation of Findings	71
Recommendations.....	75
Summary and Conclusions	77
REFERENCES	79

ACRONYMS

CGSC	Command and General Staff College
CIA	Central Intelligence Agency
CIDCM	Center for International Development and Conflict Management
CRF	Coastal Revolutionary Forces
FSDA	<i>Fundo Soberano de Angola</i>
GDP	Gross Domestic Product
ILE	Intermediate Level Education
MEND	Movement for the Emancipation of the Niger Delta
NAPIMS	National Petroleum Investment Management Service
NCDM	Nigerian Content Development and Monitoring Board
NDLF	Niger Delta liberation Force
NNPC	Nigerian National Petroleum Corporation
PNDC	Provisional National Defence Council
PSO	Peace Support Operation(s)
UN	United Nations
UNDP	United Nations Development Program

TABLES

	Page
Table 1. Factors Influencing the Risk of Instability.....	50
Table 2. Worldwide Governance Indicators for the Effects of Dependence on Institutions.....	52
Table 3. Comparison of Nigeria, Angola, Chad, and Ghana in Stability, Effects of Dependency on Institutions and Corruption	53
Table 4. Effects of Institutional Stability on Possibility of Conflict.....	61
Table 5. Effects of Dependency on Natural Resources on the Institutions of Government in Nigeria, Angola, Chad, and Ghana	63
Table 6. Ratings for Effects of Dependency on Natural Resources on the Institutions of Government in Nigeria, Angola, Chad, and Ghana.....	63
Table 7. Corruption Perception Index Ratings for Nigeria, Angola, Chad, and Ghana	65
Table 8. Assessment of Stability, Dependency and Corruption Variables for Nigeria, Angola, Chad, and Ghana	66

CHAPTER 1

INTRODUCTION

Background

Richard Dowden, a British journalist who specializes in African affairs, described crude oil as, “the life-blood of the world’s economy” (Dowden 2009, 538). Crude oil has also been referred to as black gold because of its potential to change the fortunes of countries that are endowed with the resource. This same resource was however, described as the “Devil’s excrement” by Venezuelan politician Juan Pablo Alfons (Useem 2003). Crude oil can be a source of good or a cause of untold hardship depending on its management and use. Revenues from crude oil and other constituents of the petroleum industry have potentially transformed the lot of some countries but have had the opposite effect on other countries. Countries such as Norway, Canada, and the Great Britain have made substantial gains from the exploitation of their oil and gas resources. In such countries, revenues from the petroleum industry have been managed to the benefit of a large percentage of the citizenry.

Norway had a gross domestic product (GDP) per capita of fifty-four thousand United States (US) dollars (\$54,000) by 2011 estimates, which made it the eighth highest in the world (Central Intelligence Agency 2012c). Although a country with a well-diversified economy, Norway is still very heavily dependent on its petroleum industry, with this sector accounting for the largest portion of its exports and contributing some 20 percent of total government revenue. Norway’s oil exports of 2.184 million barrels a day by 2010 estimates made it the sixth largest exporter of oil in the world while having a population of almost 5 million (Central Intelligence Agency 2012c). Norway has a well

to do mixed economy, with a sizeable state sector, vibrant private sector, and an enviable social safety system. In anticipation of an eventual dwindling of its vast oil and gas resources, the country saves state revenue from the sector. It has a five hundred billion US dollar (US \$500 billion) sovereign wealth fund (2011 estimates), the second largest such fund in the world. Returns from this fund go into the financing of the country's public expenditure. The country has none of its population below the poverty line. Its budget is set to remain in surplus (Central Intelligence Agency 2012c).

Although not a well-diversified country economically, Kuwait had a GDP per capita of forty-two thousand two hundred US dollars (\$42,200) by 2011 estimates, which made that country the nineteenth highest in the world (Central Intelligence Agency 2012a). The oil industry accounted for almost 50 percent of Kuwait's GDP, 95 percent of its export revenue and the same percentage of government revenue (Central Intelligence Agency 2012a). Despite Kuwait's issues with an undiversified economy, its petroleum revenues have generally benefitted the population. Kuwait's export of 2.127 million barrels of oil per day, by 2011 estimates, made it the eighth largest exporter of oil in the world. Kuwait has none of its population of 2.8 million below the poverty level (Central Intelligence Agency 2012a).

Africa cannot boast of any real successes in the exploitation of oil and gas resources. Most oil rich African countries are plagued with problems that range from economic through serious security challenges. Oil rich African countries like Algeria, Angola, Chad, Equatorial Guinea, Gabon, Nigeria, Sudan and others all have various degrees of problems. The only real success in the extractive industry is Botswana, which

has had remarkable accomplishments in its diamond industry. Diamonds although very different from the focus of this work, also fall into the extractive industry.

“Ten years from now, twenty years from now, you will see: oil will bring us to ruin . . . Oil is the Devil’s excrement.” This 1975 comment, by Juan Pablo Alfonso, a Venezuelan politician and one of the founders of the Organization of Petroleum Exporting Countries (OPEC), is true for most oil-rich African countries (Useem 2003). A study of oil-rich African countries reveals in most cases, a myriad of problems which fraught the oil and gas industry with varying degrees of trouble. These range from general discontent and civil strife over the management of the resource and its revenue to different levels of insurgency. Arguably, the discovery of oil in commercial quantities in some African countries has aggravated the socio-economic and political woes of those countries instead of being a catalyst for growth and prosperity. Oil is said to account for over 90 percent of the world’s trade in minerals and is the biggest source of problems for the largest number of countries endowed with the resource (Ross 2012, 1).

The current low-level insurgency in the Niger Delta region of Nigeria has direct linkages to the mismanagement of petroleum sector revenues in that country. The insurgency is fomented by the general neglect of the areas where the petroleum resource is located in terms of development and environmental degradation. Nigeria is the tenth largest exporter of oil in the world, exporting 2.102 million barrels of oil per day; it had a GDP per capita of two thousand six hundred US dollars (\$2,600) by 2011 estimates. By 2007 estimates, 70 percent of Nigeria’s population lived below the poverty line (Central Intelligence Agency 2012b). Clearly, population numbers affect GDP per capita of a country, so should Nigeria, with a population of over 170 million (2012 estimates), earn

as much as the other countries, their GDP per capita would still not be the same, judging by the disparity in population sizes (Central Intelligence Agency 2012b). However, Nigeria's large population cannot be, by any stretch of imagination, an excuse or even a factor in explaining the vast disparities between it and the other two countries discussed in terms of their GDP per capita. The disparity is most likely the result of corruption and general mismanagement of the resources of that country including its petroleum resources. It is with this background that the research is done into the exploitation of petroleum resources in Ghana, a country which has recently discovered oil in commercial quantities.

Oil was discovered in commercial quantities off of Ghana's coast of Cape Three Points, in the Western Region of Ghana, in June 2007. Further discoveries of oil reserves have been made since then in the same region of Ghana (Asamooah 2009, 13). Commercial drilling of oil started on 15 December 2010. The government of Ghana has initiated, through Parliament, several pieces of legislation meant to regulate the operations of the budding industry. In the case of Ghana it is perhaps too early to judge the effectiveness of these pieces of legislation. The issue then becomes whether the problems of the industry in other African countries are a result of a lack of regulation or of a lack of political will to implement existing regulations. Whatever the real reasons are, for Ghana to avoid going down the path that other African oil rich countries have, there is the requirement to study these countries and take pragmatic steps to correct their errors in the future management of Ghana's oil resource revenues.

Research Questions

What factors have led to the widespread mismanagement of oil and gas resources and revenues in Africa and how should Ghana position itself to avoid the economic, developmental and security problems that this causes? A number of secondary questions arise including:

1. How has governance contributed to the problems of the oil and gas or petroleum industry in Nigeria, Angola and Chad?
2. What have been the effects of the poor management of the oil industry in Nigeria, Angola, and Chad?
3. What regulations has Ghana enacted to govern the oil industry?
4. What lessons should Ghana learn from the experiences of Nigeria, Angola, and Chad in handling its recent oil find?

Assumptions

The thesis assumes that although the circumstances of the countries are different from each other, being third world countries, they have the same developmental requirements. It also assumes that they are all susceptible to the same economic ailments that afflict late-developing petroleum producing and exporting countries.

Definition of Terms

A study of the oil and gas industry reveals certain key concepts. Some of these concepts are that of governance, the resource curse, and rent seeking and reentry states. To enhance an understanding of the issues this research discusses, there is the need to define these concepts.

Governance: Governance has several definitions a few of which are given below. The researcher then draws his own definition from the numerous definitions given. These include:

A United Nation Development Program (UNDP) definition, “the exercise of economic, political and administrative authority to manage a country’s affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences” (UN Economic and Social Council 2006, 3).

A World Bank 1993 definition is “the method through which power is exercised in the management of a country’s political, economic and social resources for development” (UN Economic and Social Council 2006, 3).

Paul Hirst defines governance as “creating an efficient political framework conducive to private economic action: stable regimes, the rule of law, efficient State administration adapted to the roles that governments can actually perform and a strong civil society independent of the State” (UN Economic and Social Council 2006, 3).

This thesis will however, use a definition of governance and good governance, which draws from all these. Good governance is the prudent management of all aspects of a country’s resources to ensure sustainable development in an environment that is transparent, participatory, equitable, and perceived as such by a majority of the citizens. The role of a strong independent civil society and a vibrant, uncensored private media as checks and balances on the activities of governance are covered in the participatory bit.

Gross Domestic Product (GDP) per capita: GDP per capita is “a measure of the total output of a country that takes the gross domestic product (GDP) and divides it by the

number of people in the country. The per capita GDP is especially useful when comparing one country to another because it shows the relative performance of the countries. A rise in per capita GDP signals growth in the economy and tends to translate as an increase in productivity” (Investopedia 2012).

Real wages: Real wages, also called real income, is defined as the “income of an individual, organization, or country after taking into consideration the effects of inflation on purchasing power” (Investwords 2012).

Rent Seeking: A theory that describes the activity or tendency of people to seek personal benefits or privileges through political avenues. This includes trying to get subsidies for goods they produce or have tariffs imposed on those produced by their competitors for example on imports. In effect, it is any interest desiring to have a comparative advantage (Henderson 2012).

Rentier State: A terminology in political science and international relations theory used to describe a state that derives all or a large part of its revenue from renting its indigenous natural resources to foreign patrons. It is normally used for states endowed with resources, such as oil, but also applies to states which trade off their strategic resources. An example is permitting foreign military bases to be built in a country, probably due to the strategic location of the said country to the important foreign power (Askdefine 2012).

The Resource Curse: This is “the tendency of states with large reserves of natural resources, such as oil or diamonds, to be less developed than similar states lacking such resources” (Brown 2003). It is a curious occurrence where “countries with large endowments of natural resources such as oil and gas, often perform worse in terms of

economic development and good governance than do countries with fewer resources” (Humphreys et al. 2007, 1).

Limitations

The main limitation to this study will be the fact it has to be combined with the Command and General Staff College (CGSC) Intermediate Level Education (ILE) course. The ILE curriculum is a very intensive one. This, along with the fact that the research must be completed before the course ends, might affect the amount of research that can be done and would probably take away from the worth of the work done. It eliminates the feasibility of collecting data from the field for the research and hence limits the sources of information extensively to secondary data.

Delimitations

The research is limited to what has happened with the management of the oil and gas industries of Nigeria, Angola and Chad. The thesis will, however, make references to other African and non-African oil-rich countries in order to better illustrate phenomena. In this research oil and gas and petroleum industry are used interchangeably.

Significance of the Study

The repercussions of the mismanagement of revenues from the oil and gas industries of countries are often dire. Michael Ross posits that, since the 1990s, low- and middle-income countries that produce and export oil have been twice as likely to have civil wars as non-oil producing countries. These wars he describes as mostly small scale and often not caused directly by the oil. The presence of the civil wars, however, turns the oil resource of countries into a curse (Ross 2012, 145). The mismanagement of oil

revenues leads to economic stagnation, affects infrastructural and human development and in some cases, has led to poverty, civil strife, and even insurgencies. Should Ghana go down the same road of mismanagement of this nascent and very sensitive industry, it would have very significant consequences on the country. It could destabilize a country lauded as an oasis of peace in an otherwise very troubled region of the world. The likely effects of this on the sub-region would be grave.

The Ghana Armed Forces has participated in Peace Support Operations (PSOs) since shortly after its independence and continues to do so in several countries on and off the African continent. Ghana, a former British colony, gained independence on 6 March 1957 and became a republic on 1 July 1960. Ghana Armed Forces personnel participated in their first PSO in 1960 in the Democratic Republic of Congo, formerly Zaire, and have since participated in PSOs both on and off the African continent. The effects of conflicts, whatever the causes, on the development and well-being of countries are therefore not lost on us. This study seeks to contribute to efforts to avoid the consequences of a mismanagement of the oil and gas industry through its identification of the exact causes and recommendations as to how to avoid these.

Interactions with non-Africans provide one with a good idea of their impressions of the African continent and its various sub-regions. These are often not flattering impressions. The continent and the troubled West African sub-region deserve a success story to help chip away at the very negative perceptions it has generated across the world. This study therefore is additionally a modest contribution towards the achievement of that goal.

Organization of the Study

Oil is a natural resource that has propelled some countries towards accelerated development and has provided high standards of living for the citizenry of countries like Norway. Its discovery in several parts of Africa has unfortunately led to socioeconomic, environmental and security problems. The reasons for these are the general mismanagement of the resource in these countries. Ghana has recently discovered and begun drilling oil in commercial quantities off the western coast of the country. This research seeks to find the exact causes of these problems in order to make recommendations aimed at preventing a recurrence of these issues in Ghana.

The study will be organized into five chapters. Chapter 1 is the introduction and background to the study. It lays the foundations for the issue, stating the reasons that justify such a study and the research question and questions that fall out from it. It also defines terms, and tackles limitations. Chapter 2 is a literature review of the subject looking at scholarly works on oil and gas issues through a governance, management, regulation, development, and security lens. It touches on Venezuela, a country that represents a rather unique case of how things can go wrong, even when initial conditions are right, after the discovery of oil. Chapter 3 deals with the methodology of the research, which will be a qualitative analysis using case studies. The countries to be studied are Nigeria, Chad and Angola. Chapter 4 analyzes research information obtained from the study of the three countries. It also looks at what Ghana has done so far to avoid the problems or issues with the industry in the other countries researched. Chapter 5 presents the summary of findings, conclusions and makes recommendations for further research into the area.

Summary and Conclusions

The research seeks to establish the factors that have led to the mismanagement of oil and gas resources in most African countries, endowed with that natural resource. It aims at doing this in order to propose ways of avoiding those pitfalls by Ghana, a country which has recently started commercial oil production. The main question it seeks to answer is: what factors have led to the widespread mismanagement of oil and gas resource revenues in Africa and what Ghana should do to avoid the economic, developmental and security consequences of this mismanagement? The questions that fall out of this are in the areas of governance, regulation, security threats, consequences and lessons for Ghana from the three African countries the research will study, Nigeria, Angola, and Chad.

The research is organized into five chapters, chapter 1 introduces the research problem, chapter 2 reviews literature, and chapter 3 discusses the methodology used in the research. Chapter 4 does a case study of the three African countries and chapter 5 presents the findings, conclusions and makes recommendations. The next chapter examines the literature on oil and gas issues as they relate to the specified areas of study of this research.

CHAPTER 2

LITERATURE REVIEW

The research is on the mismanagement of oil and gas revenues in oil rich African countries with the goal of identifying lessons for Ghana's nascent oil and gas industry. It seeks to find the factors that have led to the widespread mismanagement of oil and gas resources and revenues in Africa and how Ghana should position itself to avoid the economic, developmental and security problems that this causes. It looks at these issues from governance, management, regulation and security points of view. This chapter will discuss studies done on the management of oil and gas resources in various countries. The purpose is to study the phenomenon through the eyes of other writers with the goal of identifying common factors and variables through which the analysis will be accomplished.

This chapter looks at issues of governance as it relates to the management of oil and gas resources and revenues, mainly in Nigeria, Angola and Chad. It reviews the laws that were enacted to regulate the oil and gas industries or extractive industries of the three countries. It also looks at oil and gas legislation in Ghana. It studies a country outside Africa; in this regard, the case of Venezuela is rather compelling, being a country which begun well when it had an oil boom but has since declined remarkably. It will identify trends and variables with which to conduct the analysis in chapter 4 and will end with a summary.

In studying the effects of governance on the oil and gas industries of Nigeria, Angola and Chad, it is pertinent to review the systems of governance in the three

countries. An analysis of the laws and regulations that govern their oil and gas industries is also necessary.

Nigeria

Nigeria has had a rough, checkered history. A former British colony, the Federal Republic of Nigeria became independent on 1 October 1960. Since independence, the country has suffered a civil war, the Biafran war, between 6 July 1967 and 15 January 1970 (Ofeimun 2012). It has also had numerous military coup d'états, having only had two civilian-to-civilian transfers of power in its fifty-three years of independence. These are the transfer of power from President Olusegun Obasanjo to the late President Umaru Musa Yar'Adua in 2007. The other is the transition after President Yar'Adua passed away on 5 May 2010 to his vice, Goodluck Jonathan, who later won the election of April 2011 (Central Intelligence Agency 2012b).

Twenty-nine of Nigeria's fifty-three years as an independent country have been under military rule, with civilian rule accounting for the remaining twenty-four years. Eight out of its fourteen leaders since independence have been military rulers (Hot Naija News 2013). The numerous military take-overs have implications for stability and continuity, which ultimately affect governance. Military take-overs usually have the corruption and/or incompetence of the government in power as their justification. This means that military governments will often change or discontinue most policies and projects of governments they overthrow. This affects political, socioeconomic, and developmental issues in any country, regardless of how efficient or otherwise the military government turns out to be. Apart from this, all things being equal, a military government is far less accountable to the citizenry than an elected government would be. If the

citizenry did not put the government in office, they are less able to hold it accountable for its actions or inactions.

Richard Dowden writes that in a 2004 Africa-wide survey, which Globescan conducted, only 12 per cent of Nigerians thought that their country was run by the will of the people. He states that Nigerians expressed the least belief in their government of all the countries in Africa (Dowden 2009, 451). It is worth noting that in 2004 Nigeria was under a constitutionally elected government. The issue is whether this was a reflection of the practices of President Obasanjo's government or the effect of the years of military rule that preceded Obasanjo's election.

With such challenges, it is not surprising that Nigeria is often assessed as among the most corrupt countries in the world in the Transparency International Annual Corruption Perception Index (CPI). The 2003 index for instance saw Nigeria placing as the second most corrupt among 133 countries surveyed around the world (Transparency International 2003). In 2005, Nigeria ranked as the sixth most corrupt in 159 countries surveyed around the world (Transparency International 2005). The most recent CPI rates Nigeria near the bottom, as 134th out of 178 countries surveyed in 2010, 143rd out of 182 countries in 2011 and 139 out of 176 countries surveyed in 2012 (Transparency International 2010, 2011 and 2012a). In the area of governance and public sector management, Nigeria has issues with corruption, which ultimately affects the management of its oil and gas industry.

Nigeria discovered oil in commercial quantities in 1956 in Olubiri, a village in the Niger Delta (Dowden 2009, 455). There have been many deep-water oil discoveries since then. Petroleum management and laws governing it have undergone a lot of reform since

this discovery. The overarching petroleum law in Nigeria is the Petroleum Act of 1969. It vests ownership and control of all petroleum in, under and upon any land including land covered by water in the state. It grants the Minister of Petroleum Resources interests in three areas, exploration, prospecting, and production rights. The Nigerian National Petroleum Corporation (NNPC) was formed in 1997. It replaced the Nigerian National Oil Corporation, formed by a decree in 1971, as the medium through which the Federal Government participates in the petroleum industry. It therefore manages the government's investments in the oil sector. It does this through six divisions and eight subsidiaries. Its business unit, the National Petroleum Investment Management Service (NAPIMS) handles actual government investments in the oil and gas sector (Akinjide-Balogun 2001). The main features of Nigeria's petroleum law are contained in the Petroleum Act 1969 and other laws, regulations and decrees enacted since the act. Some of these are an Indigenous Concession Program, which had the aim of encouraging the growth of local expertise production in the exploration, development and operations of the petroleum industry. It seeks to do this by maintaining ownership and control of the industry in the hand of Nigerians (Akinjide-Balogun 2001).

The Niger Delta Development Commission Act was passed in the year 2000 to deal with the ecological problems that oil exploration in the Niger Delta area was causing (Laws of Federation of Nigeria 2000). How much this Act has achieved is a very debatable issue judging from the stories that continue to be written about the region. An example of this is an article that was published in the February 2007 issue of the National Geographic Magazine by Tom O'Neil entitled "Nigerian Oil, Curse of the Black Gold,

Hope and Betrayal on the Niger Delta”. In the article, he describes the environmental degradation that persists in the Niger Delta region.

Nigeria’s National Assembly, being the legislative branch of government, is the body that passes legislation on petroleum issues, which is on an exclusive legislative list. The Federal Ministry of Petroleum Resources is the regulatory arm of the petroleum industry. Decree number 50 established the Ministry of Environment/Federal Environmental Protection Agency in 1988 to protect, restore and preserve Nigeria’s ecosystem. The Federal Inland Revenue Board collects royalties and petroleum profit taxes for the government (Akinjide-Balogun 2001). The problem with having several regulatory bodies oversee the industry is it becomes difficult to delineate responsibilities. It leads to overlaps, which could result in turf fights in areas considered beneficial, and in the neglect of other areas.

The Nigerian Federal Government, through the NNPC, has joint ventures with seven foreign oil companies, which in six cases give the government 60 percent shareholding. In the seventh case, the government has a 55 percent shareholding. Contracts with oil companies are mostly production sharing contracts, which have the following features: they are entered into between exploration and production companies and the NNPC. Oil prospecting licenses and oil mining leases, which constitute the contract are held by the NNPC. The exploration and production companies, on appointment, have exclusive rights to explore and produce in the contract area over a 30 year period. Finance of petroleum operations is the exclusive responsibility of the exploration and production company. Exploration and development risks are solely borne by the exploration and development company. This is because recovery of exploration

and development costs can only be done if the development of discoveries is successful. The priority of production is divided into royalty oil, cost oil, tax oil and profit oil. Petroleum operations and an agreed work program are overseen by a Joint Management Committee (Akinjide-Balogun 2001).

Nigeria has 5.11 trillion cubic meters of natural gas reserves by January 2012 estimates making it the tenth highest natural gas reserves in the world (Central Intelligence Agency 2012b). The legislation that affected the gas aspect of the petroleum industry is the Associated Gas Re-injection Act of 1979. Nigeria was, however, still flaring gas in 2012. It made moves by passing legislation that sought to ban gas flaring by the end of 2012 (Business News 2012). It has not been possible for the researcher to positively confirm if the flaring of gas has ceased completely.

The Federal Government of Nigeria embarked on a scheme to privatize sectors of petroleum management ostensibly to improve efficiency in the management of public funds and attract foreign exchange and new technology. It was also meant to generate income for infrastructural and social development projects. The venture involved the commercialization of six of the eight subsidiaries of the NNPC with the government maintaining a 40 per cent stake in them (Akinjide-Balogun 2001).

Nigeria's petroleum laws and regulations did not make provision for the exhaustion of their oil and gas reserves. There was therefore no sovereign fund like that of Norway and other developed countries until late 2012. The fund was officially launched in October 2012 amid reports of opposition from several state governors. The opposition of the governors was premised on fears that the establishment of the fund would result in cuts to their allocation of national revenues. The fund is meant to

safeguard petroleum revenues for future generations and to mitigate the effects of external shocks on the economy (Rice 2012). After over fifty-five years of commercial oil production, Nigeria has finally taken a big step in the right direction. It is too early to comment on the management of this new sovereign wealth fund. With the country's reputation in the area of corruption, it remains to be seen how this laudable venture will end.

The Nigerian Oil and Gas Industry Content Development Law was signed in 2010. It seeks to increase the level of participation of Nigerian and local companies in the country's petroleum industry (Adeoye 2012). The law defines Nigerian content as "the quantum of composite value added to or created in the Nigerian economy by a systematic development of capacity and capabilities through deliberate utilization of Nigerian human, material resources and services in the Nigerian oil and gas industry". The act establishes a Nigerian Content Development and Monitoring Board (NCDMB), tasked with the implementation of the provisions of the law. It also establishes a Nigerian Content Consultative Forum as an avenue for information sharing. The act requires that a Nigerian Content Plan be submitted for every bidding for license, permit, or interest in the petroleum industry. It stipulates that the award of contracts will not be strictly on the principle of the lowest bidder. Once a Nigerian company's bid is not above the lowest bidder by more than 10 percent, the company can remain in the bidding process. If bids are within one percent of each other at the commercial stage, that which contains the highest Nigerian content wins the bid. Where Nigerian capacity is inadequate, the act permits the minister to continue importing the needed items for up to three years from the effective date of the act. Fabrication and welding work should be performed within

Nigeria. The law also makes it compulsory to operators, contractors and others to maintain bank accounts in Nigeria in which a minimum of ten percent of the profits from their operations has to be retained (Adeoye 2012).

The law restricts employment at the junior and intermediate levels to Nigerians. It has several other regulations to ensure that Nigerians benefit from the petroleum industry. It restricts management positions that can be held by foreigners to only 5 percent. It obliges operators to submit a succession plan for such positions and ensure that Nigerians understudy expatriates for four years. After this period appointments held by those foreigners become nationalized. Operators and contractors can also only use Nigerian registered insurance brokers and Nigerian legal practitioners and, where practicable, Nigerian financial institutions. Companies operating in Nigeria's petroleum industry are also to submit a Nigerian Content Performance Report to the NCDMB within the first 60 days of every year. They will also submit: Research and Development Plans, Legal Services Plans, Financial Services Plans and Insurance Plans, Financial Services Plans and Insurance Plans biannually (Adeoye 2012).

Criticisms of the law in the June 2010 edition of the Newsletter on Nigerian Oil and Gas focus on the requirement for a Nigerian Content Plan being submitted for every contract. This is viewed as a process that will create an administrative bottleneck. The researcher opines that in a country that has the level of corruption that Nigeria suffers, this is another potential source of bribery. The Newsletter also criticizes the feasibility of the three-year ultimatum for an end to the importation of items for which no capacity exists in Nigeria. It raises several other possible challenges in the implementation of the provisions of the act. The achievements of the act to date will be examined in chapter 4 of

this thesis. It worth noting that, this law also creates a number of oversight organizations. This further increases the number of organizations set up over Nigeria's petroleum industry. It increases bureaucracy in the industry creating further avenues for bribery and corruption. As laudable as the goals of the law are, it does not address the tendency for persons in positions of authority to take advantage of it to further enrich themselves. Neither does it prevent cronyism and nepotism from pushing the industry into the control of a small powerful group.

Angola

Angola, a former Portuguese colony, gained independence in 1975. It suffered 27 years of civil war, which started right after independence and ended in 2002 (Central Intelligence Agency 2012e). Angola is the third largest producer of oil in Africa, after Nigeria and Algeria (Index Mundi 2013). It is also the fifteenth highest producer of oil in world (Zelman 2011).

Angola's governance issues have certainly been affected by the years of civil war. It has had only two presidents since independence. Its current president, Jose Eduardo Dos Santos, has ruled since 1979. Richard Dowden quotes an IMF report that between 1996 and 2001, almost 40 percent of Angola's state expenditure was unaccounted for. He writes that almost \$1 billion went missing from government coffers in 2001 (Dowden 2009, 220). On Transparency International's CPI, Angola has consistently been rated low. The 2003 index had Angola placing 124th out of 133 countries surveyed (Transparency International 2003). That of 2005 was 151 out of 159 countries surveyed (Transparency International 2005). Its most recent rankings in 2010, 2011 and 2012 were 168 out of 178 countries, 168 out of 182 countries and 157 out of 176 countries

respectively (Transparency International 2010, 2011 and 2012a). Angola has just as many issues with corruption as Nigeria does.

Angola's petroleum law makes *Sociedade Nacional de Combustível de Angola, Empresa Pública* (Sonangol E.P.), the national concessionaire and thus holder of mining rights for petroleum operations. These mining right cannot be transferred in part or in whole (Miranda and McClelland 2012, 6). The law regulates petroleum operations. The Supervising Minister is the issuer of prospecting licenses, which permits petroleum operations. Concessions to exercise mining rights are however, issued by a separate office of the Angolan government. Rights to carryout petroleum operations are given after safeguards are assured with regards to Angola's "defense, safety, the environment, navigation, research, management and preservation of natural resources, particularly aquatic, biological, living or non-living" (Miranda and McClelland 2012, 7).

Concessions have two periods: an exploration and a production period. Prospecting periods have a maximum of three years, which may be extended upon the application of the licensee or Sonangol E.P. The Supervising Minister retains the power to grant such extensions (Miranda and McClelland 2012, 7). This by itself has the tendency to breed bribery and corruption as oil-producing companies seek to extend their prospecting periods. The law makes it possible for a company to conduct petroleum operations in Angola outside the scope of a prospecting license. In this case petroleum operations will be conducted with Sonangol E.P. with the permission of the Angolan government as a corporation, consortium or in a production sharing agreement. It could also be a risk services agreement (Article 14, 8). Article 15 makes the share of Sonangol in any corporation or consortium more than 50 percent as a rule, which can be received

with government approval. The law establishes safety zones (Article 22), safety and hygiene in the work places (Article 24). It also makes provision for liability for damages to third parties (Article 25), the promotion of Angolan business community and development (Article 26) and the use of national products and services (Article 27).

The law stipulates that the minister, by means of executive decrees, issues licenses (Miranda and McClelland 2012, 16). According to the law, the procedure for granting concessions is through open tender and direct negotiation. The concessions are then awarded through concession decrees. These are formal government instruments, which award petroleum concessions to Sonangol E.P. (the national concessionaire) (Articles 45-57).

The law expressly forbids the flaring of gas except that done for short periods for testing and other operating reasons. The Supervising Ministry may authorize flaring of natural gas in cases of marginal small deposits to improve the viability of exploitation (Article 73). The law also forbids the extraction or production of substances not granted by the mining rights except expressly authorized. On ownership of petroleum produced, the law situates the point of transfer of ownership of petroleum produced outside or beyond the wellhead; the metering point is before the point of transfer of ownership (Articles 80-82). It also stipulates same conditions of service for both national and foreign workers employed in identical capacities (Article 86). This is an interesting provision as in a number of African countries' expatriate workers usually take higher remuneration and have better conditions of service than nationals employed in similar capacities. This practice has often been justified with the argument of the inconveniences that an expatriate experiences while working in a foreign country.

The law mandates the National Assembly to resolve any doubts or omissions arising from its interpretation or application (Article 96). It revokes without prejudice to the transitional regime, all legislation, which is inconsistent with this law. It mentions particularly, the original petroleum regulation law, the General Petroleum Activities Law, Law No. 13/78 of 26 August 1978. This law set out the basic rules regulating the post-independence regulation of Angola's petroleum potential (Revenue Watch Institute 2004). Apart from general references to this law, the researcher has been unable to access the full contents of this repealed law for the purposes of reviewing it.

Angola's Petroleum Activities Law of 2004 is structured to protect the interests of the country. Unlike that of Nigeria where quite a lot of oversight organizations exist, the Angolan law sets up few such organizations. It puts a lot of responsibility in the hands of the supervising ministry and the national concessionaire, Sonangol E.P. This reduces the bureaucracy in the petroleum industry. However, in the absence of effective checks and balances and with Angola's very high corruption, this fosters bribery and corruption as companies strive to remain in the industry. All things being equal, it is easier to pay your way through the bureaucracy when there are very few supervisory authorities to bribe than it is with a lot of such authorities. On the other hand, the cost of operation is a lot higher when a company has to bribe several supervising authorities.

Angola's petroleum law does not provide for a sovereign fund to save revenue from the oil and gas industry for future use. However, a fund was created in 2012 at the urging of the International Monetary Fund (IMF). The IMF got Angola to set up the fund after lending it US \$1.3 billion in 2008 when crude oil prices dropped requiring Angola to borrow to make up the shortfall in expected incomes. The Angolan Sovereign Fund,

Fundo Soberano de Angola (FSDA), has a three-member management board which includes the son of Angola's president. The fund makes investments in financial securities and stakes in infrastructure, hospitality projects and other industries. It is described as an evolution of resources fund based on approximately 5.6 percent of daily oil production. Angola produced 1.8 million barrels of oil a day in 2012 (Mendes and McClelland 2012). Here again, it might be too early to comment on the performance of this sovereign fund. The appointment of the son of the president who superintends over the level of corruption that Angola suffers does not provide any assurances that the fund would be managed in a transparent and efficient manner. Until the sources of corruption are effectively dealt with, the establishment of the sovereign fund will just be a good excuse and cover to get money into the pockets and private accounts of the elite in Angola.

Chad

Chad is a former French colony that gained independence in 1960. It has had the same president since December 1990 and although now supposedly a democracy, there is no limit to the number of terms the president can serve. Chad suffered three decades of civil wars and a Libyan invasion (Central Intelligence Agency 2012d). It has had four civil wars, the last of which is still ongoing. The first civil war was from 1965 and 1979; the second was from 1979 to 1982. The third civil war was 1988 to 2002 and the fourth started in 2005 and still rages on (History Guy 2013).

Chadian President Idriss Deby's rule has been described as increasingly repressive. The country has numerous rebel groups, mostly formed along tribal lines, and most of whom operate from safe havens in Sudan's Darfur region. Lydia Polgreen, a New

York Times journalist has described elections in Chad as perfunctory affairs, which have a lot of irregularities (Polgreen 2008).

Chad has consistently fared badly in Transparency International's CPI. Chad was not surveyed in the 2003 CPI (Transparency International 2003). In 2005, Chad was 159th out of 159 countries surveyed (Transparency International 2005). The 2010, 2011 and 2012 surveys saw Chad placing 171 out of 178, 168 out of 182 and 165 out of 176 countries respectively (Transparency International 2010, 2011 and 2012a). Chad is thus one of the most corrupt countries in Africa often only doing better than Sudan and Somalia (a failed state). It has also consistently been among the top ten most corrupt Transparency International surveyed countries in the world (Transparency International 2005, 2010, 2011 and 2012a).

Exploration for oil in Chad started in the 1950s with the first discovery in the 1960s. Initial conditions made it difficult to exploit Chad's petroleum deposits. The country's political and fiscal situation was unattractive to investors and being landlocked, it required a large system of pipelines to export its oil. Oil prices were also too low at the time to create favorable conditions for investment. When the Chadian government showed a willingness to change these prevailing conditions and create the necessary conditions for exploitation of its petroleum the World Bank came in to assist. The World Bank, Chad and Cameroon and a private consortium came to an agreement on the program's financing in 1999 and 2000, after Chad's Assembly had passed a Petroleum Law. Exploitation then started in 2000 with simultaneous construction of the Doba to Kribi pipeline from Chad through Cameroon to the Atlantic Ocean. Chad created a national oil company, *Societe des Hydrocarbures du Tchad* (SHT), in 2008 to handle its

interests in its petroleum industry. The company holds Chad's part of sharing agreements and will also develop small oil fields exclusively for the country (Geointelligence Network 2009).

Chad's petroleum industry is unique because of the arrangements that permitted its financing. This started with the Petroleum Revenue Management Law passed by Chad's Assembly (parliament) in 1999. The World Bank tried to use the Chadian situation as a test case in the use of the natural resource revenues of a developing country to assist it out of poverty. The agreement to get finance for the country's petroleum industry had certain features. Chad had a 12.5 percent portion of direct revenues from the petroleum industry. This amount would be paid through a London-based Citibank escrow account. An independent board had the responsibility of supervising the management of this account. A future generations fund was created into which 10 percent of the annual revenues from the petroleum industry would be paid. This fund was meant to be a reserve Chad could fall on in future when its petroleum reserves were used up. The Chadian government would receive 15 percent of the royalties and dividends for governmental expenditure. The oil-producing region, Eastern Logone would get 5 percent of the royalties. The rest of the revenue was earmarked for priority sectors: "public works, health, health education, rural development and environmental projects" (Zissis 2006).

In December 2005, faced with a rebellion that threatened to oust him from power, Deby changed Chad's Petroleum Revenue Management Law. The future generations fund was abolished and the portion of petroleum revenue meant for the Chadian government was doubled to 30 percent. Security was also included in the priority poverty reductions areas, thus permitting Deby to spend more money on arms. The rebellion

Deby sought to quell started as a result of his amending the Chadian constitution to enable him seek a third five-year term as president (Zissis 2006). Thus instead of Chad's petroleum revenues being used in a manner beneficial to the Chadian people, it has been channeled into areas that support regime survival.

Ghana

Ghana, a former British colony has also had quite a checkered past with disruptions to democratic rule. It has however, been stable for much longer than a good number of African countries. A total of 21 out of Ghana's 56 years as an independent country have been spent under military rule. The remaining 35 years have been under civilian or democratic rule. There has been no military overthrows of government in Ghana since 1982.

Ghana fares better than most African countries on issues of corruption and stability. This is shown by its performance in the Transparency International Annual CPIs. The 2003 index had Ghana at number 70 out of a 133 countries surveyed around the world. At the 70th position, Ghana was sixth in Africa (Transparency International 2003). Ghana was 65th out of 159 countries surveyed in 2005 and remained the sixth least corrupt country among Africa's 53 countries then (Transparency International 2005). With the creation in July 2011 of South Sudan, there are now 54 countries in Africa. More recent indices of 2010, 2011 and 2012 had Ghana place worldwide, 62nd out of 178 countries, 69th out of 182 countries and 64th out of 176 countries surveyed respectively (Transparency International 2010, 2011, and 2012a). Ghana, therefore has its own issues with corruption but is relatively much better when it comes to matters of good governance and political stability than most African countries.

Prospecting for oil in Ghana went on for decades before the discovery of oil in commercial quantities in 2007. Two laws, the Provisional National Defence Council (PNDC) Law 84 (Exploration and Production, 1984) and PNDC Law 188 (Petroleum Income Tax, 1987) governed the petroleum industry until 2011 (Petroleum Revenue Management Act 2011). Since the discovery of oil, Ghana's parliament has passed laws to regulate the industry. The Petroleum Commission Act of 2011, Act 821, established the Petroleum Commission. The commission is tasked with the regulation and management of the utilization of petroleum resources. It also provides for other related purposes. Among the functions of the commission are promoting optimal levels of petroleum exploitation and monitoring compliance with national policies, laws, regulations and agreements related to petroleum activities. It is also tasked with promoting local content and local participation in petroleum activities in accordance with PNDC Law 84.

The Petroleum Revenue Management Act of 2011, Act 815, was passed with the stated goal of providing a framework within which, petroleum revenues could be collected, allocated and managed. This is to be done in a responsible, transparent, accountable and sustainable manner to make it beneficial to Ghanaians in accordance with article 36 of Ghana's constitution. Article 36 obligates the state to take all necessary action to ensure that the management of the national economy results in a maximization of economic development with its attendant benefits. These include the welfare, freedom and happiness of all who live in Ghana and the provision of adequate means of livelihood, employment and public assistance to the needy (The Constitution of the Republic of Ghana 1992). Act 815 among other things, establishes a Petroleum Holding

Fund, a Ghana Stabilization Fund and a Ghana Heritage Fund. It spells out regulations that govern the use of these funds. It also establishes an Investment Advisory Committee and lays down procedures for the auditing of all petroleum funds. It also provides for accountability, transparency and public oversight over the funds (Petroleum Revenue Management Act 2011).

The Petroleum Holding Fund is a public fund at the Bank of Ghana, which receives and disburses petroleum revenue due to Ghana. The Ghana Stabilization Fund is meant to cushion shortfalls that might occur as a result of fluctuations in petroleum prices. The Ghana Heritage Fund is an endowment fund for future generations when petroleum reserves are exhausted, the fund also receives excess petroleum revenue. Excess petroleum revenue would be revenue above what is projected as a result of an unexpected increase in the world prices of crude oil and other petroleum products. Act 815 uses the term Ghana Petroleum Funds as the collective term for the Ghana Stabilization Fund and the Ghana Heritage Fund (Petroleum Revenue Management Act 2011). Ghana would seem to have taken a cue from some successful petroleum producing and exporting countries. Its establishment of the Ghana Petroleum Funds just four months after commercial drilling of oil commenced is definitely a step in the right direction. It is even more interesting that Ghana would establish these funds before Nigeria and Angola did, considering how long those countries have been producing and exporting oil.

Resource Curse Studies

The Role of the State

Joseph E. Stiglitz, in discussing the role of the state in *Escaping the Resource Curse*, identifies a situation where governments are unable to get the full benefits of their

natural resources. This he attributes to the dilemma governments are placed in when they have to deal with private business entities in the exploitation of these natural resources. He advocates the use of national oil companies for extraction of oil in countries, which have a strong administrative system and the capacity to extract. The issue is with countries that lack these attributes. Private companies are in business to make profits (Humphreys et al. 2007, 23). Such companies are therefore, unlikely to be committed to the ideals of providing for the public good which a government, by its social contract with its citizens, is obliged to. Stiglitz makes the case for privatization of the exploitation of the resource, as an alternative to the state doing it, in situations where the state is not in the position to do so efficiently. He cites Norway and Malaysia as countries that own and run their own oil countries successfully having mastered the skills required to manage and control a range of companies. In this regard, Stiglitz sees the role of the state in the extraction of the natural resource as either state owned extraction, if the state has the capacity, or privatization if the state lacks this. Should the state be required to privatize, as will undoubtedly be the case in most African country as a result of a low capacity to exploit, he suggests doing this such that the government gets a good deal for the country. His proposals are open and transparent agreements, which should be openly arrived at, and the state should ultimately remain the owner of the resource. He explains this as the state owning residual rents and controlling the industry. He also proposes fairness, which would ensure that in the end the resource benefits the citizens of the country with the foreign oil company receiving a fair rate of return that is adjusted to cater for the risks that the companies bear (Humphreys et al. 2007, 43-45). As the look at the oil regulations of Nigeria, Angola, Chad and Ghana have shown, they are structured to protect the

interests of the countries. As far as Stiglitz's proposals on the role of the state are concerned, the countries looked at are satisfying their roles. The problem of the mismanagement of petroleum resource revenues therefore lies elsewhere beyond the perfunctory establishment of laws, rules, and procedures.

In explaining the failure of policies in troubled oil-rich countries, Michael L. Ross states that these are caused by the effect of oil revenues on government institutions. He states that government officials often try to get around the problem of oil revenue volatility by avoiding long-term projects. Another cause of this failure is the expansion of government revenues quicker than government institutional capacity to effectively manage them. That is, the windfalls that the country receives, overwhelms its bureaucratic capacity (Ross 2012, 208-209). Ross proposes actions such as limiting revenue sizes, improving their stability and transparency, and altering their sources as means by which governments can avoid the oil curse (Ross 2012, 234-235).

On limiting the size of the revenue, Ross proposes leaving the oil in the ground. This he explains, is extracting the resource slowly in order that government capacity to manage the revenue is not exceeded. It will also ensure that civil society is able to monitor the use of the revenue. Ross opines that a limitation of extraction pace results in a reduction in the danger of experiencing the oil curse. He also proposes the use of barter contracts, exchange of oil for infrastructure or services instead of royalties and taxes. It reduces the possibility of loss of income through corruption. He however, mentions that, the records of the new phenomenon of bartering have so far been unimpressive and suggests bartering through competitive bidding as a way around the problems encountered. A third revenue limiting method is to distribute revenues directly to citizens

as is done in the US state of Alaska and the Canadian province of Alberta. Ross' fourth means is direct transfer of parts of the oil revenue to regional and local governments. He notes that the first two methods are feasible in developing countries while the last two are more workable in developed countries (Ross 2012, 235-240).

On changing the source of petroleum revenues, Ross suggests a privatization of national oil companies. He argues the advantages and disadvantages of this but concludes that it might improve government accountability by reducing the ability to hide oil revenues. This can be achieved through for instance, the public listing of the fully or partially privatized companies on the stock market. This he argues would be the case even if governments maintained a majority share-holding in the listed companies (Ross 2012, 240-242).

With the stabilization of petroleum revenues, Ross suggests three elements: that the government cuts spending during revenue booms, increase spending when revenues slump and create a link between the two. The link is a fund into which excess revenue goes, which is that used when oil prices drop reducing revenues. The success of such a measure, he states, depends on the preparedness of subsequent governments to maintain the policy of selfless restraint that it takes to establish such a system (Ross 2012, 242-244). Having discussed the views of Stiglitz and Ross on the role of the state in stewarding oil resource revenues, a look is now taken at the causes of the resource curse.

The Causes of the Oil Curse

Ross argues that oil affects the political and economic health of nations. In ascribing reasons to these effects, he admits that arguments that the oil curse is caused by the intervention of foreign powers who manipulate governments of oil-rich are true to an

extent. He also accepts arguments that international oil companies exploit oil resources in pursuit of extraordinary profits. He however, argues that these cannot account for the problems that late-developing oil rich countries face. He opines that if it were so, the nationalization of oil and gas resources in some of these countries would have reversed these trends. Ross blames the problems on the unique features of petroleum revenues and the way governments use them. Ross identifies four peculiar features of petroleum revenues, their scale, source, stability and secrecy.

The scales of oil revenues are usually enormous. Ross posits that this leads oil-producing countries to have large governments, he estimates that these are often almost 50 percent larger than those of non-oil producing countries (Ross 2012, 4-5). The source of the revenue is another unique feature, the sheer size of revenues that oil brings, takes away the need to finance government expenditure through taxation of the citizenry. This assertion by Ross is supported by Jeffrey Sachs in his explanation of the effects that the abundance of resources has on delicate political establishments. Sachs, in explaining the three singularities that cause the resource curse, alludes to it as a consequence of the states' ability to raise funds without taxation (Brown 2009). Certainly, countries that derive the majority of government revenues from strategic resources have a tendency to feel little need to respond to the needs of the citizens. The idea is that since the citizens do not pay anything to the government, they cannot really demand anything from the government. If petroleum resources are seen for what they really are, that is the property of the people and not the government, then this can be challenged. However, as Ross argues, oil rich countries are 50 percent more likely to have autocratic rulers than non-oil

producing countries (Ross 2012, 1). There thus exists a huge tendency for late developing oil-rich countries to be unresponsive to the needs of the citizens.

The third unique feature of stability has to do with the volatility of oil prices and the effects that this has on the finances of a government. The instability of oil prices on the world market accounts for situations like that which caused Angola to seek IMF intervention in 2008. There is a tendency for oil producing countries to embark on overly ambitious capital-intensive schemes based on projected incomes. Fluctuations in oil income then throw such ventures out of gear. Ross attributes the tendency of governments of late-developing oil rich countries to squander their resource wealth to this problem (Ross 2012, 6).

Ross' last unique feature, secrecy, is about that inclination of governments to conspire with international and national oil companies to hide transactions, revenues and expenditure. This facilitates the misuse of oil revenues and propagates the autocratic governments often found in late-developing oil rich countries. Ross identifies other problems with petroleum exploration. These include the social and environmental problems that the oil extraction process often creates. He also mentions the huge sunk costs of oil exploration facilities, which make it disposed towards extortion, and sees these as the real causes of the oil or resource curse. He also discusses the tendency of oil revenues to affect the exchange rate of oil producing countries. He posits that the most significant issue with oil is it gives governments large revenues, which are not from taxes that fluctuate unpredictably and are easy to hide (Ross 2012, 6).

Humphreys, Sachs and Stiglitz, in commenting on the resource curse, argue that natural resource wealth is different from other types of wealth in that it is not produced

but extracted. It is also different because most natural resources are not renewable. The former leads to detachment of that industry from other sectors of the economy. The latter makes the industry more of an asset than a source of income. These can cause rent-seeking tendencies in an economy. They state that the revenue that natural resource exports bring in results in an appreciation in real exchange rates. This affects the export of non-natural resource commodities and the ability of these commodities to compete with imports. The increased revenue from the mineral exports increases the ability to import goods, which affects domestic manufacturers. Labor is attracted to the natural-resource sector and there is a hike in the prices of materials because of the increased revenue. These also affect domestic manufacturing. Ultimately, the economic and political forces that the natural resource discovery and export set off push domestic manufacturing towards collapse. They argue that the effect of the afore-mentioned is felt on two sectors, the natural resource and non-tradable, an example being construction, at the expense of the traditional export sectors. In the Netherlands, as a result of its natural gas discovery in the 1970s, the manufacturing sector was the opportunity cost; in developing countries, agriculture is often the area that suffers. This has come to be known as the Dutch Disease (Humphreys et al. 2007, 4-6).

In arguing the economic theories of the resource curse, Jose Antonio Mayorbe states that Venezuela's expanding oil industry led to an inflated exchange rate in its economy. The result was young industries became uncompetitive, which slowed industrialization down. Natural resource booms adversely affect the structures of economies. Oil booms result in deindustrialization causing increased non-traded investments, which discourage investment in manufacturing. The reason is prices of non-

traded goods (such as services and construction) increase relative to prices of non-oil traded goods (such as manufacturing and agriculture) due to the appreciation in exchange rates. Increases in aggregate demand for labor resulting from the oil boom also raise manufacturing wages, affecting the competitiveness of manufacturing. The manufacturing sector has a great potential to enhance growth in an economy. This is so despite the fact that the service sector has proven in recent years to be an excellent promoter of growth (Di John 2009, 36-37).

Ross argues that not all countries are vulnerable to the oil curse. In his opinion, countries with high incomes, well-diversified economies and strong democratic institutions are not predisposed to the resource curse. He cites Canada, Norway, Great Britain, and the United States as examples of countries that fall into this category (Ross 2012, 1-3). These countries have strong, well-established bureaucracies and institutions that minimize the corruption that rent-seeking creates and its attendant inefficiencies. They are well organized for early identification and remedy of any signs of the onset of the Dutch disease. In any case, the diversified and developed natures of their economies do not lend themselves to oil curse tendencies. Having seen the causes of the oil or resource curse, it is worth looking at what has been written about its effects. In doing this, the case of Venezuela will be looked at.

Ross states that oil rich developing countries are twice as likely to have civil wars as the non-oil rich countries. He further describes these countries as being “more secretive, more financially volatile, and provide women with fewer economic and political opportunities”. He supports this claim by citing the situation with oil rich countries in the Middle East (Ross 2012, 1-2). In discussing oil-based violence, Ross is

more definite, asserting that since the early 1990s, oil-producing countries have been 50 percent more likely to have civil wars than other countries. He explains that these civil wars are rare and when they do occur, they are not the direct result of the oil resource wealth, however, the oil aggravates such wars (Ross 2012, 145). The dimension of oil-based violence is delved into in chapter 4 of this thesis.

Venezuela as a Case Study

A look at Venezuela shows the possible effects of the resource curse on a country. Venezuela is a classic case of a country that begun very well after the discovery of oil but has declined over the years showing the classic symptoms of the resource curse. Oil was discovered in Venezuela in the 1920s and the country immediately set about diversifying its production and export structure. Prior to the oil discovery, Venezuela was one of Latin America's poorest, moribund agrarian economies. It had little potential for capital accumulation due to its traditional exports of coffee and cocoa and dependence on its agricultural structure (Di John 2009, 19). After the discovery of oil, the country became a predominantly oil-exporting nation. The Venezuelan economy grew significantly up to the 1950s when the industrialization of the country took on a state-led character. This sought to promote import substitution and heavy industrialization (Di John 2009, 1). The country was one of the fastest growing in Latin America between 1920 and about 1965, with a manufacturing growth rate that led until the mid-1970s. Venezuela's non-oil economy started declining in the mid-1960s. Di John does not attribute this decline to the state-led industrialization policies that Venezuelan governments pursued. He rather states that whereas the period of growth and progress coincided with the country's transition to democracy in the late 1950s, decline coincided with periods of political crises. Di John

describes Venezuela's decline as paradoxical because the country showed the potential of one that would have maintained her growth rate. This is because of huge increases in available resources resulting from massive oil revenues between 1974 and 1985 and her democratic credentials. A third reason he gives is that Venezuela had not faced the social issues that often afflict governments in developing countries. These issues include ethnicity, caste systems, religious conflicts, and inequitable distribution of incomes.

In examining the reasons for the decline of Venezuela's growth, Di John identifies a semblance between them and the causes of similar failures in other Latin American and oil-exporting developing countries. This makes his study relevant to a study of the problems of managing such resource revenues in Africa.

Venezuela became the world's second largest producer of oil in the 1950s and still has one of the highest deposits of petroleum reserves in the world. A study of its export earnings is indicative of very significant financial resource gains during periods of oil booms. It should have used this resource mobilization capacity from its oil and gas revenues to embark on major transformations to the structure of its industrial and export sectors. This would have reduced its dependence on oil and enabled high growth and an achievement of its goals (Di John 2009, 22). The problem is, oil money is easy money and takes away the requirement for leaders to be imaginative in order to keep their economies providing revenue for their countries.

In failing to achieve these goals, Venezuela's economy declined. This decline, which occurred between 1974 and 1985, took place in the mist of increases in resource availability (Di John 2009, 23). The Venezuelan paradox is that, its slowdown happened when there were appreciably good physical and human capital investments in its political

economy. The country had quite an equitable distribution of incomes, democratic governance and a high state of resource mobilization. It had the highest savings rate in Latin America in the 1980s and matched that of East Asia's giants (Malaysia and Indonesia) fairly well. It only fell behind the East Asians in the 1990s (Di John 2009, 24). Overall, Venezuela rated high in performance across all sectors, making its conditions very favorable for continued growth.

Venezuela's decline challenges a lot of theories on growth and state capacity as it satisfied the themes of both growth theories and institutional theories on state capacity. Interestingly, the most impressive growth in Venezuela occurred during authoritarian rule during which investments in human capital formation were comparatively low. Decline on the other hand took place in a period of multi-party democracy and with a lot of investment in human capital formation. This challenges pre-requisite views of development in neo-classical growth theories. In answering the question of Venezuela's decline, Di John states, "one of the main lessons of world economic history of the past century is that sustained economic growth is achieved with sustained and successful industrialization". He posits that whereas there exists a positive correlation between the availability of natural resources and industrialization in countries, which are now developed, evidence from less developed countries in the last century proves the opposite. Sustained industrialization does not result from specialization in natural resource exports. The country's failure to transform the structure of its economy and its poor economic performance between 1973 and 1988 is also due to the inability of its leaders to realize that increases in oil revenues are not permanent. They therefore made

unsustainable large scale, long-gestating industrial and infrastructural investments (Di John 2009, 32-35).

Economic analysts do not agree on the causes of Venezuela's predicament. Thus, Di John's analysis of Venezuela indicates that it cannot be totally explained by the Dutch Disease models. Instead of the oil booms of the 1970s and 1980s affecting investments in manufacturing, there was initially a positive correlation between oil revenues and manufacturing, contrary to the main argument of these models. He cites the little proof of a reduction in manufacturing in non-oil GDP over time, because of the oil booms, as evidence of the inability of the this model to explain Venezuela's slowdown. He argues that the model does not explain the slowdown in the non-oil economy in general and specifically in the manufacturing sector's growth rate. Neither was the rapid manufacturing growth, which was accompanied by the expansion of the oil industry between the 1920s and the 1960s, consistent with the theories of the model (Di John 2009, 74).

The reentry state models, Di John argues, have been more successful at explaining Venezuela's woes. This is despite the fact that they also have certain flaws in their explanations. He attributes the success of these models in dealing with the Venezuela case to their dealing with issues of growth restricting policy, unlike economic theories like the Dutch Disease models. The main thrust of the reentry state model's argument is when countries make their revenues from resource rents and aid, there is less of a need to raise revenue through taxation. Income generated through oil and mineral rent permit high ups in society to establish "corrupt patron networks". This undermines the workings of the right social contract reliant on the "exchange of public goods financed through

domestic taxation”. Leaders thus become less accountable and more likely to resort to rent-seeking and corruption, impeding their ability to make policies that foster growth. This erodes the legitimacy of the government and the entire state apparatus with the effect of weakening it. This weakening then increases the vulnerability of such countries to conflict (Di John 2009, 77).

Thus, reentry states are weak because oil rents reduce the need for domestic taxation. That has an effect on the social contract between the state and its civil society, affecting governance. The absence of taxation of the citizenry affects the administrative reach of the state and ultimately its authority, capacity and acceptability. These rents also encourage rent-seeking and corruption in other sectors of the economy. The increased rates of rent-seeking and corruption result in reductions in economic growth rates. Resource rents lead to narrow sightedness on the part of state officials and result in an erosion of the urgency for change and rapid growth. The principal argument of analysts who have attempted to explain the Venezuelan case using the reentry state model has been that the oil windfall led to rent-seeking. This made government reluctant to carry out an evaluation of state subsidies and its effects on the efficiency of the Venezuelan economy. Naturally, this reluctance would have led to inefficiencies within the economy and gradually led Venezuela down the road to the decline that it suffered. The reentry state models claim that huge revenues from oil create trends of state intervention and governance that are ultimately detrimental to economic growth and development (Di John 2009, 78-80).

Di John, in critiquing the explanations of the reentry state model for Venezuela’s slow down, takes issue with some of Terry Lynn Karl’s assumptions. One of these being

that a weak state exists when external rents are discovered. Having argued that countries like Norway and Australia had well-established bureaucracies and diversified economies before the oil windfall came in which ultimately resulted in good management of the resource rent. Di John argues that Venezuela had been independent for a hundred and ten years before the discovery of oil. It therefore had every opportunity to create a bureaucratic system that was as developed as that of Norway. Di John however, contradicts this argument by stating and providing evidence that this period of Venezuela's history was characterized by banditry, guerrilla wars, revolutions and general instability (Di John 2009, 80-81).

The socio-economic and political consequences of Venezuela's economic stagnation have been devastating, resulting in a drastic reduction in real wages. These had already fallen below 1950 levels. Unemployment rates also went high particularly from the mid-1980s. Urban informal employment also increased to a high of 50.1 percent in the 1998 to 2002 period but declined to 41.1 percent because of the 2004-05 oil boom. The incidence of poverty also increased. Di John quotes figures from Gustavo Marquez and Carola Alvarez. The percentage of Venezuelan households below the poverty line rose from 20 percent in the period 1980/81 to 36 percent in 1985/86, 42 percent in 1989/90 and 51 percent in 1994/95 and hit an all-time high of 62 percent at the end of 2003 after non-oil growth collapsed between 1998 and 2003. Here again the 2004/05 oil boom reduced the rates to 45 percent in 2005 (Di John 2009, 18). Venezuela almost suffered a political implosion between 1989 and 1998. Its decline led to a crisis in governance, seen in the collapse of two political parties. Coup attempts increased, voter absenteeism during elections was high and there was an increase in mass often violent

demonstrations and general labor unrest. Crime rates also rocketed sky high. The country was suffering a rapid decline in per capita income and an increase in income inequality that was one of the largest in Latin America. This was despite her earlier gains in political stability and economic growth discussed earlier in this chapter. These problems, Di John blame on the stresses that liberalization can put on transition economies, late developing capitalist and established democratic polity. He argues that, the country's attempt at economic liberalization failed to revive economic growth. It also worsened income distribution, which ultimately polarized politics in the country (Di John 2009, 106 - 108).

Summary

This research seeks to find out the causes of the mismanagement of oil and gas revenues. It is also an attempt at finding the effects of this mismanagement in a bid to make suggestions which will assist Ghana in avoiding such pitfalls. This chapter reviewed the oil and gas laws of Nigeria, Angola, Chad and Ghana, the principal focus of the study. It also reviewed literature on the oil or resource curse, the role of the state, the causes of the phenomenon and looked at Venezuela, a country that displays classic features of the resource curse.

In reviewing the oil and gas laws regulating the industries of the four African countries, it is clear that they are robust in protecting the interests of the countries. Nigerian petroleum laws for instance, are such that they seem to put foreign oil companies at a disadvantage. Nigeria and Angola finally set up sovereign funds in 2012 to cushion their petroleum revenues from world oil-price fluctuations and save for when their oil reserves get depleted. Chad rescinded the initial agreement with the World Bank,

which led to a facilitation of its petroleum exploitation. Ghana passed a law setting up a Petroleum Fund made up of a Stabilization Fund and a Heritage Fund four months after commercial drilling of oil begun.

The review looked at Transparency International's Corruption Perception Indices. On issues of governance, Nigeria, Angola and Chad all suffer very high levels of corruption relative to other African countries and the rest of the world. Ghana fares much better in both Africa and the world.

The literature review identified certain variables, which will inform the rest of the study. These are issues associated with stability, dependency on natural resources and corruption. These variables will be analyzed in chapter 4 using three studies. These are a study conducted by the Center for International Development and Conflict Management (CIDCM) on the estimated risk of experiencing political instability in countries. This study uses variables that assess institutional economy, and infant mortality, among others, as a means of judging the stability of countries. The effect of natural resource dependency on institutions of a country will be analyzed using a World Bank working paper. For corruption, Transparency International's Corruption Perception Index will be used.

The look at the case of Venezuela elucidated some of these problems. The country is an economist's best example of a country that has suffered the resource curse. It has been difficult for several economic theories to explain fully the causes of Venezuela's decline. This has mainly been the result of the country's unique circumstances of having all the pre-requisites for economic growth and industrialization but failing to achieve this. The Venezuelan case has several lessons for countries with undiversified economies and

lack strong bureaucratic systems that discover resources such as oil and gas. It shows the complexities of channeling windfalls from natural resources into ventures that promote productivity and enhance growth.

The next chapter discusses the methodology of the research. It will cover the research design and methods, data collection and sources and data analysis and presentation.

CHAPTER 3

RESEARCH METHODOLOGY

This is a research into the mismanagement of oil and gas revenues in oil-rich African countries. Its objective is to pick lessons for Ghana's budding oil and gas industry. It is meant to find the factors that have caused the mismanagement of petroleum resources and revenues in Africa. It will also find what Ghana's posturing should be in order to avoid the economic, developmental and security consequences of the mismanagement. The research looks at these issues from a governance, management, regulation and security perspectives. Chapter 1 gave the background to the problem, the primary and secondary research questions and the significance of the study. Chapter 2 reviewed studies done into issues of petroleum revenue management. It identified common factors and variables through which later analysis would be done. This chapter describes the methodology of this research. It will discuss the collation and analysis of information to answer the primary and secondary questions. It will look at research design, data collection and sources, and data analysis and presentation.

Research Design

As noted by Ellen Taylor-Powell and Marcus Renner, in a qualitative research, data could come from many people, a few individuals, or a single case (Taylor-Powell and Renner 2003). This research is a qualitative case study using secondary sources of information on Nigeria, Angola, Chad, and Ghana. The qualitative study will be done using the variables identified in chapter 2. These variables are now grouped under three major areas: stability, corruption, and dependency.

A qualitative research by definition focuses on examining subjective data, with the intention of gaining insight and knowledge about the subject studied. It is interpretive or responsive and usually inductive; it formulates an idea using observations. It seeks to describe the situation, creating better understanding, which could result in improvements and sees truth as bound by the context (Research Methodologies 2013).

Qualitative research data is made up of words and observations as opposed to numbers. These require analysis and interpretation to make them meaningful and understandable and this calls for creativity, discipline and a systematic approach. There are several ways of going about this, the method chosen is dependent on the questions the researcher wants to answer, the needs of the intended audience and the resources of the researcher (Taylor-Powell and Renner 2003). These also determine the data collection methods and the sources used.

Data Collection and Sources

According to Taylor-Powell and Renner, there are a number of methods of producing narrative data which will require analysis to fulfill the objectives of a research. These include: open-ended questions and written comments on questionnaires, testimonials and individual interviews. Others are: discussion group or focus group interviews, logs, journals and diaries and observations. The rest are documents, reports and news articles, stories and case studies (Taylor-Powell and Renner 2003). Data for this research will come from research and working papers with key ones done by the Center for International Development and Conflict Management (CIDCM), Transparency International and the World Bank.

Data Analysis and Presentation

In analyzing the data collected, information will be used from such sources as Richard Dowden's, *Africa, Altered States, Ordinary Miracles*, which does an in-depth study of the challenges confronting a number of African countries. Michael L. Ross' book, *Oil Curse, How Petroleum Shapes the Development of Nations*, will also be used, this book does a comprehensive study of the oil curse. *Escaping the Oil Curse*, edited by Macartan Humphreys, Jeffrey D. Sachs and Joseph E. Stiglitz will also be used. The research will also rely extensively on on-line journals, articles and reports by reputable organizations such as the United Nations, New York Times, and Jane's Sentinel Security Assessment. Others include Oil and Gas Journal, African Affairs, African Development Review and others. Information from these sources will be analyzed in chapter 4 and the finding presented in chapter 5.

The analysis of the relevant information gathered from the secondary sources will be done using the case study method. The case study method is a comprehensive and systematic examination of a single aspect of a phenomenon. It uses as much information as possible to ensure that very little is missed and is suitable for either for illuminating a situation or phenomenon such that further investigation can be done. It is also useful for testing previous findings in the field (Research Methodologies 2013). Robert K. Yin, a researcher, defines case studies as, an empirical inquiry using multiple sources of evidence, which investigates contemporary phenomena within their real-life, when no clear boundaries are evident between the phenomena and the context (Yin 1984, 23).

The case studies will concentrate on only the areas that answer the primary and secondary research questions using the three major variables of stability, corruption and

dependency. For the stability variable, the CIDCM's Peace and Conflict 2012 study will be used to assess the four countries. Transparency International's Annual Corruption Perception Index, discussed extensively in chapter 2, will be used to assess the corruption variable. For the dependency variable, the World Bank's Policy Research Working Paper 6151, titled, "Are Natural Resources Cursed?—An Investigation of the Dynamic Effects of Resource Dependence on Institutional Quality" will be used.

The CIDCM's Peace and Conflict Instability Ledger ranks countries on future risks estimating the chances of government collapse or disruptions in the provision of basic services. The 2012 Ledger ranked 163 countries around the world on the basis of the estimated risk of them experiencing major bouts of political instability or armed conflict over a three-year period, 2010–2012. It did this using 2009 data which employed variables assessed as correlating strongly with the onset of political instability or armed conflict. The Ledger is an amalgamation of leading research on explaining and forecasting state instability. The variables used are therefore widely agreed on among researchers as important to any forecast on stability (Peace and Conflict 2012, 4-5). The variables, institutional consistency, economic openness, infant mortality rates, militarization, risk category, and neighborhood security (war), their domain and descriptions are shown in table 1.

Table 1. Factors Influencing the Risk of Instability

Factor	Domain	Description
Recent Instability	Political	A ranking of recent instability implies that the country has been coded by the Political Instability Task Force (PITF) as having experienced instability events as at the end of 2009 (Hewitt et al 2012, 13 & 16).
Institutional Consistency	Political	Institutional consistency refers to the extent to which the institutions comprising a country's political system are uniformly and consistently autocratic or democratic. Political institutions with a mix of democratic and autocratic features are inconsistent, a common attribute of polities in the midst of a democratic transition. Based on a series of findings reported in the academic literature, we expect regimes with inconsistent institutions to be more likely to experience political instability (Gurr 1974; Gates et al. 2006; Hegre et al. 2001).
Economic Openness	Economic	Economic openness is the extent to which a country's economy is integrated with the global economy. Countries that are more tightly connected to global markets have been found to experience less instability (Hegre et al. 2003; Goldstone et al. 2000).
Infant Mortality Rates	Economic and Social	Infant mortality rates are indicators that serve as a proxy for a country's overall economic development, its level of advancement in social welfare policy, and its capacity to deliver core services to the population. In this respect, this indicator taps into both the economic and social domains of a country. Research findings reported by the PITF have been especially notable for the strong relationship found between high infant mortality rates and the likelihood of future instability (Esty et al. 1999; Goldstone et al. 2005).
Militarization	Security	To account for the security domain, the Ledger focuses on a country's level of militarization. Instability is most likely in countries where the opportunities for armed conflict are greatest. In societies where the infrastructure and capital for organized armed conflict are more plentiful and accessible, the likelihood for civil conflict increases (Collier and Hoeffler 2004). Extensive militarization in a country typically implies that a large portion of the society's population has military skill and training, weapons stocks are more widely available, and other pieces of military equipment are more diffused throughout the country. The likelihood of instability is greater in this setting because increased access to and availability of these resources multiplies the opportunities for organizing and mobilizing.

Risk Category	Security	The placing of states in risk categories is based on risk scores. The risk score provides a three-year forecast of the relative risk of experiencing instability. The computation of this score is from a statistical model, which uses global data from 1950 to 2003. This with data from 2009 was used in arriving at the forecast for 2010-2012 (Hewitt et al. 2012, 17).
Neighborhood Security (war)	Security	The likelihood of political instability in a state increases substantially when a neighboring state is currently experiencing armed conflict. This risk is especially acute when ethnic or other communal groups span across borders. A number of studies have shown that neighborhood conflict is a significant predictor of political instability (Sambanis 2001; Hegre and Sambanis 2006; Goldstone et al. 2005).

Source: Joseph Hewitt et al. eds. *Peace and Conflict 2012 Executive Summary* (College Park, MD: University of Maryland, 2012).

The dependency variable measures the effects of dependence on natural resource revenues on countries. The study states that research into the impact of natural resource dependence on economic performance indicates that they affect average long run incomes. This is only to the degree that they affect the quality of the institutional environment. It measures the effects of variables on institutional quality in a country using Worldwide Governance Indicators (WGI) compiled by the World Bank. The indicators highlight various aspects of governance and are, Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption (De Rosa and Iooty 2012, 9). The measuring of the indicators will be done using a positive (+), negative (-), and neutral (0) valuation based on each assessment. The definitions of these indicators as applied is provided in table 2.

Table 2. Worldwide Governance Indicators for the Effects of Dependence on Institutions

Serial	Variable	Description
1.	Voice and Accountability	Measuring the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association and a free media
2.	Political Stability and Absence of Violence	Measuring perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism
3.	Government Effectiveness	Measuring the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies
4.	Regulatory Quality	Measuring the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development
5.	Rule of Law	Measuring the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence
6.	Control of Corruption	Measuring the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests

Source: Donato De Rosa and Mariana Iooty, *Are Natural Resources Cursed? An Investigation of the Dynamics of Resource Dependence on Institutional Quality* (Washington, DC: The World Bank, 2012).

Corruption will use Transparency International's Annual Corruption Perception Indices for the four countries for 2012. This index scores countries yearly on the perception of corruption of their public sectors. The index capture the informed positions of analysts, business people and experts in the countries assessed (Transparency International 2012b).

The matrix below will be used to assess the four countries, it is a compilation of all three variables vis-à-vis the country core values. The actual values from the countries assessed in the mentioned studies will be used to determine the scores the countries get.

Table 3. Comparison of Nigeria, Angola, Chad, and Ghana in Stability, Effects of Dependency on Institutions and Corruption

Variable	Country			
	Nigeria	Angola	Chad	Ghana
Stability	Positive, negative, or neutral (+, 0, -) highlight of overall assessment			
Institutional consistency				
Economic openness				
Infant mortality rates				
Risk category				
Neighborhood security				
Dependence	Positive, negative, or neutral (+, 0, -) highlight of overall assessment			
Voice and accountability				
Political stability and absence of violence				
Government effectiveness				
Regulatory quality				
Rule of law				
Control of corruption				
Corruption	Transparency International Annual Corruption Perception Index for 2012			

Source: Created by author using variables from Joseph Hewitt et al. eds. *Peace and Conflict 2012 Executive Summary* (College Park, MD: University of Maryland, 2012); Donato De Rosa and Mariana Iooty. *Are Natural Resources Cursed? An Investigation of the Dynamics of Resource Dependence on Institutional Quality* (Washington DC: The World Bank, 2012); Transparency International, “Annual corruptional perception index results,” 2012, <http://cpi.transparency.org/cpi2012/results/> (accessed 12 February 2013).

In chapter 4 the results of the analysis of these variables will be used to conduct the analysis of the case study. This will be done one main variable after the other, for

each of the main variables, the four countries, Nigeria, Angola, Chad and Ghana will be looked at simultaneously. This analysis will inform the conclusions drawn about the phenomena, which will lead to the conclusions and recommendations in chapter 5.

Reliability and Validity of Data

Taylor-Powell and Renner posit that for a researcher to avoid personal biases influencing the results of his/her analysis, the researcher should use several sources of data, track their choices and involve others (Taylor-Powell and Renner 2003). This research will seek to satisfy the five step analysis process of: get to know your data; focus the analysis; categorize the information; identify patterns and connections within and between categories; and interpretation, which brings it all together (Taylor-Powell and Renner 2003).

The reliability of the information will be enhanced by the use of multiple credible sources using data from previously published studies. Due to the reliance on qualitative research methods for this study, the approach to analysis will be descriptive. A comparative analysis of the four African countries, which are the main focus of the study, Nigeria, Angola, Chad and Ghana, will be adopted throughout. This will enhance the understanding of the causes and effects of the mismanagement of oil and gas resource revenues. It will also indicate the possibility of the trends, identified in the other three African countries, occurring in Ghana. It will thus enable the researcher to answer the primary and secondary research questions.

Summary and Conclusion

The research uses a qualitative method using secondary sources of information to conduct case studies. Data will be collected research and working papers of CIDCM, Transparency International and the World Bank on three main variables, stability, dependency, and corruption. The case studies will concentrate on only those areas that answer the primary and secondary research questions through the variables identified in chapter 2. A comparative analysis method will be used to interpret the information gathered. The next chapter does an analysis of information gathered.

CHAPTER 4

ANALYSIS

This research is an effort to draw lessons for Ghana's nascent oil and gas industry by looking at the mismanagement of oil and gas revenues in oil-rich African countries. The objective is to identify the factors that have caused the mismanagement of petroleum resources and revenues in Africa. It will also find what Ghana's posturing should be in order to avoid the economic, developmental and security consequences of the mismanagement. The research looks at these issues from governance, management, regulation and security perspectives. Chapter 1 gave the background to the problem, the primary and secondary research questions and the significance of the study. Chapter 2 reviewed studies done into issues of petroleum revenue management. It identified common factors and variables through which later analysis would be done. Chapter 3 described the methodology of the research, stating and discussing the variables that would be used for analysis. The research is a qualitative analysis using case studies of three oil-rich African countries: Nigeria, Angola and Chad. These will be used to draw lessons for Ghana. Chapter 3 also discussed the collation and analysis of information to answer the primary and secondary questions.

This chapter analyzes the three countries in the case study, while at the same time reviewing the current standing of Ghana vis-à-vis the three. It looks at the four countries in the areas of stability, dependency and corruption. For stability, variables from the CIDCM Peace and Conflict 2012 study are used. These variables are recent instability, institutional consistency, economic openness, infant mortality rates, militarization, risk category, and neighborhood security (war). For dependency, variables from the World

Bank's WGI, presented in the World Bank Policy Working Paper 6151 of 2012 are used. The variables are voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. The corruption variable will use data from Transparency International's Annual Corruption Perception Index for 2012. The variables for stability and dependency will be given a positive (+), negative (-) or neutral (0) rating with an overall rating based of the countries performance in the individual countries performance in the areas of each variable given for that particular variable. After the analysis, the primary and secondary research questions will be answered and a summary and conclusions made.

Stability

Under stability the study covered recent instability, institutional consistency, economic openness, infant mortality rates, militarization, risk category, and neighborhood security.

On recent instability, Nigeria and Chad were ranked as having had cases of instability recently. Angola was not covered in the study for recent instability because the study dealt with events up to the end of 2009. There was an incident in January 2010 of a separatists attack in Cabinda. The researcher therefore includes Angola in the list of countries that have experienced recent instability. Ghana has however not had any recent incidents of instability. The issues with conflict in both Nigeria and Chad were discussed in chapter 2. Nigeria has had and continues to have issues with Boko Haram, an extremist Islamic movement opposed to western education and influence in Nigeria. Boko Haram, a Hausa phrase which literally means 'western education is forbidden' is fighting to overthrow the Nigerian government and establish an Islamic state in northern Nigeria

(BBC News Africa 2013). There is also the low-level insurgency in the oil-producing Niger Delta area with the Movement for the Emancipation of the Niger Delta (MEND) being the most prominent faction. There are other militant groups in the area like the Niger Delta Liberation Force (NDLF) and the Coastal Revolutionary Forces (CRF). These militant groups have the avowed goal of fighting for the Delta region to get its fair share of the area's oil and gas revenues. The Nigerian government maintains that they are criminal organizations that operate in the area because of the moneys they get from kidnapping oil industry workers and selling stolen oil (The Economist 2009) (The Economist 2010) (All Africa 2013).

Chad's continual insurgency with several different factions was also discussed in chapter 2. In its first 15 years as an independent country, Chad experienced 13 incipient insurgencies (Cooper 2009). The Chadian government is currently fighting an insurgency in the east of the country. This insurgency is said to have links to the Darfur conflict in Sudan (Royal African Society 2013).

Angola's civil war was also discussed in chapter 2, it ended in 2002 (Central Intelligence Agency 2012e). Angola however has a secessionist group in its Cabinda exclave. A recent incident that caught international attention was the attack on the Togo national football team for the 2010 African Cup of Nations in Angola by the Front for the Liberation of the Enclave of Cabinda (Flec) as they were escorted through Cabinda. Flec later apologized to Togo saying that the attack had been aimed at the Angolan troops who were escorting the Togolese national football team and not the team. Flec was not considered a serious risk before the attack (Sturcke et al. 2010).

Ghana has not had any recent cases of instability. For this research, Nigeria and Chad with recent cases of instability are rated negative (-). Angola is rated neutral (0) and Ghana is rated positive (+).

The Peace and Stability Instability Ledger for 2012 ranked countries according to the forecast of the risk of instability in the future. The study notes a strong relationship between the risk of conflict in the future and the consistency to which a country's political institutions are autocratic or democratic. A mixture leads to of both is seen as inconsistent and more prone to political instability. Nigeria was rated as inconsistent because it depicts the characteristics of a partial democracy. This the study found to be more likely to result in instability. Angola, Chad and Ghana were rated as partial autocracies which have a propensity for instability which is somewhat less than in partial democracies (Hewitt et al. 2012, 16). The researcher assigned a positive (+) to consistent democracy or autocracy, a neutral (0) to partial autocracy and a negative (-) to partial democracy.

For economic openness, the study assessed integration with global markets as closer integration reduces the likelihood of civil conflict and political instability. As a measure of economic openness, the volume of a country's GDP accounted for by the value of all trade (exports plus imports) was assessed. Nigeria, Angola and Ghana were rated in the middle 50th percentile globally, whereas Chad scored in the upper 25th percentile (Hewitt et al. 2012, 16). The researcher assigned a positive (+) for the upper 25th percentile and a neutral for the middle 50th percentile.

Infant mortality rates serve to indicate the success of governments in executing policies that improve social welfare in countries (Hewitt et al. 2012, 16). Here Nigeria,

Angola and Chad were rated among the states with the worst records, that is the highest 25th percentile of infant mortality in the world. Ghana scored in the middle 50th percentile, putting it in the middle range in the world. For infant mortality, states with the best records in the world are rated positive (+), those in the middle, like Ghana are rated neutral (0) and those with the worst records, Nigeria, Angola, and Chad get a negative (-).

The study identifies a higher likelihood of instability in countries where opportunities for conflict are greatest. It measured militarization by the countries active armed forces as a percentage of the total population. Nigeria and Ghana were rated at the bottom 25th percentile on militarization and therefore get a positive (+) rating. Angola and Chad were rated in the middle 50th percentile and are therefore rated neutral (0).

The risk scores of countries was used to place them in a risk category. The risk score provides a three-year forecast of the relative risk of experiencing instability. The computation of this score is from a statistical model, which uses global data from 1950 to 2003. This with data from 2009 was used in arriving at the forecast for 2010-2012 (Hewitt et al. 2012, 17). Based on the research's risk categorization, Nigeria and Chad were rated negative (-), Angola neutral (0) and Ghana, positive (+).

The study identifies the presence of armed conflict in a neighboring state as an indicator of increased risk of state instability. It used data from the Uppsala Conflict Data Project at the International Peace Research Institute to determine the conflict status of states. Nigeria and Chad were rated as having neighbors with conflict whereas Ghana and Angola were rated otherwise. Nigeria and Chad are thus scored negative (-) while Ghana and Angola get a positive (+).

Overall therefore, for the stability variable, Nigeria and Chad score negative (-), Angola is neutral (0) and Ghana is positive (+).

Table 4. Effects of Institutional Stability on Possibility of Conflict

Variable	Country			
	Nigeria	Angola	Chad	Ghana
Stability	-	0	-	+
Recent Instability	-	-	-	+
Institutional consistency	-	0	0	0
Economic openness	0	0	+	0
Infant mortality rates	-	-	-	0
Militarization	+	0	0	+
Risk category	-	0	-	+
Neighborhood security	-	+	-	+

Source: Joseph Hewitt et al. eds. *Peace and Conflict 2012 Executive Summary* (College Park, MD: University of Maryland, 2012).

Dependency

The dependency variable looks at voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. These variables were defined in chapter 3 and are picked directly from the World Bank’s policy research working paper 6151 titled “Are Natural Resources Cursed? An Investigation of the Dynamic Effects of Resource Dependence on Institutional Quality.”

Voice and accountability assesses the level of participation of the citizens in the selection of their government, freedom of expression, freedom of association and a free media. Political stability and absence of violence measures the likelihood of destabilization and unconstitutional or violent overthrow of government, including domestic violence and terrorism. Government effectiveness gauges the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Regulatory quality assesses the government's ability to formulate and implement sound policies and regulations that permit and promote private sector development. The extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence is gauged by the rule of law variable. Control of corruption measures the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests. The ratings from the study are provided in table 5.

This research uses the study's 2011 data. For all the areas of the dependency variable, the study uses an estimate of governance range from approximately -2.5 (weak) to 2.5 (strong). For its ranking percentile among countries, the ranges are from zero (lowest) to 100 (highest) ranks. The researcher uses a system of scoring which rates -2.5 to -0.1 as negative (-), zero as neutral (0) and 0.1 to 2.5 positive (+). Using the upper percentile of countries will be ranked negative (-) for zero to 45, 46 to 55 in neutral (0), and 56 to 100 is positive (+).

Table 5. Effects of Dependency on Natural Resources on the Institutions of Government in Nigeria, Angola, Chad, and Ghana

	Voice & accountability	Political stability & absence of violence	Government effectiveness	Regulatory quality	Rule of law	Control of corruption
Nigeria	-0.76 29.44	-1.94 7	-1.12 21	-0.69 37	-1.25 14.95	-1.14 19
Angola	-1.17 19.63	-0.33 49	-1.15 21	-1.10 22	-1.23 16.36	-1.36 13
Chad	-1.35 14.95	-1.29 21	-1.40 14	-1.03 24	-1.46 10.28	-1.25 18
Ghana	0.50 68.22	0.15 64	-0.03 63	0.14 64	-0.06 60.28	0.17 68

Source: Donato De Rosa and Mariana Iooty, *Are Natural Resources Cursed? An Investigation of the Dynamics of Resource Dependence on Institutional Quality* (Washington, DC: The World Bank, 2012).

Table 6. Ratings for Effects of Dependency on Natural Resources on the Institutions of Government in Nigeria, Angola, Chad, and Ghana

Variable	Country			
	Nigeria	Angola	Chad	Ghana
Dependency	-	-	-	+
Voice and accountability	-	-	-	+
Political stability and absence of violence	-	0	-	+
Government effectiveness	-	-	-	+
Regulatory quality	-	-	-	+
Rule of law	-	-	-	+
Control of corruption	-	-	-	+

Source: Created by author using assessment of data from Donato De Rosa and Mariana Iooty, *Are Natural Resources Cursed? An Investigation of the Dynamics of Resource Dependence on Institutional Quality* (Washington, DC: The World Bank, 2012).

On the dependency variable Nigeria and Chad showed a negative effect of dependency on natural resources on the institutional quality of all the six areas. Angola showed a negative effect on all areas except political stability and absence of violence where it was barely neutral. Ghana showed a positive even though in the areas of government effectiveness and rule of law the estimate of governance was negative.

Corruption

The global anti-corruption civil society organization, Transparency International's Annual Corruption Perception Index for 2012 was used for the research. The index measured perceived levels of corruption in the public sectors of 176 countries and territories worldwide. Of the 176 countries surveyed, 70 percent scored under 50 out of 100. The average score was 43 out of 100. In Africa, 90 percent of the countries surveyed score below 50 out of 100 (Transparency International 2012b). For this research, the country scores and not positions is used to rate the four countries. Scores of zero to 39 will receive a negative (-) rating, 40 to 59 will be rated neutral (0) and 60 to 100 will be rated positive (+). Nigeria, Angola, and Chad were 139th, 157th and 165th respectively and scored 27, 22 and 19 out of 100 respectively. All three countries therefore get a negative rating. Ghana was 64th, scored 45 out of 100, and thus gets a neutral rating. Nigeria, Angola and Chad have public institutions, which are perceived as very corrupt falling into the bottom percentile globally. Ghana although better than average and upper 25th percentile of the least corrupt countries had below 50 out of 100. The ratings are shown in table 7.

Table 7. Corruption Perception Index Ratings for Nigeria, Angola, Chad, and Ghana

Variable		Country			
		Nigeria	Angola	Chad	Ghana
Corruption	Rating	-	-	-	0
	Score (%)	27	22	19	45
	Position (out of 176 countries)	139	157	165	64

Source: Transparency International, “Annual Corruptional Perception Index Results,” 2012, <http://cpi.transparency.org/cpi2012/results/> (accessed 12 February 2013).

All three variables, stability, dependency and corruption are combined in table 8. The assessment reveals that Nigeria and Chad have a high propensity for future instability, have institutions that are very negatively affected by dependency on natural resources and are perceived as very corrupt. Angola has a propensity for future instability, which is neutral, has institutions which are negatively affected by its dependence on natural resources and is perceived as very corrupt. Ghana is stable, has institutions which are not affected by a dependency on natural resources and is slightly above averagely perceived as not being corrupt.

Table 8. Assessment of Stability, Dependency and Corruption Variables for Nigeria, Angola, Chad, and Ghana

Variable	Country			
	Nigeria	Angola	Chad	Ghana
Stability	-	0	-	+
Dependency	-	-	-	+
Corruption	-	-	-	0

Source: Created by author based on assessments of data from Joseph Hewitt et al. eds. *Peace and Conflict 2012 Executive Summary* (College Park, MD: University of Maryland, 2012); Donato De Rosa and Mariana Iooty, *Are Natural Resources Cursed? An Investigation of the Dynamics of Resource Dependence on Institutional Quality* (Washington, DC: The World Bank, 2012); Transparency International, “Annual Corruptional Perception Index Results,” 2012, <http://cpi.transparency.org/cpi2012/results/> (accessed 12 February 2013).

Answers to Research Questions

This research sought to answer the questions: what factors have led to the widespread mismanagement of oil and gas resources and revenues in Africa and how should Ghana position itself to avoid the economic, developmental and security problems that this causes? Subsidiary questions arising from this were: how has governance contributed to the problems of the oil and gas or petroleum industry in Nigeria, Angola and Chad? What have been the effects of the poor management of the oil industry in Nigeria, Angola, and Chad? What regulations has Ghana enacted to govern the oil industry? What lessons should Ghana learn from the experiences of Nigeria, Angola, and Chad in handling its recent oil find? These questions are answered below but their implications are discussed in chapter 5.

The mismanagement of the oil and gas revenues of Nigeria, Angola and Chad is caused by weak capacities of state institutions of the three countries. The weak

institutions of state make good governance as defined in this thesis unachievable. The lack of good governance has led to very high levels of corruption in all three countries further weakening state institutional capacity and causing instability. In this way, governance has contributed to the problems of the petroleum industries of the three countries.

The effects of the poor management of the petroleum resource revenues in Nigeria, Angola and Chad can be viewed from political, socio-economic and security perspectives. Politically it has resulted in instability in those countries. Socio-economic effects are very high levels of corruption, widespread poverty among the populations of the three countries and high infant mortality rates. It has also impeded the development of the three countries studied. With security, all three countries have security threats. Nigeria has a low-level insurgency in its Niger Delta region, the area which accounts for its oil wealth. It also has issues with the Islamic fundamentalist group Boko Haram. Angola has a number of secessionist factions in its Cabinda exclave and Chad has an insurgency in the east of the country. The security challenges of the three countries can be summed up as secessionist attempts, insurgencies and general insecurity.

With regulation, Ghana has enacted a number of laws to regulate its oil and gas industry. These include PNDC Law 84 (Exploration and Production Law of 1984), PNDC Law 188 (Petroleum Income Tax Law of 1987), the Petroleum Commission Act of 2011, Act 821, and the Petroleum Revenue Management Act of 2011, Act 815. Act 815 created the Petroleum Holding Fund and the Ghana Petroleum Funds. The Ghana Petroleum Funds is made up of the Ghana Stabilization Fund and the Ghana Heritage Fund. The Stabilization Fund is an effort to save revenue to offset the effects of

fluctuations in global petroleum prices. The Heritage Fund is an endowment fund for future generations. Ghana's petroleum industry regulating laws would seem to have taken cognizance of best practices in the petroleum industry. They appear adequate for regulating the industry.

On lessons for Ghana, the research shows that at least with regulation Ghana set off determined to avoid the problems faced by Nigeria, Angola, and Chad. In this regard, Ghana has learnt lessons from their problems. The lessons that inform Ghana's management of its oil and gas revenues should come from countries like Norway, Canada and the like. The research found that Ghana is more likely to manage revenues from its petroleum industry better than has been the case with Nigeria, Angola and Chad.

Summary and Conclusion

This chapter analyzed the three countries of the study, Nigeria, Angola, and Chad, simultaneously with Ghana. This analysis was done that way in order to get a clear picture of the standing of Ghana against the other three countries. The study used variables from stability, dependency and corruption; these are variables that were identified in chapter 2 as important to the phenomenon the research sought to study. The CIDCM Peace and Conflict 2012 study was used to analyze the stability variable. Under this variable the areas covered in the study were institutional consistency, economic openness, infant mortality rates, militarization, risk category and neighborhood security (war). For the dependency variable, the World Bank's WGI of 2012 was used, the most recent data used in that study was from 2011 and these were used in the analysis of the countries. This study covered the areas, voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and

control of corruption. The corruption variable used data from Transparency International's Corruption Perception Index for 2012.

An analysis of the data from all the sources showed that Nigeria and Chad stood a greater chance of instability and had institutions that had been severely affected by a dependence of natural resources. The two countries also were among the most corrupt in the world. Angola scored a neutral in stability but had institutions that had been weakened by a dependency on natural resources and was also among the most corrupt globally. Ghana on the other was fairly stable, had institutions that were fairly immune from the ill effects of dependency of natural resources and fared above about in corruption being above the 50th percentile of the world's least corrupt countries.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This research sought to study the phenomenon of the mismanagement of oil and gas resource revenues in oil-rich African countries. It was to draw lessons from this for Ghana's budding oil and gas industry by studying the cases of three oil-rich countries, Nigeria, Angola, and Chad. To do this the research tried to find answers to the main question: What factors have led to the widespread mismanagement of oil and gas resources and revenues in Africa and how should Ghana position itself to avoid the economic, developmental and security problems that this causes? Subsidiary questions arising from this were: how has governance contributed to the problems of the oil and gas or petroleum industry in Nigeria, Angola and Chad? What have been the effects of the poor management of the oil industry in Nigeria, Angola, and Chad? What regulations has Ghana enacted to govern the oil industry? What lessons should Ghana learn from the experiences of Nigeria, Angola, and Chad in handling its recent oil find?

Chapter 1 established the background for the research and stated the primary and secondary questions and the significance of the study; it also gave its limitations and delimitations. Chapter 2 reviewed literature on issues of petroleum revenue management and identified common factors and variables through which later analysis would be done. Chapter 3 spelt out the methodology of the research and chapter 4 did an analysis using the methodology enumerated in chapter 3.

This chapter presents conclusions from the analysis done to answer the primary and secondary research questions. It will summarize and interpret the findings from

chapter 4 and make recommendations for further study and for action before presenting a summary and conclusions.

An analysis was done of variables identified from the literature review, which were stability, dependency and corruption. This analysis showed that the three countries studied Nigeria, Angola and Chad had a high propensity for instability in the future, and had institutions that were weakened by heavy dependence on their oil and gas resources. The three countries were also among the most corrupt countries not only in Africa but globally, falling into the bottom 25th percentile.

Interpretation of Findings

The findings indicate that the causes of the widespread mismanagement of oil and gas resource revenues in Africa is the resource curse caused in the cases studied by instability, weak institutions of state caused by a heavy dependence on their oil and gas resources and very high levels of corruption.

Nigeria, Angola and Chad had all experienced recent instability and the institutions of all three countries were inconsistent. Only Chad was economically open and all three countries had high infant mortality rates. The percentage of the citizens who were militarized was low in the case of Nigeria and average in the cases of Angola and Chad. Nigeria and Chad were in a high risk category and had neighborhood security issues. Angola was in a moderate risk category and had no neighborhood security issues.

The measurements of the effects of dependency on the institutions of the three countries showed that it had resulted in generally weak institutions. Citizens had little say in the selection of their government, freedom of expression, association and a free media. This is despite the fact that all three countries profess to hold elections. Widespread

rigging has generally marred elections. There was also a high perception that the government would be destabilized or overthrown by unconstitutional and violent means. The quality of public and civil services was generally low across the board in all three countries. These services were also not independent from political pressures. The quality of policy formulation and implementation was also low. The governments of the three countries had a low ability to formulate and implement policies and regulations that permit and promote private sector development. There was a low level of confidence in and implementation of the rule of law. Public power was used for private gain and elite interests had captured the state. The three countries were also among the most corrupt in Africa and the world.

The lack of stability can be blamed on the weakened institutions as a result of the over dependence on their natural resources of the three countries. The countries studied display classic cases of the resource curse. The institutions of those countries were not strong enough to handle the revenues that their oil and gas industries brought them. This goes back to Ross' proposal of limiting revenue sizes to what governments can manage effectively, by leaving the oil in the ground (Ross 2012, 234-234). In this regard, Ghana's production of just over 105,000 barrels per day might be another blessing (Daily Graphic 2012). It gives it the opportunity to work out all revenue management issues before larger profits come in.

In the case of Nigeria, perhaps the early discovery of oil four years before independence, which meant the newly independent country had to deal with the resources revenue worsened their resource curse. At independence, the institutions of state were in their infancy and could not have handled the relatively complex problems that oil

windfalls can challenge a country with. These challenges were daunting for even a developed country with well-established institutions like the Netherlands and hence the term the 'Dutch disease'. The Dutch disease was in the end not a disease for the Netherlands because of its strong institutions, diversified and innovative economy, highly efficient government and low corruption (De Rosa and Iooty 2012, 25). The importance of strong institutions and low corruption in dealing with such challenges can also be seen in the case of Norway. As discussed in chapter 1, Norway is also very dependent on oil and gas resource revenues. Its strong institutions, diversified economy, very efficient government and very low levels of corruption eliminate any chance of Norway suffering the resource curse. These are qualities missing from Nigeria and the two other countries. These infant institution and windfalls from the petroleum industry contributed to the high levels of corruption, which affects the institutions of state in Nigeria. Corruption is the single biggest contributor of Nigeria's resource curse. Nigeria's issues with weak institutions was only aggravated by the Biafran war (Nigerian civil war) which begun just seven years after independence. Civil wars are periods when institutions of state suffer neglect. State resources would also have been channeled into the prosecution of the war. A lowering in accountability and therefore, an increase in corruption would also have characterized such a period. These challenges are true for Angola and Chad as well.

The weakened institutions were also the result of the reentry-state characteristics of Nigeria and the two other African countries. Any discussion on reentry state issues should take cognizance of the fact that the African countries are former European colonies. Their colonial legacy has been one of exporting raw materials and importing finished products manufactured from these raw materials. It cannot be easy to break away

from this legacy. Added to this is the combination of all the other challenges the countries had to contend with. These include the rent-seeking tendencies that dependence on a natural resource like oil and gas causes and the weakening of institutions that this brings. The result of this has been corruption, which further weakened the institutions of state. It is a vicious cycle where instability and dependency bred corruption, which in turn worsened the instability. How this cycle can be broken should be the subject of a future study.

Angola's civil war, which started right after independence in 1975, put it in the same situation described above. The instability that it has and continues to suffer since independence have only aggravated its resource curse troubles. The same is true for Chad, which has suffered instability for most of its existence as an independent state. The two countries, like Nigeria, suffer the same vicious cycle which feeds into phenomenal levels of corruption, which serve to keep the cycle going.

In all three countries, the resource curse has meant weak institutions of state, high corruption and threats to security of the state. In Nigeria, there is the low-level insurgency in the oil-rich Niger Delta region. The effect of this has been insecurity and a loss of income to the state due to the activities of the insurgent groups and the effort by the state to fight them. A lot of resources is also spent trying to protect the oil company facilities and workers. There is also the unrelated issue of the terrorist group Boko Haram. Though not directly related to the resource curse problems, conditions of instability and weak institutions have allowed it to fester and flourish. Other implications of the problems of petroleum resource revenue mismanagement have been the percentage of the population living below the poverty line and high infant mortality rates. In Nigeria, 70 percent of the

population lives below the poverty line (Central Intelligence Agency 2012b). According to Richard Dowden, 95 percent of Angola's population lives on less than a dollar a day (Dowden 2009, 220), other estimates put the figure at 40.5 percent by 2006 estimates (Central Intelligence Agency 2012e). In Chad, by 2001 estimates had 80 percent of its population living below the poverty line (Central Intelligence Agency 2012d).

In several ways therefore, the rather late discovery of oil and gas in commercial quantities in Ghana is a blessing. It has had the opportunity since independence to develop relatively strong institutions even though there remains a lot that can be done. It has a vibrant and free media and an industrious civil society (Freedom House 2012). Beyond this it has the lessons of Nigeria, Angola, Chad and several other resource curse sufferers to learn from. It is therefore not surprising that Ghana established a sovereign fund, called the Heritage fund before Nigeria and Angola did. From the analysis done in chapter 4, Ghana is relatively more stable, has stronger institutions that are not affected by a dependency of natural resource revenues and is far less corrupt than any of the other countries. Ghana also strives to attain the tenets of good governance. The model for Ghana as it seeks to avoid the resource curse does not lie in Africa; it is in following the example of countries like Norway, the Netherlands and other countries who have managed their natural resources without it becoming a curse.

Recommendations

An area of study for the future could be the issue of breaking out of cycle of being a reentry state. This is a most important step in getting over the challenges of the resource curse. A number of studies have been done on how to avoid the resource curse; the challenge here is to look at this from the unique African perspective. This unique

perspective would mean taking on the challenge of studying cases where newly independent countries with infant institutions were trust with resource windfalls.

The following recommendations are also made to help Ghana in the its bid to avoid the problems that the mismanagement of oil and gas resource revenues has caused in the African countries. A first step would be to pursue policies that further strengthen the institutions of state. This important step will serve to promote stability and prevent the effects of dependency on natural resources on the institutions. It would promote good governance, increase confidence of the citizenry in government and lead to a reduction in corruption. It would also improve the ability of the government to implement the provisions of the country's petroleum industry laws. This will be enhanced by an active civil society in the country and a free and vivacious media, which will serve to guard the freedoms that the institutions enjoy from undue political pressures. In creating stronger institutions, the tax base of the country should be widened; this will help prevent reentry state issues. As discussed in chapter 2, the collection of taxes from the citizens makes governments more accountable to the citizens. It also serves to cushion the country from the fluctuations in income as a result of petroleum profit fluctuations. Strong institutions also prevent the likelihood of hiding oil and gas revenues, dealing with Ross' issue with the ease of hiding petroleum revenues (Ross 2012, 6). The existence of strong institutions of state attracts foreign investment to the country, which would assist with efforts at economic diversification discussed next.

Every effort should be made to diversify the economy of the country and create a system that adds value to primary products before export. The tendency for the agricultural sector to suffer as a result of oil and gas windfalls eluded should be prevented

(Humphreys et al. 2007, 4-6). Every effort should be made to prevent the increased ability to import goods and services from driving local businesses out of competition.

The tendency to keep oil revenues secret to be avoided. In this regard, the oversight functions of parliament and the watchdog activities of the media and other civil society is essential. These make this somewhat linked to the earlier discussed requirement for the provision of good governance with all its tenets.

Summary and Conclusions

The research was to study the problem of the mismanagement of oil and gas resource revenues in oil-rich African countries. The goal was to draw lessons from three oil-rich countries, Nigeria, Angola, and Chad, to keep Ghana from this pitfall. After reviewing literature on the area of the study, three variables were identified for analysis: stability, dependency, and corruption.

The research found that weak institutions of state causing bad governance was the main issue causing the resource curse in Nigeria, Angola, and Chad. These weak institutions of state led to very high levels of corruption. The countries studied did not have the opportunity to build state institutional capacity to be able to deal with the windfalls of the petroleum industry. This made them susceptible to classic resource curse issues and they are essentially reentry states.

In the case of Nigeria, a civil war which begun seven years after independence aggravated the effects on state institutions of the discovery of oil in commercial quantities before independence. This meant that institutions of state did not have the opportunity to mature to the level where they could deal with complex reentry state and rent-seeking issues that come with natural resources such as oil and gas.

Angola and Chad also suffer weak state institutional capacities because of years of conflict that they have both suffered. The results of this have been similar to that of Nigeria, high levels of corruption that have further weakened their institution. This has then caused further instability resulting in a never-ending cycle of corruption and weak institutional capacity.

Ghana on the other hand has been lucky in that oil was discovered in commercial quantities after 50 year of independence. It has therefore had the opportunity to build relatively stronger institutions and to keep the level of corruption much lower. It also has a much more effervescent civil society. Ghana is therefore in a much better position to deal with the unique resource curse issues of corruption caused by the rent-seeking tendencies that natural resource revenues bring. With stronger institutions, Ghana is also well position to handle reentry state issues. In doing these Ghana should strive to improve on institutional capacities, work to diversify its economy and continue its efforts to reduce corruption. These will prevent the political, socio-economic and security problems that the mismanagement of resources has created in the three countries studied.

REFERENCES

- Adeoye, Yemi. 2012. Nigerian content act: Strengths, weaknesses. Vanguard Nigeria. <http://www.vanguardngr.com/2012/08/nigerian-content-act-strengths-weaknesses/> (accessed 16 February 2013).
- Akinjide-Balogun, O. 2001. Nigeria: Legal framework of the Nigerian petroleum industry. Mondaq. www.mondaq.com/x/10726/legal+Framework+of+The+Nigerian+Petroleum+Industry (accessed 9 February 2013).
- All Africa. 2013. Nigeria: Resurgence of insurgency in the Niger Delta. allafrica.com/stories/201304290867.html (accessed 18 May 2013).
- Asamoah, John. 2009. *Making the oil and gas find in Ghana a blessing*. Accra, Ghana: Joasa Publications.
- Askdefine. 2012. Extensive definition of reentry. <http://rentier.askdefine.com/> (accessed 5 October 2012).
- BBC News Africa. 2013. Boko Haram crisis: Nigerian army begins raids in Borno. <http://www.bbc.co.uk/news/world-africa-22557727> (accessed 17 May 2013).
- Brown, Kaysie. 2009. Review of Escaping the Resource Curse. http://www.wilsoncenter.org/sites/default/files/ECSPReport13_Brown.pdf (accessed 5 October 2012).
- Business Dictionary. 2013a. Definition of economic growth. <http://www.businessdictionary.com/definition/economic-growth.html> (accessed 5 May 2013).
- . 2013b. Definition of economic development. <http://www.businessdictionary.com/definition/economic-development.html> (accessed 5 May 2013).
- Business News. 2012. Nigeria to ban natural gas flaring. Energy Resources. http://www.upi.com/Business_News/Energy-Resources/2012/05/30/Nigeria-to-ban-natural-gas-flaring/UPI-43411338372133/ (assessed 11 February 2013).
- Central Intelligence Agency. 2012a. The world factbook, Kuwait. <https://www.cia.gov/library/publications/the-world-factbook/geos/ku.html> (accessed 3 October 2012).
- . 2012b. The world factbook, Nigeria. <https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html> (accessed 3 October 2012).
- . 2012c. The world factbook, Norway. <https://www.cia.gov/library/publications/the-world-factbook/geos/no.html> (accessed 3 October 2012).

- . 2012d. The world factbook, Chad. <https://www.cia.gov/library/publications/the-world-factbook/geos/cd.html> (accessed 21 February 2013).
- . 2012e. The world factbook, Angola. <https://www.cia.gov/library/publications/the-world-factbook/geos/ao.html> (accessed 21 February 2013)
- . 2012f. The World factbook, Ghana. <https://www.cia.gov/library/publications/the-world-factbook/geos/gh.html> (accessed 21 February 2013)
- Collier, Paul, and Nicholas Sambanis, eds. 2005. *Understanding civil war, evidence and analysis*. Washington DC: The World Bank.
- CommonLII. 2006. Nigerian legislation. http://www.commonlii.org/ng/legis/num_act/ndcea504/ (accessed 11 February 2013).
- The Constitution of the Republic of Ghana. 1992. http://www.judicial.gov.gh/constitution/second_schedule/home.htm (accessed 6 March 2013).
- Cooper, Tom. 2009. 45 years of wars and insurgencies in Chad. Österreichs Bundesheer. www.bmlv.gv.at/truppendienst/ausgaben/artikel.php?id=952 (accessed 19 May 2013).
- Daily Graphic. 2012. Ghana's oil production hits over 105,000 barrels per day. <http://www.modernghana.com/news/436751/1/ghanas-oil-production-hits-over-105-000-barrels-pe.html> (accessed 18 May 2013).
- De Rosa, Donato, and Mariana Iooty. 2012. *Are natural resources cursed? An investigation of the dynamics of resource dependence on institutional quality*. Washington DC: The World Bank.
- Di John, Jonathan. 2009. *From windfall to curse?, Oil and industrialization in Venezuela, 1920 to the present*. Pennsylvania: The Pennsylvania State University Press.
- Dictionary Reference. 2013. Definition of economic diversification. <http://dictionary.reference.com/browse/diversification> (accessed 5 May 2013).
- Dowden, Richard. 2009. *Africa, altered states, ordinary miracles*. New York: PublicAffairs.
- The Economist. 2009. Fighting in Nigeria's Delta getting desperate. www.economist.com/node/13745871 (accessed 18 May 2013).
- . 2010. Nigeria's restive delta, the president is threatened by a fraying amnesty. www.economist.com/node/17800311 (accessed 18 May 2013).
- Energy Information Administration. 2011. Country analysis briefs, Nigeria. www.eia.doe.gov (accessed 17 May 2013).

- FAO Corporate Document Repository. 2005. Comprehensive Africa agriculture development programme. <http://www.fao.org/docrep/005/y6831e/y6831e-01.htm> (accessed 5 May 2013).
- Freedom House. 2012. Freedom of the press 2012. <http://www.freedomhouse.org/report/freedom-press/freedom-press-2012> (accessed 18 May 2013).
- Geointelligence Network. 2009. Chad oil history. http://www.geosint.com/index.php?option=com_content&view=article&id=99&Itemid=96&73f7ce3fc219677a35dbd9862b113a68=275e6a8ffa9963e81a1afbfc42bbeca2 (accessed 24 February 2013).
- Henderson, David R. 2012. Rent seeking: The concise encyclopedia of economics. <http://www.econlib.org/library/Enc/RentSeeking.html> (accessed 5 October 2012).
- Hewitt, Joseph J., Jonathan Wilkenfeld, Ted Robert Gurr, and Birger Heldt, eds. 2012. *Peace and conflict 2012 executive summary*. College Park, MD: University of Maryland.
- History Guy. 2013. The civil wars of Chad. http://www.historyguy.com/chad_civil_wars.htm (accessed 21 February 2013).
- Hot Naija News. 2013. Nigerian past and present leaders from 1960 till present. <http://hotnaijanews.com/nigerian-past-and-present-leaders-from-1960-till-present/> (accessed 11 February 2013).
- Humphreys, Macartan, Jeffrey D. Sachs, and Joseph E. Stiglitz, eds. 2007. *Escaping the resource curse*. New York: Columbia University Press.
- Index Mundi. 2013. Country comparison, oil production. <http://www.indexmundi.com/g/r.aspx?v=88> (accessed 13 February 2013).
- Investopedia. 2012. Definition of per capita GDP. <http://www.investopedia.com/terms/p/per-capita-gdp.asp#axzz28DQ2PPMT> (accessed 3 October 2012).
- Investwords. 2012. Definition of Dutch disease. http://www.investorwords.com/1604/dutch_disease.html (accessed 5 October 2012).
- Laws of the Federation of Nigeria. 2000. [www.nigeria-law.org/Niger-DeltaDevelopmentCommission\(Establishment etc\)Act 2000.htm](http://www.nigeria-law.org/Niger-DeltaDevelopmentCommission(Establishment%20etc)Act%202000.htm) (accessed 9 February 2013).
- Martin, Paul J. 2002. Chad-Cameroon oil pipeline project, a study tool and case study. <http://www.columbia.edu/itc/sipa/martin/chad-cam/overview.html> (accessed 24 February 2013).
- Mbaku, John Mukum. 2007. *Corruption in Africa*. Lanham, MD: Lexington Books.

- Mendes, Candido, and Colin McClelland. 2012. Angola starts sovereign wealth fund with \$5 billion. Bloomberg. <http://www.bloomberg.com/news/2012-10-17/angola-starts-sovereign-wealth-fund-with-5-billion.html> (accessed 18 February 2013).
- Miranda, Correia, Amendoeia, and Associados. 2004. Sonangol Gabinete Juridico, Republic of Angola, petroleum activities law. [http://www.eisourcebook.org/cms/files/attachments/other/Angola Petroleum Activities Law, 2004.pdf](http://www.eisourcebook.org/cms/files/attachments/other/Angola%20Petroleum%20Activities%20Law,%202004.pdf) (accessed 18 February 2013).
- Nigeria's Leaders. 2013. <http://www.dawodu.com/leaders.htm> (accessed 11 February 2013).
- O'Neil, Tom. 2007. Nigerian oil. <http://ngm.nationalgeographic.com/2007/02/nigerian-oil/oneill-text/1> (accessed 11 February 2013).
- Ofeimun, Odia. 2012. The forgotten documents of the Nigerian civil war. Sahara Reporters News and Reports. <http://saharareporters.com/report/forgotten-documents-nigerian-civil-war-odia-ofeimun> (accessed 9 February 2013).
- Petroleum Revenue Management Act. 2011. Act 815. Parliament of Ghana. <http://ghanaoilwatch.org/images/laws/petroleum-revenue-management-act815-2011-.pdf> (accessed 6 March 2013).
- Ploch, Lauren. 2007. CRS Report for Congress, *Nigeria: Current issues*. http://assets.opencrs.com/rpts/RL33964_20070412.pdf (accessed 5 October 2012).
- Polgreen, Lydia. 2008. Rebels' border war prolongs Darfur's misery. *The New York Times*, 13 April. http://www.nytimes.com/2008/04/13/world/africa/13chad.html?pagewanted=all&_r=0 (accessed 21 February 2013).
- Princeton education. 2013. Definition of insurgency. <http://wordnetweb.princeton.edu/perl/webwn?s=insurgency> (accessed 5 May 2013).
- Ravallion, Martin. 2010. World Bank's \$1.25/day poverty measure- countering the latest criticisms. Research at the World Bank. <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,contentMDK:22510787~pagePK:64165401~piPK:64165026~theSitePK:469382,00.html> (accessed 5 May 2013).
- Research Methodologies. 2013. www.bethlehem.edu/document.doc?id=255 (accessed 18 March 2013).
- Revenue Watch Institute. 2004. Petroleum activities law–Angola. www.revenuewatch.org/training/resource_center/petroleum-activities-law-angola (accessed 19 March 2013).

- Rice, Xan. 2012. Nigeria plans big boost to sovereign fund. <http://www.ft.com/cms/s/0/296d3d00-0d59-11e2-97a1-00144feabdc0.html#axzz2KeoPsqTB> (assessed 11 February 2013).
- Ross, Michael L. 2012. *The oil curse, how petroleum wealth shapes the development of nations*. Princeton, NJ: Princeton University Press.
- Royal African Society. 2013. Chad. www.royalafricansociety.org/countries/chad (accessed 19 May 2013).
- Sturcke, James, Paul Myers, and David Smith. 2010. Togo footballers were attacked by mistake, Angolan rebels say. *The Guardian*, 11 January. www.guardian.co.uk/world/2010/jan/11/two-arrested-togo-football-attack (accessed 19 May 2013).
- Taylor-Powell E., and M. Renner. 2003. *Analyzing qualitative data*. Wisconsin: University of Wisconsin-Extension.
- Transparency International. 2003. Annual corruption perception index. http://archive.transparency.org/policy_research/surveys_indices/cpi/2003 (accessed 17 February 2013).
- . 2005. Annual corruption perception index. http://archive.transparency.org/policy_research/surveys_indices/cpi/2005 (accessed 17 February 2013).
- . 2010. Annual corruption perception index results. <http://www.transparency.org/cpi2010/results> (accessed 12 February 2013).
- . 2011. Annual corruption perception index results. <http://www.transparency.org/cpi2011/results> (accessed 12 February 2013).
- . 2012a. Annual corruption perception index results. <http://cpi.transparency.org/cpi2012/results/> (accessed 12 February 2013).
- . 2012b. Corruption perception index overview. www.transparency.org/research/cpi/overview (accessed 5 May 2013).
- UN Economic and Social Council. 2006. Compendium of basic terminology in governance and public administration. <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan022332.pdf> (accessed 3 October 2012).
- Useem, Jerry. 2003. The devil's excrement. *CNN Money*. http://money.cnn.com/magazines/fortune/fortune_archive/2003/02/03/336434/ (accessed 3 December 2012).
- The World Bank News and Broadcast. 2006. World Bank statement on changes to Chad petroleum law. <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/>

0,,contentMDK:20771610~pagePK:34370~piPK:34424~theSitePK:4607,00.html (accessed 24 February 2013).

Yin, Robert, K. 1984. *Case study research: Design and methods*. Newbury Park: CA: Sage.

Zelman, Joana. 2011. Top 20 oil-producing countries (photos). *The Huffington Post*. http://www.huffingtonpost.com/2011/02/22/oil-producers-exporters-t_n_826564.html#slide=244272 (accessed 3 February 2013).

Zissis, Carin. 2006. Chad' oil troubles. Council on Foreign Relations. <http://www.cfr.org/energy/chads-oil-troubles/p10532> (accessed 24 February 2013).