GHANA’S NEW OIL: CAUSE FOR JUBILATION OR PRELUDE TO THE RESOURCE CURSE

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Abstract

Ghana is a small West African nation of 23 million people. In 2007, the largest oil and gas discovery in Africa in the last decade was made by the US-based oil and gas company, Kosmos Energy, 75 miles offshore Ghana. The discovery was named the Jubilee Field and it is estimated to contain recoverable reserves of 1.8 billion barrels of oil and 800 billion cubic feet of natural gas. The phase one production rate is currently planned at 120,000 barrels of oil per day and 160,000 cubic feet of gas per day. In 2008, Ghana consumed 56,000 barrels of oil per day and only produced 7,400 barrels per day domestically, making it a net exporter of 48,600 barrels of oil daily that year. When first oil is reached with the Jubilee Field in late 2010, overnight, Ghana will become a net exporter of oil by approximately 64,000 barrels of oil daily.

This transition from oil importer to oil and gas exporter will fundamentally change all facets of the economy, society and government within Ghana. The pending influx of Petrodollars into the government’s coffers is estimated to be $1 billion annually from the Jubilee Field alone and up to $3 billion annually when additional offshore fields begin producing in 2011 through 2015. While this drastic increase in government revenue has caused a significant amount of jubilation throughout Ghana and the petroleum industry, such a rapid flood of Petrodollars into a developing nation with weak political and economic institutions in place to manage a burgeoning mineral industry can wreak more havoc on a nation than good. Many developing nations with vast mineral wealth – as Ghana now has – have experienced declining or negative economic growth, increasingly authoritarian regimes and general social and civil strife compared to many other nations with little or no mineral wealth. This phenomenon is called the “Resource Curse” and Ghana could potentially find itself as another cautionary tale of the resource curse in West Africa. The best means of preventing the resource curse is by the transfer of mineral ownership from the state to domestic private entities through the privatization of Ghana’s national oil company, the Ghana National Petroleum Corporation.
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I: Introduction – The Jubilee Oil Discovery, Cause for Either Celebration or Despair

In 2007, US-based oil company, Kosmos Energy, made Ghana’s first major oil discovery in decades. The Jubilee field, located off Ghana’s western coast, is one of the largest recent finds on the continent, estimated at holding 3 billion barrels of recoverable oil, with a planned production rate of 120,000 barrels per day (bpd). Analysis of exploratory wells has also indicated associated gas is present in the reservoir (estimated to be able to produce 120 – 160 million cubic feet of gas per day).

The Jubilee discovery has caused significant interest in Ghana’s hydrocarbon potential from around the world, whether it is oil and gas companies (i.e. foreign investors) looking to get in on any potential action; the government trying to hastily manage the regulation of their burgeoning petroleum industry; or civil society and NGOs trying to ensure equitable resource distribution throughout the country.

Today, Ghana is in an extremely unique position to leverage their new found oil wealth to become the continent’s rising economic star, or they can go down the path of many resource-rich countries and succumb to the pitfalls of the “resource curse” where mineral wealth has a negative effect economic and political effects, leading to slower or declining economic growth and authoritarian regimes (which has been the case with many of Ghana’s neighbors throughout Africa). As the development of the Jubilee field gets underway in 2010, the nation is forging ahead under fragile circumstances with little certainty over the impacts that oil and gas will have in the next decade. A host of stakeholders throughout the world will be closely watching Ghana as it attempts to

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become one of the few nations in West Africa to effectively manage its mineral resources for the benefit of all Ghanaians and not just a small selection of powerful interest groups.

On the one hand, Ghana is in a stronger position to prevent oil from halting its economic growth and damaging civil society than many of its neighbors were upon mineral discovery. Most notably, Ghana has a maturing, but still young democracy that can serve as the foundation to improve the accountability and transparency of the country’s petroleum industry and the government institutions currently in place to regulate the industry. For example, in 2008, the country underwent a peaceful transition of power in a closely contested presidential election. Additionally, there is a democratically elected parliament that actively debates national issues, a free and vibrant press with over 30 daily newspapers, and an engaged civil society.

On the other hand, the rapid arrival of mineral wealth tends to breed corruption and erode democratic accountability and the institutions meant to protect the public interest, ultimately leading to some degree of a resource curse, or the “paradox of plenty.” This is particularly the case in countries where existing mineral laws are underdeveloped, ineffective or not in place at all. Prior to the Jubilee discovery, Ghana had only three petroleum laws which established a petroleum regulatory authority (the Ministry of Energy); created a state-run exploration company (Ghana National Petroleum Corporation, GNPC); and set a petroleum production income tax. After the discovery, the government quickly assembled a technical committee to draft a petroleum regulatory authority bill that will govern the industry moving forward under the following six areas:

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“legal framework, fiscal regime and fund types, natural gas utilization and infrastructure development, environmental management and community issues, local content, and security issues.”5

While the committee’s recommendations are a step in the right direction for Ghana’s petroleum industry, significant problems still exist that could undermine any positive consequences the government and people of Ghana think will come from oil and gas development. Most notably, the government is moving oil development along too fast for the country’s best interest because the proper institutions are not yet in place to regulate the petroleum industry; they are systematically marginalizing civil society’s input; they are reluctant to improve transparency of the deals between private oil companies and the regulatory bodies; and control of the industry lies solely in the President’s administrative cabinet with no checks and balances by parliament or the courts.6 Thus, despite being a democracy, when it comes to oil, there is very little oversight.

Since the Jubilee discovery, government officials from the President down, have publically acknowledged the genuine detriments of oil wealth and have vowed to not allow Ghana to become the next Nigeria of West Africa; however, sheer political will does not make up for the existing weak government capacity to regulate the petroleum industry.

The new administration of President Atta Mills has inherited this challenging situation, and he repeatedly promises to not allow Ghana to go down the cursed path of Nigeria, Angola or Chad. While some steps have been taken by his administration to

5 Ibid, pg. 35.
6 Ibid, pg. 29-59.
indicate there is some degree of political will to allocate windfall petrodollars equitably, existing weak government capacities still loam over Ghana’s potential to become blessed, and not cursed by oil. For Ghana to avoid the resource curse, they must transform this political will into not only tangible institutional improvements recommended by most academic literature; but also consider the more unconventional question of ownership structure over the resources. Time is of the essence for Ghana to implement many of the regulatory and economic structures of its petroleum industry as there is just under 14 months (at the time of writing) before production begins on the Jubilee field in 2010. Whether or not any policies or resource ownership structures change in time to prevent a full-fledged resource curse in Ghana is still uncertain. Should the government embrace the recommendations of this paper—which go beyond those of typical academic literature on the subject—the likelihood of preventing a petroleum curse is much greater than if they continued down their current oil development plan.

This paper will present a briefing on the current state of Ghana’s petroleum industry, and its regulatory framework. It will then provide recommendations to the government, foreign companies and lending institutions to help lead Ghana on a development path that avoids a resource curse caused by the recent oil discoveries. The paper is split into six sections: the research methods; a background on the Jubilee field and other oil discoveries; a literature review on the resource curse, Dutch Disease and obsolescing bargaining theory; the differences between state owned resources with a production sharing agreement scheme and private domestic owner resources with a royalty/tax scheme; and a policy position for Ghana to adopt in order to avoid the resource curse. Section two discusses the research methods that were used to reach this
paper’s policy prescription for Ghana. Section Three summarizes the current state of oil and gas development in Ghana and the anticipated economic effects it will have on government coffers under existing contracts with the independent oil companies. Section Four defines the resource curse and Dutch Disease, along with case studies of why the typical policy recommendations put forth to resource rich developing nations do not work. It then introduces the often overlooked policy prescription of a domestic private ownership structure for petroleum. Section Five highlights the history of the production sharing agreement in oil producing nations with a focus on how this sort of agreement is connected to the resource curse. Section Six then analyses several policy recommendations for all major stakeholders in Ghana’s petroleum industry. The section focuses on the political and economic costs of each policy proposal (i.e. who wins and who losses by each policy change), particularly surrounding the fundamental recommendation of private domestic ownership and the shifting of government revenue collection from a production sharing contract to a tax and royalty scheme. The section concludes with how the government can effectively spend their anticipated oil revenue to promote sustainable economic growth throughout the country by investment in industries other than petroleum.

II: Methods

This study was conducted through various research techniques, which were then synthesized into the final policy prescription for the stakeholders in Ghana’s petroleum industry. First, personal observations, interviews and casual interactions were undertaken by the author while in country. This included meeting with key employees of various companies operating in Ghana along with those of state-run organizations. Additionally,
the author spoke with several local Ghanains regarding their impression of the burgeoning petroleum industry and its eventual impacts on the nation as a whole. With a local understanding of Ghana’s oil future and justification for further research, the study moved to an analysis of the recent offshore oil discoveries. Using data from the industry, production rates and revenue generation rates (particularly those of the government) were estimated to understand the magnitude of petrodollars entering the government’s coffers.

With a comprehensive background on the basic impacts of Ghana’s pending oil production, the research transitioned into a literature review on the resource curse, Dutch Disease and the Obsolescing Bargaining Theory. Case studies of these resource phenomenons from various regions of the world, with a focus on Ghana’s neighbor, Nigeria, were then analyzed in the context of Ghana. Within the literature review of the resource curse, the common policy prescriptions that the academic literature has purported over the last 25 years is presented and applied to Ghana. From this, a more examined review of domestic private ownership versus state ownership of the oil and gas resources is undertaken. Lastly, given Ghana’s current existing political and economic situation, all the research methods are applied to the nation as it stands today in order to create a policy prescription with an emphasis on domestic privatization of all state-owned petroleum assets in the country. The paper concludes with a bulleted set of recommendations for all of Ghana’s stakeholders to undertake in order to avoid the paradox of plenty.

III: Overview of Ghana’s Burgeoning Oil Industry

Prior to the Jubilee discovery, interest in Ghana’s oil industry was minimal when the government started auctioning offshore exploration blocks in the Gulf of Guinea between

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2000 and 2006. Oil production held at a steady rate of 400,000 barrels per day between 2002 and 2004, and then declined to nearly zero when the shallow offshore Saltpond field was shut down in 2004. When the government, under the auspices of GNPC, began auctioning offshore exploration blocks around this same time, only smaller independent oil and gas companies showed any interest in Ghana’s offshore oil prospects, while SuperMajors like ExxonMobil and national oil companies like China National Offshore Oil Corporation (CNOOC) delayed interest until late 2009. Figure 1 below shows the eleven blocks auctioned in Ghana’s offshore waters and the various exploratory wells drilled in those blocks between 2004 and 2008.

Figure 1: Ghana’s hydrocarbon map – onshore processing facilities, offshore oil and gas exploration blocks, drilling activities, and the West Africa Gas Pipeline.

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The Jubilee field spans both the Cape Three Points and Deepwater Tano exploration blocks between boxes 8 and 9 in Figure 1 above. At the time of discovery, the Jubilee field had several foreign and domestic entities with ownership interests. Kosmos Energy, until selling its interest to ExxonMobil in October 2009, had a significant minority interest in the Cape Three Points block (30.875%) and a smaller minority interest in the Deepwater Tano block (18%).\(^8\) Two other independent foreign operators have significant stakes in the Cape Three Points block: Anadarko Petroleum Corporation still holds a 30.875% interest and Tullow Oil plc, a 22.896% interest. GNPC maintains a 10% participating interest in the block, while the remaining 5.354% is split between E.O. Group Ltd (3.5%) and Sabre Oil and Gas Ltd (1.854%).\(^9\) Figure 2 below from Tullow Oil provides a detailed map of the three offshore exploration blocks where much of Ghana’s new oil and gas fields have been discovered, along with Tullow’s respective interest in each block. Because the Jubilee field spans two blocks, and since Tullow has a 49.95% interest in Deepwater Tano, it has been designated as the head operator for the first development plan for the field. At the time of writing, it is rumored that ExxonMobil is also trying to acquire Anadarko and/or Tullow’s interests in the Jubilee field which would make ExxonMobil the majority stakeholder and primary operating company.\(^10\)

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\(^10\) Herron, James (2009).
Since the time of Jubilee’s discovery, along with other smaller fields, industry analysts now anticipate that Ghana’s proven oil reserves are likely over 3 billion barrels. The Jubilee field alone is estimated to hold between 600 million to 1.8 billion barrels of proven oil reserves and 800 billion cubic feet of associated gas.\footnote{Gary (2009), p. 18.} In July 2009, the Ghanaian government formally approved the first development phase of the Jubilee field with Tullow acting as operator in the Deepwater Tano block, where development is to begin first. Tullow has purchased and is currently retrofitting a floating, production,
storage and offload (FPSO) vessel to manage development of the field throughout its anticipated 20 to 30 year production phase. The FPSO will produce 120,000 barrels per day and up to 160,000 cubic feet of gas per day, with a water injection capacity of 230,000 barrels of water per day. Through appraisal well sampling and oil assays, Tullow and Kosmos determined the oil contained in Jubilee is of high quality—a “light, sweet” crude—which will obtain a price premium in oil markets compared to quoted marker crudes like West Texas Intermediate because light, sweet crudes are easily refined into valuable petroleum products such as motor gasoline and jet fuel.

Depending on the volatile nature of oil prices, the German foreign aid organization, GTZ, estimates that based on the current production schedule of the Jubilee field, the Ghanaian government will soon be receiving more than $1 billion annually through GNPC’s 13.75% stake in development phase one and its production sharing contract with the foreign operators. With an estimated 20 to 30 years of sustainable oil production, the Jubilee field alone will pump approximately $13.3 billion of today’s money into the government’s coffers! This amount easily eclipses the government’s revenues from all other mineral extraction, which has historically been gold.

It is easy to assume that this vast sum of money will allow Ghana to rise from its current impoverished state to become a thriving economic powerhouse on the continent,

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12 Water injection is used in oil production as an enhanced recovery method to maintain pressure within the reservoir, yielding a larger amount of oil ultimately recovered.
15 The designation of “light, sweet” is typically given to crude oils with an API gravity (a measurement of a liquid’s weight in terms of specific gravity) of more than 31.1° and a sulfur content of less than 0.7% by weight.
17 Izundu (2009).
18 $13.3 billion is the net present value (NPV) of the estimated government revenue from Jubilee oil, assuming government revenues are $1 billion per year, a 25 year production lifespan, and an interest rate equal to a ten year historical LIBOR average of 5.6%.
but the paradoxical truth is that evidence from other nations once in Ghana’s position, suggest this wealth is more likely to create worse economic performance, unbalanced growth, and weaker government institutions. The next section of this paper analyzes several examples of nations falling under a resource curse and how most policy recommendations have not worked to mitigate the potential evils of plentiful natural resources when they are applied to a nation lacking the appropriate transparent institutions to properly manage their resource development.

IV: Literature Review – The Resource Curse, Dutch Disease and Obsolescing Bargaining Theory in Oil Rich Developing Nations

Since the 1970s, there has been a well documented and repeated phenomenon that resource rich nations have underperformed their resource constrained counterparts on nearly all indicators of economic growth. For example, the per capital GDP between 1970 and 1993 in resource rich nations grew by only 0.8 percent compared to 2.1 to 3.7 percent in resource constrained nations. The most striking example of this is the exceptional growth of the East Asian “tiger” economies that possess little mineral resources compared to the stagnant growth of resource rich Latin American nations. Even the economies of the world’s largest oil exporters (members of OPEC) either experienced negative annual growth or slower than usual growth in this time period.\textsuperscript{19} The plight of resource rich, export nations has gained prominence in academic literature under three non-mutually exclusive phenomenons: the resource curse, Dutch Disease and obsolescing bargaining theory.

The resource curse or “paradox of plenty” (first coined by Terry Lynn Karl’s seminal book on the topic) refers to those nations whose mineral wealth has led to widespread negative economic, political and social consequences. The inverse correlation between resource wealth and economic wealth (i.e. stagnant growth as mentioned above) that typifies a nation suffering from the resource curse has primary causal roots in weak governance at the outset of resource extraction. Most often, when resources are discovered without well established and transparent policies in place to regulate the development of those resources, corruption spreads throughout government because the few officials in control of the resources are financially incentivized to yield increasing power over their mineral sectors. Resource rich nations consistently rank the lowest of the World Bank’s Governance Research Indicators and the Transparency International’s Corruption Perception Index. With mineral wealth accumulating into a few hands, corrupt government officials use it as a weapon to consolidate their power, repress civil society and ultimately lead more toward an authoritarian government where accountability and transparency over mineral resources revenues disappears. With this downward spiral of sound governance, the societies of resource rich nations suffer by stagnant or negative economic growth, and consequently, a lack of infrastructural investment in other industries and public goods such as roads, schools and hospitals. Often times the situation is so dire in resource cursed nations that civil unrest builds to the point of wars fought over the minerals, particularly when that mineral is oil.

Within the overall phenomenon of the resource curse, two other related occurrences have been observed and connected to sudden resource wealth befalling a developing nation: Dutch Disease and obsolescing bargaining theory. A nation suffering

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from the resource curse will experience varying degrees of the Dutch Disease or obsolescing bargaining theory depending on several exogenous factors leading up to resource curse.

Dutch Disease was first coined by The Economist in 1977 based on the 1959 discovery of large offshore natural gas reserves in the Dutch North Sea that were developed and mostly exported to surrounding European markets. The theory states that windfall profits from commodity exports (e.g. natural gas, oil, gold and/or diamonds) will appreciate the exporting nation’s exchange rate, making all other export sectors of the economy suffer from less competitive trade terms (i.e. non-mineral exports like agriculture and manufacturing become more expensive in international trade). The exchange rate appreciation increases domestic inflation and in turn, results in less diversity in the nation’s economy by creating an escalated dependence on the natural resource exports, which are then highly prone to boom-and-bust cycles due to notoriously volatile prices for most natural resources, particularly oil and gas. Another associated macroeconomic effect of decreased economic diversity is a fall in demand for skilled manufacturing labor that then hinders educational opportunities and promotes greater income inequality throughout the population.

Equatorial Guinea is a prime example of all the ills associated with the Dutch Disease following significant oil and gas discoveries. Since oil production began, government revenues from oil went from $3 million in 1993 to $725 million in 2003, and the oil sector’s share of GDP increased from 11 percent to 86 percent in 2000.

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21 “The Dutch Disease” The Economist, November 26, 1977, p. 82-83.
accounted for 61 percent of government revenues in 2000. With this new oil driven economic dominance, agricultural exports of cocoa and coffee (the former primary export) fell from 60 percent of GDP in 1991 to less than 9 percent in 2001.24 As the oil wealth of Equatorial Guinea made it the fastest growing economy in the world on paper—a 65 percent growth rate in 200125—all other socioeconomic indicators told a different story. Life expectancy is still at a dismal 51 years, with estimates that a third of the country will not live to age 40. And expenditures on education have remained miserably below international standards at 1.7 percent of GDP since 1985, well before the oil boom.26

After the Dutch Disease has settled into a nation’s economy, long term consequences beyond just stagnant socioeconomic progress soon manifest throughout the society. One of the foremost concerns is the lack of government foresight in public expenditures based on revenue streams from commodities as volatile as oil and gas. The boom-and-bust nature of the hydrocarbon industry means that an oil-dependent government budget is vulnerable to the up and down price swings of oil. During high price periods, governments often implement ambitious public expenditures, but often find their budgets cannot maintain that level of spending during low price periods. As a result, the government will often borrow money at unfavorable terms not only during bust cycles, but they will also pledge future oil production as collateral to secure additional loans during boom cycles.27

Obsolescing bargaining theory (OBT) was originally coined in 1971 by Raymond Vernon who observed that host governments of resource rich countries lacked the technological and financial resources to find, develop and market their minerals. They therefore relied on foreign investors and companies who were wary to risk the large capital investments required to create a resource extraction industry without the financial terms heavily weighted toward their economic interest at the outset. The theory contends that over time though, host governments eventually gain the upper hand in bargaining power by renegotiating contract terms with international investors and foreign operating companies whose investment costs have already been sunk.\(^{28}\) However, when the government gaining more bargaining influence is corrupted under normal resource curse conditions, the woes of their society are exacerbated through further power consolidation and less accountability. That is, the corruption effect of the resource curse magnifies under OBT because as the dominance of natural resource sectors increase, so do the stakes for political officials to gain and hold increasing leverage over those resources. Incumbents become unwilling to yield any of their power and react by often hostile moves to renegotiate terms with investment organizations and foreign companies.\(^{29}\) Thus, natural resource wealth more often than not, further complicates any effort to build strong political institutions because self-interested political elites utilize OBT to subvert any institutions wherever they might already exist.

The development of an oil pipeline between Chad and Cameroon, with funding from the World Bank, serves as a prime example of OBT gone wrong. In 1999, the


World Bank financed the construction costs of the pipeline in return for the government of Chad passing the Petroleum Revenue Management Law 001, stipulating explicit uses of revenue. According to the original law, 72 percent of the revenues would be invested in critical sectors like education, health, social services, infrastructure, environmental protection and water management. Another 10 percent was to be allocated to the Future Generations Fund for when the oil ran out. A specific 4.5 percent was to be used for community development in areas of oil development, leaving 13.5 percent for the government to use in its general budget. However, as soon as oil started flowing in 2004, the Chadian government sought to revise the law to the chagrin of the World Bank which stopped loan payments and froze the government’s escrow account. By 2006, the World Bank conceded by turning the funding back on and agreeing to increase the government discretionary budget to 30 percent of the revenue while abolishing the Future Generations Fund. Meanwhile, President Idriss Deby utilized the oil wealth to consolidate power and decrease accountability causing massive flights of foreign investment and civil unrest to rise. Today, Chad remains one of the world’s most impoverish and war-torn nations despite the oil wealth that World Bank officials believed would bring the nation out of poverty. This is largely due to the obsolescing bargaining power of the World Bank over the revenue allocation which allowed the government of Chad to succumb to the typical conditions of a nation cursed by mineral wealth.

III. a) The Litany of Proposed Solutions and Their Numerous Failures

Since the identification and analysis of the resource curse, countless scholars and political scientists have suggested a varying list of policies solutions that would prevent the

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30 Ibid., p. 11.
resource curse in a resource rich nation.\textsuperscript{31} The literature repeatedly suggests only better revenue management solutions based on the hypothesis that revenues inherently accrue only to the state. In Ghana, in particular, the government has received extensive counseling on the matter from several non-governmental organizations who are merely recommending some form or another of what has not worked for most countries in Ghana’s position. The solutions currently proposed to Ghana include 1) further development in resource management, fiscal and monetary policies, 2) improved government transparency and civil involvement, 3) revenue expenditures to promote economic diversity, 4) creation of an oil fund and 5) creation of a new national oil authority independent of GNPC.\textsuperscript{32}

While these recommendations are noble causes the government of Ghana should strive toward, they often do not lead to avoidance of the resource curse. Most countries do not have the “autonomous technocracy” necessary to push through the often unpopular policies required to implement budgetary spending practices that offset the Dutch Disease. Botswana is one of the few examples where the government spent their windfall diamond revenues wisely to prevent an appreciated exchange rate and domestic inflation because all spending requires Parliamentary approval, insuring the whims of a power seeking executive are checked.\textsuperscript{33} Currently, decisions on Ghana’s petroleum management and revenue spending lie with one executive agency responsible only to the President and not Parliament.\textsuperscript{34}

\textsuperscript{31} Weinthal and Luong (2006) p. 35.
\textsuperscript{32} Gary (2009), p. 55-57.
\textsuperscript{34} Gary (2009), p. 23.
Countless efforts by non-government organizations, international financial institutions and other foreign entities have been undertaken to improve the transparency of deals brokered between domestic governments and foreign companies brought in to extract the resource of interest. Western governments have even stepped in to require that extractive companies under their tax jurisdiction disclose what they pay foreign governments to operate. For international financial institutions like the World Bank, providing mineral development loans under conditions of improved transparency is a popular mechanism to promote transparency. Chad was initially a perfect case study of this type of carrot and stick lending practice, but soon broke down under the realities of OBT (discussed above). The World Bank certainly holds a lion’s share of the blame for allowing the government of Chad to renege on the original Revenue Management Plan. And the example underscores the premise that international financiers must maintain extreme levels of oversight in the day-to-day spending of oil revenue generated from the projects they finance, otherwise greedy, power-seeking leaders will use petrodollars to consolidate power and decrease transparency and accountability.

In Ghana today, all transactions between foreign oil companies and GNPC in the form of bids have been shroud in secrecy, with little to no information or data being released to civil society until long after the deals are struck. And because the development of oil is being financed by foreign oil companies and not international investors like the World Bank, there is little incentive for these companies to tie government revenue expenditure policies to their development contracts as there would be with the World Bank. While the U.S. government (who has jurisdiction over Kosmos Energy and ExxonMobil) or the U.K. government (who has jurisdiction over Tullow Oil)
can require their companies doing business in Ghana to disclose certain financial aspects of their deals (increasing transparency), they cannot force the companies to dictate specific royalty revenue spending policies over the government of Ghana (decreasing accountability). There have been discussions within Ghana to join the Extractive Industries Transparency Initiative for the petroleum industry to improve oversight, but this has not yet been instituted in Ghana.\footnote{Gary (2009), p. 4.}

If transparency and accountability over the rents obtained from the petroleum sector break down, most of the efforts of economic diversification soon follow. While nearly all nations widely follow some recommendation to invest their windfall petrodollars into other sectors, only a select few have experienced a transition from a mineral-dominant economy to a non mineral-dominant economy. Of all the oil economies identified in 1970, Tunisia is the only one that was no longer ranked as one in 1991,\footnote{Weinthal and Luong (2006) p. 39.} while most others are still suffering from the Dutch Disease, unable to foster growth in other sectors. When these commodity dependent countries hit bust cycles, as Russia did with the 2008 oil price collapse (forcing them to enter unfavorable “oil-for-loans” agreements with China)\footnote{Kemp, Andres. “Pragmatism prevails as Russia and China move towards gas deal.” \textit{China Oil & Gas Monitor, NewsBase, Week 42, Issue 226, p. 2.}}, an economic crisis that would normally only effect one industry ripples through the nation’s entire economy and cripples the government’s ability to implement fiscal stabilization policies, especially if any Oil Funds (see below) were misused prior to the commodity collapse. Ghana’s closest experience with the oil revenues they will soon be collecting is their once booming gold industry during the British colonial era. After a century of gold mining, the country has little show for it as...
no other economic sector has seen any significant growth, and the government has been blamed with squandering the little revenues they received from foreign companies. The likelihood of repeated failures at economic diversity throughout Ghana’s gold era are high because the government institutions have not been and still are not ready to handle the burden associated with a massive influx of commodity revenues. There are efforts to improve the gold industry’s impact on Ghana by the industry’s own advances in corporate social responsibility and the government’s increased pressure on the industry, but there is little tangible evidence that anything has improved to date.

Oil funds, which allocate a certain percentage of oil revenue into a future spending account (i.e. saving for a rainy day when the oil rents decrease or disappear), are implemented to some degree in nearly all resource rich nations, whether developed or developing. In the developed world, the state of Alaska in the U.S. has the Alaska Permanent Fund and Norway has the State Petroleum Fund. In the developing world, Nigeria has their Oil Fund that is added to when oil prices are above $45 a barrel and drawn from when prices go below, and Kuwait has the Reserve Fund for Future Generations. The critical difference is that in the developed world, Alaska and Norway’s fund’s have high levels of transparency and degrees of public involvement, while in the developing world, Nigeria and Kuwait’s funds have no public input and often act as personal bank accounts for the politically elite. To prevent corrupt handling of oil funds, some political scientists have recommended, on top of transparency and public involvement, direct distribution of money to the citizens under the basis that private

households will make better investment decisions and have a higher proclivity to save the money than governments. Such a scheme is currently employed in the US state of Alaska where it has not had the proposed effect because the society becomes complacent, viewing the government as a source of free wealth that is more often used to promote consumption than savings.\textsuperscript{42} It is too early to tell if Ghana’s oil fund will be spent under public scrutiny or not, but given the government’s current record of non-transparency and the executive branch’s sole authority over GNPC and oil revenue, the likelihood of following Nigeria’s example is high given the corrupting nature of new found petrodollars.

Lastly, it has been suggested that in order to prevent all the ills brought on by resource rents (whether that’s increased corruption or the Dutch Disease), Ghana should create another government agency, independent of GNPC, that oversees the regulatory and commercial functions of the nation’s oil development. The logic behind this recommendation is to take regulatory power away from the executive branch (as it is currently held) and give it to the widely elected Parliament. This is a sound policy recommendation as it can address many of the aforementioned reasons other policy recommendations do not work in resource rich nations lacking the proper institutions to regulate their mineral sectors. However, at the time of writing, it is just a recommendation and not a reality. And while this policy prescription should be pursued as a means of improving transparency, the overall threat of succumbing to the resource curse may not be prevented because the ownership structure of the oil still is in the hands of the government where oil rents inevitably accrue to a government coffer.

\textsuperscript{42} Weinthal and Luong (2006) p. 42.
Ghana’s oil boom is happening in an era of increased attention to the problems of resource rich states, and Ghana has important opportunities to learn from the positive and negative examples of others, especially its neighbors in Africa. The government and people of Ghana are right to be exuberant about their newfound oil wealth, but they must proceed with extreme trepidation. The past experiences of Ghana’s peers provide countless examples of how not to manage their oil resource. But to fully prevent the onslaught of the various evils of the resource curse, there is one missing proposal that the Ghanaian government would be prudent to implement.

V: Private Domestic Ownership Over State Ownership

Under existing laws in Ghana, the state physically owns all mineral resources and foreign companies are invited into the country to extract those minerals through a production sharing agreement (PSA). The concept of the modern PSA was first utilized in Indonesia in the 1960s and has since become one of the most popular forms of oil contracts around the world.\textsuperscript{43} With a PSA scheme, the state, as owner of the resource, engages foreign oil companies to provide the technical and financial resources that the state lacks to explore for and develop the national petroleum resources. In return, the foreign company is permitted to use produced oil to recover all operating expenditures, known as “cost oil,” and the remaining “profit oil” is split between the government and the company, generally at a rate of 80 percent and 20 percent respectively. In addition, the foreign

company must also pay the government a royalty on any oil it finds, and then an income tax on any oil it sells for profit after the government’s take.  

PSAs are the prevalent means of oil extraction in developing countries for three main reasons: 1) national oil companies (NOC) in developing countries lack the technological ability to extract oil; 2) all investment risk prior to oil production lies with foreign oil companies, while future rewards are overwhelming given to the government; and 3) the government retains ownership over the oil, giving it authority to control how the resource is managed from discovery to production. Ultimately, PSAs put the balance of power in the hands of the government symbolizing the appearance of national sovereignty, and oil companies, desperate to continually increase their proven global oil reserve base reluctantly accepted these terms as the normal cost of doing business in today’s environment.

While on the surface, a PSA appears to benefit the resource rich nation by removing all the development risks from the NOC, the nature of the resource ownership structure and subsequent accrual of oil rents to non-transparent government treasuries under a PSA has a casual relationship with the resource curse. In theory, the concept of a PSA recognizes that oil ultimately belongs to the people of the resource rich nation, whereby the government acts as the administrator of the public’s resource. The supposed benefits of a PSA’s recognition of public ownership break down when the institutions meant to regulate the government’s handling of oil rents are weak or do not exist, leading to various degrees of the afflictions associated with the resource curse. It is not a coincidence then that the time period of growing prominence of the PSA around the

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world, between 1960 and 1990, is also the very same period in which the resource curse was identified by scholars.\textsuperscript{45}

Additionally, prior to the mid-1960s, when the resource curse was not notably observed in oil rich countries, the dominant agreement between foreign oil companies and domestic governments was a “royalty and tax system” (R/T).\textsuperscript{46} Under an R/T system, foreign oil companies are contracted to explore and develop petroleum reserves similar to a PSA. However, the key difference is that with a R/T system, the ownership of the oil is transferred from the state to a private entity at the production wellhead in exchange for a significant royalty payment that is either in-kind (e.g. a percentage of lifted oil) or pure cash payments to the government. In addition to the royalty paid to the government at the wellhead, two levels of taxes are typically placed on the foreign company: an oil tax that is often 60 percent of the oil’s market value, and a secondary income tax (up to 30 percent) on the revenues from sales of the oil by the foreign company. Between the initial royalty and two levels of taxes, governments typically take between 70 and 80 percent of the cumulative value of the oil produced through an R/T scheme.\textsuperscript{47}

PSAs provide the government with nearly the exact same range of the oil’s cumulative value as an R/T system, so why is it that the preeminence of PSAs in the last 50 years is also associated with the rise of the resource curse? It has been suggested that the fundamental difference between a PSA and R/T system – ownership structure – has underlying causation in the existence of the resource curse. When a resource is state owned under a PSA, the revenues that accrue to the government’s treasury come from the

\textsuperscript{45} Weinthal and Luong (2006) p. 43.  
\textsuperscript{47} Humphreys (2009) p. 59.
sale of oil by the NOC (GNPC in Ghana’s case), which is controlled by politically appointed bureaucrats who answer to a single political elite (for example, either an executive administration in Ghana or an absolute monarchy in Saudi Arabia). This creates a blurred relationship between the state and the oil-controlling bureaucracy who both have exclusive access to the resource and explicit financial and political incentives to weaken regulatory institutions, thereby allowing each party to line their coffers with petrodollars to be used to consolidate power and decrease transparency and accountability.\textsuperscript{48} By this point with a PSA, the resource curse has taken root and little can be done prevent its disastrous cycle as the elite will continue to exploit the PSA to bolster their grip on power and prevent reform.

With private ownership, most successfully attained by the R/T system, the critical difference between a PSA is that there is a clear boundary between the two main players, the government and the operating company. Each entity has a source of power over the other, where the government needs the operating company to produce oil in order to collect royalty and tax revenue, and the operating company needs the government to permit exploration and production on its sovereign land.\textsuperscript{49} R/T systems fell out of vogue in the 1960s, ceding ground to PSAs, because it was not politically popular to continue letting foreign operating companies to technically own the domestic resource of an autonomous nation. But now, with 50 years of hindsight, it is also not politically popular, nor socially or economically desirable, to have a state that lacks the proper administrative infrastructure own the oil reserves under a PSA.

\textsuperscript{48} Weinthal and Luong (2006) p. 43.
\textsuperscript{49} Weinthal and Luong (2006) p. 44.
The preferred solution would represent a hybrid between the traditional R/T systems and PSAs where private, domestic entities (not foreign operating companies) are given ownership over the oil and the government implements an R/T system to collect revenue. Private, domestic ownership under an R/T system accomplishes the nationalization goals originally responsible for PSAs, while maintaining a clear boundary between the government and private resource owners, thus preventing a fundamental source of the resource curse. The boundaries erected between the government and domestic owners lead to high transaction and monitoring costs, which encourage the creation of strong institutions on the government’s side to ensure collection of royalties and taxes, and likewise, encourages operational efficiency on the private company’s side to ensure profitability.50

VI: Accomplishing Private Domestic Ownership in Ghana

Ghana is currently sitting at a crossroads in its development and it stands to be argued that a well intentioned government holds the potential to prevent the nation from becoming another cautionary tale of the resource curse, Dutch Disease and obsolescing bargaining power. In order for Ghana to put in place all the institutions and regulatory agencies required to promote economic growth from its bourgeoning oil wealth, it is prudent to follow many of the commonly prescribed policies in the literature such as sound spending of oil windfalls to prevent the Dutch Disease; improvements in accountability and societal involvement; and a natural resource fund to stabilize government spending through boom and bust cycles. However, given the experience of most resource rich, developing nations, none of these efforts are usually successful when the oil is owned by the state. Therefore, the first priority of the Ghanaian government

should be the facilitation of resource ownership to transfer from the government run GNPC, to a competitive marketplace of private, domestic companies.

In privatizing GNPC, there should be three primary goals: 1) maintain a majority domestic ownership of GNPS shares, 2) achieve full privatization of all GNPS’s shares and 3) prevent any and all corruption (i.e. the unfair and nontransparent selling of GNPC assets to politically connected elites). To accomplish the first goal, 60 percent of GNPC’s shares should be floated on the Ghana Stock Exchange. There is evidence to believe the exchange can absorb at least, and probably more than 60 percent of GNPC’s value because of its 50:1 magnitude of exchange value to GNPC value. To accomplish the second goal of full privatization and in the case that not all of GNPC value can be floated on the local exchange, 40 percent of GNPC’s should be listed on a secondary exchange such as London’s AIM. The third goal of avoiding corruption should be accomplished just by virtue of free and public information being available for all market exchange transactions in Ghana and London. However, if this is still a concern, the government can mandate a limit to the position size a single investor or entity can take in ownership at the time the shares are floated on the exchanges.

Only after domestic privatization of GNPC is accomplished, will the incentives for corruption, theft, and power consolidation be over taken by incentives to build functioning regulatory institutions that uphold transparency and promote sound investments of oil revenues back into the nation’s economy and infrastructure.

The largest obstacle to creating a system of domestic private ownership in Ghana is that there is currently no domestic national company capable of producing oil from offshore fields like the Jubilee field, where nearly all of Ghana’s oil lies. Not even small
independent foreign companies like Tullow or Kosmos have the full capacity to operate in Ghana’s offshore oil plays. This is why highly capable SuperMajors like ExxonMobil are now entering the picture. While it is a technological reality that foreign companies will be required to produce the first barrel of oil in Ghana, it is possible for the resource ownership to lie in private, domestic hands through a few options. First, the government can stipulate that any company operating in its country establish a domestic affiliate company that has an office and tax-paying entity in Accra, along with specific requirements that management and operational employees be composed of a certain percentage of Ghanaians. Alternatively, GNPC can be privatized, as many formerly nationalized Russian oil companies were in the 1990s, and given control over the management of the oil reserves. A privatized GNPC would operate with the tenants of a for-profit competitive company that the government would collect royalties and taxes from, instead of its current operative motive as an arm of the executive branch. GNPC, as a private company, would then be responsible to contract exploration and production work to foreign companies capable of complex offshore operations while simultaneously re-investing its profits into growing its own capabilities with the intention of taking more and more operating responsibilities away from foreign companies in the future. Additionally, a privately held GNPC would be able to raise capital through selling shares or bonds on international markets, making it ultimately responsible to shareholders or creditors who could withdraw their investments if economic efficiency is not pursued by maintaining a clear boundary with the government. In essence, privatization would encourage accountability at GNPC which would permeate up through the government’s regulatory agencies.
V: a) Winners and Losers under Privatization

Privatizing GNPC, or allowing other private, domestic entities to own and control the oil resources, would be beneficial to an overwhelming number of stakeholders in Ghana, while marginalizing a few. First, it is a well known fact that the government revenues under an R/T system can be equal to or more than revenues under a PSA, which is currently estimated to be over $1 billion a year.51 This means the government does not have to forego any revenue on Ghana’s future oil production. Second, Ghana’s democratically elected Parliament will benefit by controlling the tax revenues of the petroleum industry as opposed to the executive branch. By virtue of being a collective body of legislatures, there is much less opportunity for corruption to accrue than if the tax policies and revenues were controlled by the President. Third, two groups of investors would benefit. Privatizing GNPC would open up investment opportunities for Ghanaians to buy shares in Ghana’s oil future and have an active participation in the industry as a shareholder. Additionally, foreign operating companies are better served when their interests of bottom line profits are aligned with their domestic partners. Forth, and most importantly, the citizens of Ghana would benefit through domestic private ownership because they can become direct stakeholders in the management of the oil reserves and the R/T system would ensure less petrodollar corruption that has led so many other nations toward the resource curse.

There are two major stakeholders who will be marginalized by privatization. The President and executive branch will lose its grip over the control of GNPC, the nation’s petroleum reserves, and direct access and influence over the spending of petroleum

revenues. GNPC and the heavily engrained bureaucrats that run the organization will also lose under a privatization scheme as their influence over the industry is shifted from an arm of the executive branch that is only responsible to the President (allowing significant opportunities for corruption) to a privatized entity that is responsible to its shareholders and the widely elected Parliament.

V: b) Incentivizing Privatization among Stakeholders

To accomplish the privatization of GNPC will require an act of Parliament that is passed by the President’s signature. Politically, the cost burden – in terms of forgoing power – lies with the President who will have to release the executive branch’s hold over the petroleum sector right at the moment when it is poised to become the most important and powerful industry in Ghana. At the time of writing, it is hard to determine if President Atta Mills would be willing to accept privatization because it has never been publicly proposed to him and he has never acknowledged privatization in public statements made about GNPC and his nation’s burgeoning petroleum industry.

Nevertheless, it is clearly not in the President’s interest to privatize GNPC as he is positioned to soon control over $1 billion in annual petroleum revenues. It is therefore the role of civil society, with the help of NGOs, to incentivize the President through grassroots campaigns to move toward private domestic ownership over Ghana’s petroleum resources. The campaign must start with an effort to educate key stakeholders in different communities throughout Ghana of the virtues of private domestic ownership with an R/T scheme over state ownership with a PSA. The key community leaders to target are those who can not only reach a large audience of the population, but also, have
influence with elected officials in Parliament such as religious leaders, local government leaders and domestic business owners. Additionally, any foreign investment funds like the IMF or World Bank that get involved in Ghana’s petroleum development can also be leveraged to influence the ownership structure transition by conditioning their investments on it. They would just have to maintain constant involvement throughout the investment period to avoid the obsolescing bargaining power experienced in Chad.

If a large enough coalition of community leaders and foreign investors is sold on the idea of domestic private ownership, they could then penetrate a large majority of civil society and build momentum amongst the electorate to petition their representatives in Parliament to craft a privatization and R/T bill for the petroleum sector. If such a bill reaches fruition in the Parliament with overwhelming support, the President will be given clear signs of its support by the population. Were he to veto such a bill, it could very easily become the campaign promise of his next opponent for President in 2012.

Considering the influence of petroleum issues in Atta Mills’ election in 2008 just after the Jubilee discovery, the electorate is only going to increase its interest in petroleum issues in the next election as first oil is produced from the Jubilee field and revenues start flowing into government coffers. Thus, incentivizing an executive administration with little desire to release its hold over the nation’s petroleum resources will require a mutually inclusive and simultaneous effort from NGOs, civil society, foreign investors and Parliament to demonstrate to the President – through the force of an overwhelming coalition – that he has no choice in matter, or else face losing reelection in 2012.
V: c) Effective Petrodollar Spending

Privatizing oil resources, though, does not necessarily mean Ghana will avoid the resource curse or Dutch Disease as it will merely be the first step. How the government invests the windfall royalty and tax revenues will be a critical element in the success or failure of Ghana’s political and economic future as an oil producing nation. The largest challenge will be to avoid Dutch Disease where the petroleum industry becomes the overwhelming force in the national economy to the detriment of all other export industries. Assuming a privatized GNPC and Parliament in control of the petroleum revenue collection and spending, there must be the enactment of an additional bill that clearly dictates how and in what and when the government’s petrodollars can be spent. The bill should allocate the distribution of revenue into four different funds: 1) a critical infrastructure fund, 2) an economic diversification fund, 3) an oil fund for emergency and future use and 4) a general government revenue fund. The largest percentage of revenues should go into the first two funds at 35 percent each, while the last two funds should receive 20 and 10 percent respectively.

A critical infrastructure fund would be responsible for directly investing petroleum revenues into direly needed improvements to Ghana’s roads, energy system, public schools, hospitals and other public services. Functioning and sound infrastructure is the foundation to fostering economic growth in industries other than petroleum. An economic diversification fund should identify both existing industries that will suffer from petroleum exports under the tenants of Dutch Disease and new industries that should be encouraged to develop in Ghana. Part of the revenue in this fund should therefore go to supporting any existing export industries while also encouraging new
industries that can become active in Ghana. An oil fund is meant to invest a portion of any oil revenues for future use when oil production declines or disappears. Since production of Ghana’s offshore fields is only predicted to last 20 years, an oil fund that cannot be pillaged by a corrupt political leader will be critical to maintaining government investment in infrastructure and economic diversification. A general government spending fund, which is to receive the smallest portion of petroleum revenues, is important to use for investment in capacity and institutional improvements to the government and regulatory agencies themselves. This includes increasing the staff and expertise in important institutions such as a petroleum royalty and taxation agency, an environmental protection authority that will oversee oil development, and an organization responsible to Parliament for distribution and spending of all petroleum revenues.

VII: Conclusion

Ghana is clearly at a cross roads and the direction it goes in over the next decade in managing the petroleum industry is highly uncertain today. While the relatively strong economy and democracy of Ghana give the country hope that it will not succumb to the resource curse, the incredible corrupting powers of petrodollars does not guarantee any success. Thus, the foundation of this study’s policy prescription for Ghana’s best chances at avoiding the resource curse and Dutch disease is the creation of a coalition of stakeholders from civil society up to Parliament to incentivize the privatization of GNPC to domestic entities and for the government to then implement a royalty and tax scheme over the petroleum industry as is done in here in the US and Europe. Only then, when the government and particularly the executive branch, is no longer the resource owner, will
all the institutions necessary to sustain the petroleum industry and the domestic economy be implemented.

The policy prescription, which involves all stakeholders at various degrees and levels of implementation, can be summarized by the following Ten-Point Plan:

**Privatization**
- Encourage grassroots efforts to pressure the legislative and executive branches to privatize GNPC.
- Introduce a privatization and royalty/tax scheme in Parliament to undergo a complete privatization of GNPC with 60 percent domestic ownership and 40 percent international ownership.
- Should privatization encounter resistance in the government, utilize civil society (free press, community leaders, business owners, NGOs, and outside investors) to make privatization a campaign issue for the 2012 Presidential and Parliamentary elections.

**Transparency**
- In additional to privatization, develop a policy framework to regulate petroleum industry activities (e.g. environmental and labor policies) that public included civil society and parliament.
- Publicize any and all documents that relate to transactions between all petroleum industry stakeholders, including but not limited to, the government, private companies, foreign investors, and civil society.
- Disclose all petroleum agreements and licensees.
- Extend the existing EITI process for the gold industry to the petroleum industry.

**Revenue Collection and Expenditures**
- Establish a Petroleum Tax unit in the nation’s Internal Revenue Service and staff it with the sufficient capacity to monitor and enforce all taxable parties involved in the petroleum industry.
- Establish a Petrodollar investment plan that involves investments into critical infrastructure (e.g. roads, schools, hospitals, etc.), non-petroleum sectors to diversify the economy, and general discretionary fund which is all controlled by agencies which report to the legislative and executive branches.
- Establish an oil fund that can only be tapped into in times of strictly defined economic crises or at the point of oil production decline.
This Ten-Point Plan policy prescription for Ghana represents a road map for successfully managing the nation’s soon-to-be largest and most prolific industry. It is also, most importantly, a means for Ghana to become one of the only economic success stories of West Africa, as opposed to another cautionary tale of the resource curse, Dutch Disease and Obsolescing Bargaining Theory. Privatization is not an easy obstacle to overcome considering the incentives in place to maintain the status quo of a nationalized GNPC. However, should it be accomplished, it will naturally incentivize all branches of Ghana’s government to work together in successfully building all the necessary institutions to manage and regulate the petroleum industry for the benefit of all Ghana’s people for generations to come. Should privatization not occur, the near term influx of corruptive petrodollars could very easily turn the tides against Ghana’s economic and democratic progress and put the nation on a path akin to Nigeria and Chad. Another impoverished, dysfunctional, corrupt and war-torn nation on the African continent is not in the interest of any nation on earth. Let’s hope privatization is a success.
VIII: References


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