REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
02-11-2012	FINAL	

4. TITLE AND SUBTITLE

Leveraging Agriculture to Break Nigeria's Oil Curse

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

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5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Joint Military Operations Department
Naval War College
686 Cushing Road
Newport, RI 02841-1207

8. PERFORMING ORGANIZATION REPORT NUMBER

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

For Example: Distribution Statement A: Approved for public release; Distribution is unlimited.
Reference: DOD Directive 5230.24

13. SUPPLEMENTARY NOTES A paper submitted to the Naval War College faculty in partial satisfaction of the requirements of the Joint Military Operations Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.

14. ABSTRACT

The term "oil curse" is used to describe how countries blessed with great natural petroleum wealth seem to have problems translating that blessing into higher performing economies, especially when compared to countries not similarly gifted with this resource wealth. An analysis of the Nigerian economy reveals a textbook case of the oil curse, primarily manifested through "Dutch Disease" which has decimated Nigerian agriculture. A means of breaking the oil curse is economic diversification away from oil-related activity. This paper contends that the agricultural sector has the potential to lead this diversification effort; consequently, it is argued here that the Nigerian government should encourage growth and development in this sector by supporting smallholder farmers, increasing productivity, and improving rural infrastructure. This work delves into these three areas, analyzes the importance of each to the rejuvenation of agriculture, and draws conclusions about the most pressing needs the Nigerian government should address. The paper concludes by recommending a more stable policy towards smallholder farmers; a restructuring of the government's fertilizer distribution system to enhance productivity; and an increase in resources devoted to rural roads, the foundation of rural infrastructure.

15. SUBJECT TERMS

Nigeria, oil curse, Dutch Disease, agriculture, smallholder farms, productivity, fertilizer, rural infrastructure, rural roads

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Chairman, JMO Dept
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED		25	19b. TELEPHONE NUMBER *(include area code)* 401-841-3556

NAVAL WAR COLLEGE
Newport, R.I.

LEVERAGING AGRICULTURE TO BREAK NIGERIA'S OIL CURSE

by

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Lt Col, USAF

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

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Signature: _____

02 Nov 2012

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Paper Abstract

The term "oil curse" is used to describe how countries blessed with great natural petroleum wealth seem to have problems translating that blessing into higher performing economies, especially when compared to countries not similarly gifted with this resource wealth. An analysis of the Nigerian economy reveals a textbook case of the oil curse, primarily manifested through "Dutch Disease" which has decimated Nigerian agriculture. A means of breaking the oil curse is economic diversification away from oil-related activity. This paper contends that the agricultural sector has the potential to lead this diversification effort; consequently, it is argued here that the Nigerian government should encourage growth and development in this sector by supporting smallholder farmers, increasing productivity, and improving rural infrastructure. This work delves into these three areas, analyzes the importance of each to the rejuvenation of agriculture, and draws conclusions about the most pressing needs the Nigerian government should address. The paper concludes by recommending a more stable policy towards smallholder farmers; a restructuring of the government's fertilizer distribution system to enhance productivity; and an increase in resources devoted to rural roads, the foundation of rural infrastructure.

INTRODUCTION

The 1970s were boom times for oil exporting countries. Between 1970 and 1980, the Organization for Petroleum Exporting Countries (OPEC) succeeded in increasing the price of oil tenfold to $30 per barrel. Oil producers were swimming in windfall revenues and spending at record rates. OPEC domestic spending increased by no less than 50 percent a year between 1974 and 1979.[1] For poorer oil countries, these revenues promised to be a blessing that would allow them to fast track economic development. However, all was not as great as it seemed, at least according to Juan Perez Pablo Alfonso, Venezuela's oil minister in the early 1960s and the co-founder of OPEC. In 1975, during the surge in global oil prices, he voiced a contrary opinion of the "blessing" of oil when he complained, "I call petroleum the devil's excrement. It brings trouble…waste, corruption, consumption, our public services fall apart. And debt - a debt we shall have for years."[2] As the 1980s and 1990s progressed, Alfonso's quote turned out to be prescient, and the "oil curse" was born.

Nigeria, Africa's largest oil producer, provides a textbook case of the oil curse. The riddle Nigeria has been attempting to solve is how to escape this curse. The answer is neither simple nor straightforward. For Nigeria, an indispensable aspect of shaking the curse is to increase economic diversification, thereby providing an alternative to vagaries of oil-related economic activity. Nigeria's once burgeoning agricultural sector could hold the key. The revitalization of this sector could be leveraged as the primary means of increasing economic diversification, subsequently diluting the impact of oil on Nigeria's economy. In order to encourage needed development in the agricultural sector, the Nigerian government should focus on supporting smallholder farms, increasing productivity, and improving rural infrastructure.

THE CURSE OF OIL

Before delving into a discussion of Nigeria's agricultural sector, it makes sense to spend some time discussing the nature of the oil curse and its impacts on Nigeria. One must understand how and why the oil curse manifests itself and its insidious effects on the Nigerian economy in order advance practical remedies.

Richard Auty first used the term resource (oil) curse in 1993 to describe how countries blessed with great natural resource wealth seem to have problems translating that blessing into higher performing economies, especially when compared to countries not similarly gifted with this resource wealth.[3] When discussing the impact of the oil curse on a country's economic diversification, one must understand "Dutch Disease." *The Economist* coined the term in 1977 in an attempt to explain the impacts of North Sea natural gas exports on the Dutch economy.[4] Specifically, as the Dutch began to reap revenues from natural gas exports, they were surprised to discover that their manufacturing sector began to underperform. The cause of this phenomenon was the fact that this robust rise in the value of natural gas exports increased the country's real exchange rate, thus resulting in an appreciation of Dutch currency. This made Dutch manufacturing exports more expensive and imports cheaper which, subsequently, had detrimental impacts on the entire manufacturing sector. Quite simply, Dutch Disease has come to be defined as the process by which a surge in a country's natural resource sector causes a rise in the prices of domestically-produced agricultural and manufactured goods. This makes these goods less competitive both in the domestic and global markets and, if unchecked, will result in the decline of domestic agricultural and manufacturing sectors.[5]

As the Dutch Disease advances and domestic sectors like agriculture and manufacturing decline, oil surges to dominate not only export revenues but also total government revenues. As a country comes to have a greater reliance on the export of oil, its budgets, and economy at large, are increasingly at the mercy of the price swings of this commodity on the global market. When oil prices rise, governments tend to increase their spending to match the surge in income. However, when oil prices decrease, these governments are faced with the prospect of either decreasing spending, sometimes dramatically, or borrowing to make up the difference. Add this to the fact that most developing, oil-dependent economies find it much easier to borrow from international lenders when the price of oil is high, essentially using windfall revenues as collateral.[6] In the end, these countries end up borrowing during good times and bad, resulting in a borrowing cycle that never ends and debt as far as the eye can see. Needless to say, none of this enhances macroeconomic stability.

With the theoretical underpinnings of the oil curse understood, one can better analyze the role the curse has played in Nigeria's economic development over the past 40 years. At the end of its civil war in the 1970, Nigeria emerged as a major oil producer. The 1970s were boom times for oil producing countries. From 1969 to 1977, the volume of oil Nigeria produced grew by 380 percent. Over these eight years, the Nigerian government's total revenues rose from $4.9 billion to $21.5 billion, after accounting for inflation. At the same time, government spending rose from about 10 percent to more than 25 percent of the Nigerian economy.[7] While Nigeria's oil sector was skyrocketing in the 1970s, it is here one can detect the onset of Dutch Disease. Before the late 1960s, different regions of the country did very well in the production and export of agricultural products. However, the 1970s

witnessed the abandonment of this once vibrant sector as all focus turned to the production and export of oil.[8] Agriculture represented 48 percent of GDP in 1970. By 1980, that had been more than halved to just 20.6 percent.[9] Michael L. Ross, in his book *The Oil Curse: How Petroleum Wealth Shapes the Development of Nations,* asserts there is no doubt Dutch Disease has been a factor in Nigerian economic development and, more specifically, the demise of agriculture.[10] While Dutch Disease was crippling agriculture, oil was taking over the Nigerian economy. This is evident in the significant swings in per capita Gross Domestic Product (GDP) that accompanied fluctuations in global oil prices over the past 40 years. In 1970, per capita GDP was US$202. By 1980, it peaked at US$1,233; however, by 1995, it had plummeted back down to US$275. By 2010, it was back up to US$1,240, essentially the same as it was 30 years before in 1980.[11] Oil's dominance of the Nigerian economy is now unquestioned, and there is no doubt Nigeria is firmly in the grip of the oil curse. Currently, oil accounts for more than half of the country's GDP, approximately 85 percent of government revenues, and over 90 percent of export revenues.[12] Nigeria is finally attempting to deal with its oil curse and the need to diversify its economy away from the oil sector. Which sector should lead the way? This paper makes the case that agriculture can and should lead the effort.

THE REVITIALIZATION OF AGRICULTURE

To break the oil curse, agriculture is the prime candidate to lead economic diversification away from oil-related economic activity. Agriculture once dominated the Nigerian economy and can assume a prominent role once again. From 1950 to 1970, while economic growth was not outstanding, it was steady and commendable. From 1950 to 1960, agriculture accounted for 60-70 percent of total exports.[13] By the early 1960s, agriculture

accounted for well over 80 percent of exports, approximately 65 percent of GDP, and about 50 percent of government revenue.[14] During this decade, Nigeria realized impressive GDP growth, averaging 3.1 percent annually.[15] Then, with the boom in oil export revenues in the 1970s, everything changed. Agricultural exports collapsed, and the demise of the sector was rapid. From 1970-74, agriculture exports fell from about 43 percent of total exports to just over 7 percent. By 1996, agriculture accounted for only two percent of exports. Nigeria became a net importer of some commodities it formerly exported.[16] By 2005, agriculture was a mere 0.2 percent of total exports.[17] In short, the ascendancy of oil in the '70s and its continued dominance short-circuited the natural growth, development, and modernization of Nigeria's agricultural sector, and it has remained in a state of arrested development ever since. Renewed development in the agricultural sector can be expected to decrease oil's grip on the Nigerian economy and dampen the swings in per capita GDP. Agriculture can be the steadying influence it was before 1970.

There is no reason to believe agriculture's resurgence cannot rescue Nigeria from the oil curse. The country has been endowed with significant agricultural resources that, if properly managed and developed, could result in a robust agricultural sector. Not only would a revival in agriculture diversify economic activity away from oil, it would also directly contribute to poverty reduction. Additionally, it would buy valuable time for Nigeria to develop its manufacturing and service sectors. To build the foundation for a sustained agricultural renaissance in Nigeria, the government should, first, focus on smallholder farms. These farms are home to the majority of the Nigerian workforce and the lion's share of Nigeria's poverty. Second, once the government has re-energized smallholder farms, increasing productivity will further increase output and profitability, in addition to being

necessary if Nigeria wants to progress past its reliance on smallholder farms to more efficient large-scale operations. Finally, improvements to rural infrastructure will build on productivity gains while having multiplier effects for the rest of the economy.

FOCUS ON SMALLHOLDER FARMS

An unrelenting focus on Nigeria's smallholder farms is essential to the development of the agricultural sector and carries with it the added benefit of directly contributing to the reduction of Nigeria's grinding poverty. The criticality of smallholder farms in the development of the agricultural sector merits attention first. Throughout its history, smallholder farms have dominated Nigeria's agricultural sector. In a traditional development model, as a country's development and industrialization progresses, smallholder farms invest in ever-increasing amounts of labor-saving devices. Labor required by these farms would decrease even as productivity enhancements continued to increase output. The displaced, and relatively cheap, labor would move into the manufacturing sector which would allow that sector to take off. Smallholder farms, in a quest for economies of scale, would gradually consolidate and develop into medium- and large-scale commercial operations. This is not what has happened in Nigeria. Oil's hijacking of the Nigerian economy short-circuited the natural development arc of Nigeria's agricultural sector. Forty years after the start of the oil boom, smallholder farmers still produce about 90% of Nigeria's food.[18] Nigeria's agricultural sector has essentially been in a state of arrested development for the past forty years. Because of that, Nigerian agriculture simply cannot leap frog forward to large-scale, highly efficient agricultural endeavors. Daramola et al., in their study "Agricultural Export Potential in Nigeria," supports this concept by concluding,

> It is very clear from Nigeria's past experience, generation of employment, infrastructure conditions, and lessons learned from other developing countries

> that its agricultural export growth should be predicated on efficient small farms. The small farm can later develop into medium- and large-scale commercial enterprises by which time the business environment will be in a better position to support them. The experiences of large-scale operations that have failed in Nigeria are instructive in this respect.[19]

Additionally, a study by the International Food Policy Research Institute (IFPRI) titled *Trends and Drivers of Agricultural Productivity* in Nigeria concludes that the relationship between farm size and productivity in Nigeria suggests that small scale farms are efficient and takes note of the low productivity of large scale farms.[20] Another study from IFPRI, titled *Options for Enhancing Agricultural Productivity,* goes one step further by suggesting that the forming of groups or cooperatives of smallholder farmers could increase productivity and capacity, allowing them to pool resources and acquire large production and processing equipment that could be rented out to members and non-members.[21] The bottom line is that, despite the view by some policymakers that smallholder farmers are "backward" or "un-modern," smallholder farms still represent the most efficient way to produce food in Nigeria. Consequently, these smallholder farms should be leveraged to accelerate the continued development of the agricultural sector.

While smallholder farms, which produce 90 percent of Nigeria's food, may be the most efficient way to produce food in today's Nigeria, they are also at the nexus of the country's grinding poverty. Despite the enormous oil wealth, Nigeria is essentially a poor country with more than half its population living below the poverty line and 35 percent living in extreme poverty. Add to this the fact that Nigeria's poverty index remains on a steady rise and the world economic index places Nigeria among the category of the poorest countries on the planet.[22] Unfortunately, for the majority of the population, few if any benefits from a capital-intensive oil industry have been realized, especially by the rural poor. No less than 80 percent of the rural population lives in poverty.[23] Agriculture is the largest contributor to

the well-being of the rural poor, providing a livelihood for no less than 70 percent of the total labor force and a stunning 90 percent of the rural labor force. Additionally, the agricultural sector has the highest poverty rate (67 percent) among all occupations in Nigeria.[24] What better way to address poverty than to focus efforts on the portion of the population most affected—the smallholder farmer. In general, the contribution of agricultural growth in poverty reduction has been well-documented over time.[25] Moreover, there are benefits to non-agricultural sectors as well, especially in developing countries. Specifically the growth of the agricultural sector not only reduces poverty in that sector but also generates demand in non-agricultural sectors. In the case of Nigeria, as smallholder farmers are benefitted by a focus on the revitalization of the agricultural sector, the economy at large benefits as well since agriculture has linkages to the manufacturing and service sectors. More money in the pockets of the rural poor results in more money being spent by the rural poor. This increases aggregate demand in the country across all sectors, which means that the poverty reduction effects should, in the long run, spillover from agriculture to other sectors of the economy.

Overall, there is no doubt that smallholder farms form the backbone of the Nigerian agricultural sector. While the country may desire more large-scale enterprises, smallholder farms are Nigeria's current reality. Additionally, these smallholder farmers are mired in poverty. Therefore, making the smallholder farmer the centerpiece of the program to revitalize the agricultural sector is not only essential to achieving the next stage of development but is also crucial to reducing poverty among the rural poor. Simply recognizing that the smallholder farmer holds the key to agriculture's comeback is a critical first step; however, Nigeria must also focus on ways to make him more productive.

INCREASING PRODUCTIVITY

If Nigeria wants to eventually progress past its reliance on smallholder farms to more efficient medium- and large-scale operations, its agricultural sector simply must become more productive. The good news for smallholder farms over the past two decades is that the amount of food they produced increased; the bad news is that this increase has had nothing to do with productivity. Agricultural yields have been falling in Nigeria, not rising. Productivity in this sector has declined over the past twenty years while, internationally, it has been on the rise. At the same time, the quantity of food produced has increased to the point where Nigeria has mitigated its extreme reliance on imports.[26] How does a country increase agricultural production despite declining productivity? It simply places more land under cultivation with more smallholder farmers to work it. In a country where the unemployment rate of those 15-29 years old is estimated to be around 60 percent, the need for more smallholder farmers is not necessarily a terrible thing.[27] It provides opportunities for employment until Nigeria can get its manufacturing and service sectors moving. Moreover, there is continued room for this type of expansion since only 48 percent of the cultivable land is under cultivation, and only one percent is irrigated.[28] In the short term, there are benefits to this mode of increased food production, even in the face of declining or stagnating productivity: more employment opportunity for smallholder farmers; lower food prices; lower cost of living; lower prices for manufactured products that rely on raw agricultural materials; poverty reduction; improved food security; etc. However, in the long term, it is an unsustainable model. With a growing population, there is ultimately a finite amount of land available to feed it. Nigeria's growth path, to this point, has been distinct from other developing countries like India. In India, manufacturing and services were the

vanguard of more traditional economic development with the amount of the workforce in agriculture diminishing with time due to increased productivity in the sector. Conversely, Nigeria's recent growth has occurred with a relatively stable contribution from the agricultural sector. From 1999-2006, there was actually a shift in labor force into agricultural employment consistent with the emphasis on producing more food without a corresponding boost in productivity.[29] If the goal is to produce more food in the near term, productivity is not needed if one has the available human capital and land to do it. At some point, Nigeria will want to take the next step toward an economy more reliant on the manufacturing and service sectors. To do that, labor will need to move from smallholder farms into these sectors. The only way that can happen, without a negative impact on food production, is for Nigerian agriculture to become more productive. While there are a myriad of factors that affect agricultural productivity, none poses a larger issue for Nigeria than the use of fertilizer. It is a threshold requirement for boosting productivity that must be addressed as soon as possible.

Nigeria's use of fertilizer to enhance productivity has been miserable. The country is ranked 11th in the world in terms of arable land, but it is ranked 116th out of 138 farming nations in its use of fertilizer.[30] There is no statistic that is more relevant to Nigeria's current lack of agricultural productivity than this. The failure to increase the use of fertilizer has generally been a policy failure. Since the 1980's, recognizing that fertilizer use is at the crux of improving the productivity of its farms, the Nigerian government has taken on the responsibility of purchasing and distributing fertilizer. While the government has increased its supply nearly every year, it has not kept up with the demand of farmers. Because demand outpaced supply, middlemen in the distribution network were able to illegally increase the

price of fertilizer and pocket the difference between the government price and the price farmers were willing to pay, a practice known as "rent seeking." The government also implemented a price subsidy to control the costs of fertilizer; however, it has steadily reduced this subsidy over time. The result is that government policies have been working at cross purposes. Government procurement policy sought to stimulate the use of fertilizer while unchecked rent seeking and a pricing policy that reduced subsidies increased the cost of fertilizer to farmers.[31] Remember, smallholder farmers produce 90 percent of Nigeria's food. These farmers have little to no ability to absorb these price increases. As a result, as the cost of fertilizer increases, farmers simply buy less. The decreased use of fertilizer also decreases yields which decreases productivity. In order to produce the increasing levels of food required by Nigeria while productivity is decreasing, more land must be brought into production to be farmed by more smallholder farmers. Without a dramatic move from the government to break this circle, there is little hope for increased productivity in the agricultural sector. The government is fully aware of this dilemma. President Goodluck Jonathan has publicly admitted that only 11 percent of government-purchased fertilizer is reaching Nigerian farmers. The remainder is hoarded by cartels or moved across Nigeria's porous borders.[32] Add to this the fact that there has been no domestic production of fertilizer in Nigeria since the early 2000s. Between the late 1980s and mid-1990s, domestic fertilizer production varied between 46 to 60 percent of the aggregate supply.[33] Now, it is zero, and this adds yet another layer of complexity to what is the most fundamental aspect of increasing productivity—the widespread use of fertilizer.

In summary, while short term lack of agricultural productivity is not necessarily damaging to Nigeria's growth, it must be addressed if the country hopes to move past the

smallholder farm stage of development and create a vibrant agricultural sector that can help diversify the economy away from oil. Increased productivity will increase farm wages, further reduce the incidence of poverty, and increase food security.[34] While there is no more basic component to increasing agricultural productivity than the use of fertilizer, the government has failed to get to more than 11 percent of the fertilizer it procures to its farmers. There are many other means to enhance productivity; however, until the government fixes its fertilizer distribution system, the chances for increased agricultural productivity will be slight. One area that could help enhance fertilizer distribution, and is a significant contributing factor in productivity, is Nigeria's rural infrastructure.

IMPROVING RURAL INFRASTRUCTURE

Assuming the government renews its focus on the smallholder farmer and is able to adequately support him with fertilizer to increase yields and productivity, his produce must still be able to be transported from the farm site. Rural infrastructure plays a pivotal role in connecting farmers to markets, storage facilities, production areas, and processing zones. In the case of Nigerian agriculture, improvements in rural infrastructure would go a long way to increasing the profitability and productivity of its smallholder farmers. There are numerous aspects of rural infrastructure: health services, water supply, electricity, education, irrigation, etc. All of these aspects are important to the development of rural Nigeria. However, there is one component of rural infrastructure that supports all others—roads.

The development of Nigeria's rural roads is the linchpin of Nigeria's rural development and, hence, vital to modernizing its agricultural sector. When discussing the lack of rural roads, one typically focuses on what farmers will not be able to move out of these rural areas. Even if smallholder farmers are able to move some of their surpluses from

the farm site, poor infrastructure still comes at a cost. First, deteriorating roads and lack of storage facilities means that a farmer's product will not be able to move expeditiously throughout country. Consequently, the farmer's goods cannot access markets at any significant distance from his village, which limits his distribution potential. Second, transporting goods over shoddy roads is more expensive than moving goods to market on well-maintained infrastructure. This cost must be borne by the smallholder farmer who already has little ability to absorb these costs. Inevitably, this drives up consumer prices. The difficulty in selling at elevated prices results in longer storage which can result in spoilage. As one might guess, spoilage is a significant issue in Nigerian agriculture. Post-harvest losses in Nigeria average between 20 and 40 percent depending on the crop, about the highest in the world.[35] To drive this point home, the Nigerian Rural Access and Mobility Project (RAMP), on behalf of the Ministry of Agriculture, reported some startling statistics in November 2011. It concluded only 15 percent of Nigeria's secondary and tertiary roads were "motorable." This came only 72 hours after the Deputy Senate President urged the government to declare a national emergency on Nigerian roads. Not surprisingly, rural roads, which constitute 67.7 percent of the Nigerian road network, were reported to be most significantly impacted by this neglect. The National Coordinator of RAMP stated that farmers continued to face the challenges of "high transport cost, long travel time, huge post-harvest losses and a high rate of auto accidents."[36] To address this crisis, RAMP is currently spearheading rural road development in two states with noteworthy results. Additionally, on October 20, 2012, the World Bank announced it had approved US$170 million to aid in the Nigerian government efforts to modernize its agriculture by upgrading roadways in four states. The World Bank Director of for Sustainable Development, Africa Region stated,

"diversifying Nigeria's economy beyond its oil sector is vital to reducing poverty in the country's rural communities."[37] It seems conclusive that if Nigeria can improve rural roads it will ultimately serve to open up markets for the smallholder farmer. This will drive down costs which will make him more productive and profitable. With that said, the discussion about moving products out of rural areas is just half the story. Just as important, these roads will facilitate the movement of information, goods, and services into the rural sector to the smallholder farmer.

Rural roads are important for both what they move out of and into the village. Without serviceable rural roads, critical productivity-enhancing agricultural research, extension services, technology, modern equipment, fertilizer, etc. cannot move into these rural areas, and this directly affects crop yields. As a matter of fact, these rural roads are how nearly every aspect of infrastructure improvements moves into rural areas, to include health services, electricity, education, irrigation technology, etc. It is the reason rural roads are so fundamental to the continued development of Nigerian agriculture. Without these roads, very little else can happen. More specifically, lack of a serviceable rural road network essentially puts the smallholder farmer on a rural island, which means he will never be much more than a subsistence farmer. Overall, two-thirds of Nigeria's population lives in rural areas, and these roads are essentially the lifelines that connect them to the rest of the country and, ultimately, the world. Unfortunately, rural infrastructure in Nigeria has been neglected for far too long. While the government has paid much attention the urban areas, its rural road network is one of the least developed in sub-Saharan Africa.[38] Quite simply, if Nigeria expects to continue to expand its agricultural sector via productivity enhancements, investments in rural roads will have to increase. A study by B. Segun Fakayode et al., titled

An Economic survey of Rural Infrastructures and Agricultural Productivity Profiles in Nigeria, agrees with this premise and states, "attention to rural infrastructure is highly indispensable for high level of agricultural productivity in the state of Nigeria as a whole."[39] Rural roads are the cornerstone to this rural infrastructure which is so vital to increasing the productivity of the smallholder farmer.

In conclusion, while there are numerous, and very important, aspects to improving rural infrastructure, nearly all are predicated on the existence of serviceable rural roads. Recent RAMP statistics highlight the magnitude of the challenge Nigeria faces. These roads are literally the foundation upon which all rural infrastructure is built. They are critical to the smallholder farmer in that they provide him access to markets for his goods. Better roads decrease transportation costs, which make these farmers more profitable and productive and have the added benefit of holding down consumer prices for basic staples for the population as a whole. All of this reduces the incidence of poverty and increases food security. At the same time, these roads serve as a conduit to move productivity-enhancing information and technologies into rural areas. This also makes the smallholder farmer more profitable and productive, puts downward pressure on consumer prices, and decreases poverty in the nation at large. At the end of the day, these roads can also be leveraged by the manufacturing and service sectors which means they will have an impact way beyond the agricultural sector. Rural roads can truly be economic multipliers.

CONCLUSIONS

In order to effectively prescribe remedies for Nigeria's economic woes, one must understand the cause of the country's current fiscal condition. As such, a review of the theoretical underpinnings of the oil curse was essential to understanding the impact it can

have on an economy. A subsequent examination of the Nigerian economy over the past 40 years can only lead one to conclude that Nigeria represents a classic case of the manifestations of the oil curse. More specifically, it is quite clear Dutch Disease has ravaged its agricultural sector. Given the realization that Dutch Disease was brought about by the impacts of the oil curse, there are ways in which the curse can be mitigated. The primary means is by diversifying the economy away from oil-related activity. Before the discovery of oil in Nigeria, the agricultural sector drove steady growth. Despite decades of neglect, it can do so again. The country has been endowed with significant agricultural resources which could result in a robust agricultural sector. In order to revitalize the agricultural sector, there are some basic areas that must be addressed.

First, smallholder farms are the backbone of the Nigerian agricultural sector. Currently, they are the most effective way for Nigeria to produce food and, as such, must continue to be the centerpiece of efforts to develop the agricultural sector. Smallholder farmers are also at the nexus of Nigeria's crippling rural poverty; therefore, focusing on the smallholder farmer is good not only for the agricultural sector, but also for poverty reduction.

Second, the productivity of the smallholder farmer must be addressed more effectively if the country hopes to create a vibrant agricultural sector that can help diversify the economy away from oil. There is no more basic component to increasing agricultural productivity than the use of fertilizer, yet only 11 percent of the fertilizer the government procures gets to its farmers. This depresses yields which stymies productivity. The complete lack of a domestic source of fertilizer only complicates the policy issues. There are many other means to enhance productivity; however, until the government fixes its fertilizer distribution system, the chances for increased agricultural productivity will be slight.

Third, in Nigeria, improving rural infrastructure is first and foremost about building and repairing rural roads. They are the means by which smallholder farmers move surpluses to markets and the means by which productivity-enabling information and technologies move into rural areas. Without these roads, smallholder farmers never get more productive; they forever remain smallholder farmers. Without increases in smallholder farmer productivity, the agricultural sector does not modernize. Without modernization in the agricultural sector, oil's dominance will continue unabated, and the oil curse will continue to afflict Nigeria.

RECOMMENDATIONS

- Nigeria must resist the temptation to fast track its agricultural development by abandoning what some consider "backward," yet efficient, smallholder farms in lieu of large-scale agricultural enterprises which, to date, have been ineffective in Nigeria. The government must make it clear that: (1) the road to national agricultural development runs through smallholder farms and (2) this is an enduring commitment that will not change depending on what administration is in power.
- Nigeria must completely revamp and rebuild its fertilizer distribution program. It is a program rife with criminal activity and its failure is seriously inhibiting the productivity of smallholder farmers. Also, the government should make every effort, through its industrial policy, to re-establish a domestic source of fertilizer.
- When it comes to rural infrastructure, rural roads must be seen as the "first among equals." Nigeria must spend more money on building these vital lifelines to the rural areas that constitute two-thirds of its population and less money on urban areas that have historically been the primary beneficiaries of infrastructure spending. A good first step would be to quickly expand RAMP beyond its pilot programs in just two states.

NOTES

[1] *The Economist*, "The Devil's Excrement: Is Oil Wealth a Blessing or Curse?" May 22, 2003, accessed September 30, 2012, http://www.economist.com/node/1795921.

[2] Ibid.

[3] Richard M. Auty, *Sustaining Development in Mineral Economics: The Resource Curse Thesis* (London: Routledge, 1993).

[4] Michael L. Ross, *The Oil Curse: How Petroleum Wealth Shapes the Development of Nations* (Princeton, NJ: Princeton UP, 2012), 47.

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[7] Ross, *The Oil Curse*, 27.

[8] Robert O. Dode, "The Political Economy of the Resource Curse and the Niger Delta Crisis in Nigeria: Matters Arising," *Afro Asian Journal of Social Sciences*, vol 2, no. 2.1 (2011): 2, accessed October 7, 2012, http://www.academia.edu/974439/THE_POLITICAL_ECONOMY_OF_RESOURCE_CURSE_AND_THE_NIGER_DELTA_CRISIS_IN_NIGERIA_MATTERS_ARISING.

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