Dutch Disease in Africa: A Case Study of Nigeria and Chad

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Originally coined in 1977 by The Economist, the term Dutch disease refers to the decline in the manufacturing sector of the Netherlands due to the discovery and exploitation of natural gas deposits in the 1960s. Now it is often used to refer to the detrimental effects of the discovery of any valuable natural resource that causes declines in other sectors of a nation’s economy. Generally, Dutch disease affects the economy of a country in two ways: first by causing a resource movement effect from one sector of the economy to another, and second, by inducing a spending effect that appreciates the real exchange rate of the country’s currency.

In Africa, there is a looming threat of Dutch disease due to the substantial natural resource wealth of many of its regions. Nigeria began extracting oil in the late 1950s and since then the oil industry has dominated the economy and given it much needed boosts. However, price shocks in oil and recessions have severely damaged its economy, leaving it at the mercy of the market. Now Chad has begun the extraction of oil as well, and needs to take careful measures to prevent against Dutch disease due to poor planning for the use of its oil revenues. Policies must be made in both Nigeria and Chad to successfully support the exploitation of their oil while simultaneously boosting other sectors of their economies as well. Throughout this paper we will analyze the factors that can lead to or have led to Dutch disease in Nigeria and Chad. This will be accomplished in three parts: the first part will explore and explain the theory behind Dutch disease; the second and third parts will look at the impact of economic policies regarding oil in Nigeria and Chad, respectively.

An Introduction to Dutch Disease

The resource movement effect is a shift of factors of production from non-booming sectors to booming sectors. This tends to include capital, as investments in the booming sector are immediately lucrative, as well as labor, which is better compensated in the booming sector as a result of higher demand. The transfer of capital and labor can have profound effects on the sectors that lost these resources, causing them to decline, and in many cases, fail outright. As the cost of production factors escalates due to the effect of resource movement, those sectors competing for affected resources, especially the manufacturing sector, tend to lose their competitive edge.

The second and ultimately more potentially hazardous effect is the spending effect. The spending effect causes an increase in spending in non-tradable goods, usually construction. The increased demand then serves to increase the price. However, the price for these goods is often set internationally, preventing such an increase. This results in an increase...
with Nigeria. By preventing further corruption, Nigeria can use its resource wealth to maintain positive economic gains for years to come.

The Case of Chad: Potential for Dutch Disease
Chad now finds itself in a situation resembling the beginnings of Dutch disease in Nigeria. Like Nigeria, Chad is a country that has been involved in ceaseless fighting and has only showed some political stability quite recently. It is a subsistent agricultural economy with little manufacturing, high poverty rates, and has been ravaged by fighting, not only internally, but also on its eastern border with Darfur. Yet now, having the opportunity to exploit its natural resource wealth, Chad is looking to sell its oil reserves for immense profits. It is a chance for Chad to gain more political stability, lessen poverty, and kick start a lagging industrial sector. However, steps must be taken to prevent Chad from falling into the same trap that Nigeria fell into, like the Netherlands before them.

Chad has long known about its natural resource wealth, but until recently has been unable to exploit it. Following three decades of civil warfare lasting until the 1990s, and constant political uprisings ever since, Chad is thus far poorly developed, ranking 170th out of 177 developed countries according to the Human Development Report. The infant mortality rate is at a staggering 12.4% and the real GDP per capita is under 1,500 U.S.-adjusted dollars. With crude oil reaching over $100 per barrel, there are great incentives to invest in the extraction of its reserves.

The recently-established political stability under President Idriss Deby has provided Chad with an opportunity to begin exporting its massive reserves of oil, estimated at around 1.5 billion barrels. In late 2000, the World Bank began financing a vast and expensive oil project in the southwestern Doba region of Chad, which included the construction of a 640-mile, $3.7 billion pipeline through neighboring Cameroon. This extensive project is expected to produce over 1 billion barrels of oil over twenty-five years. With so much at stake, the potential for disaster is that much greater.

Despite all these threats to Chad’s success, the oil project may be its best shot at escaping a systematically low grossing domestic product (GDP).

The dangers facing Chad are numerous, and the World Bank is aware of this. When chartering an agreement to export the oil reserves from Chad, it took care to arrange a contract that would preserve the earned windfall revenues. Specifically, 70% of Chad’s annual revenues will go toward infrastructure, education, health, and rural development. This agreement reflects some of the more successful policies that countries like Norway and Chile have followed. By transferring revenue into non-oil industries and infrastructure, the government can help prevent the deindustrialization of manufacturing sectors in its economy. However, an appreciation in the value of currency could still become a detrimental factor for exports. Fortunately for Chad, most of their industries produce only goods sold internally, and are not actually exported to the international...
market. Hopefully any moderate decrease in firms’ competitiveness will not hurt their industries too much.

Another potential concern is that of corruption in Chad. President Deby won what many consider to have been a questionably fair election. In 2005, Transparency International’s Corruption Perceptions Index rated Chad as the most corrupt country of those surveyed, with a score of 1.7 out of 10 (lower being more corrupt). This begs the question of what measures are being put in place to prevent corrupt officials from taking advantage of Chad’s lucrative oil situation. Competing military forces in the region will most certainly want to claim 2008’s expected $1.5 billion in profits for themselves.

President Deby has already had to break contracts with the World Bank to pull funds for defense spending. The World Bank was forced to freeze accounts held in London in order to prevent the complete draining of designated funds. At the moment, Deby and the World Bank have reached an interim agreement, but how long the World Bank will be able to prevent further access to the funds is subject to debate. Thus, it is important that all agreements are strictly adhered to and observed by independent watchdog groups, particularly because Chad’s economy is already unstable and susceptible to corruption.

Despite all these threats to Chad’s success, the oil project may be its best shot at escaping a systematically low grossing domestic product (GDP). As shown in figure 4, Chad’s GDP remained relatively low and stable at around $1 billion U.S. until 2000 when investment in the Chad-Cameroon oil pipeline began.

**Figure 4: Gross Domestic Product of Chad**

![Gross Domestic Product of Chad](source: World Development Indicators, The World Bank, 2007)

Over 80% of Chad’s population consistently remains below the poverty line. Although massive inflows of money can often lead to Dutch disease, many such as Rodenstein-Rodan or Murphy, Shleifer, and Vishny argue that countries in poverty need these large inflows of capital to escape the constant subsistence levels, similar to those seen in Chad. Though neither side’s argument is conclusive, Figure 2, which shows GDP
in the country’s real exchange rate, and renders the lagging, non-boom sectors even less competitive. Often in poorer countries, these non-boom sectors include agriculture.

The combination of these two effects poses dire consequences for the countries faced with Dutch disease. When the source of the exploited natural resource depletes or the value declines internationally, the country is left without a booming sector and with its remaining economy weakened. Since most of the investments over the course of the booming sector’s duration have been in non-tradable goods, these investments become essentially worthless. In poorer countries, this can often mean a severe decline in agriculture, which may comprise the employment opportunities. The afflicted country has now become worse off than before the resource had been discovered.

However, several countries have successfully combated Dutch disease. The most common approach to protecting against it has been to save the windfalls from resource exploitation to generate a steady source of revenue over time, and reinvest into things such as infrastructure, education, and the manufacturing sector, as well as in the rural sector for poorer countries. By investing in this way, countries are investing in their own future competitiveness. Countries such as Norway, with its Petroleum Fund, and Chile, with its stabilization policies, have demonstrated success in countering Dutch disease. It is important for all countries faced with the looming threat of Dutch disease to take similar steps in protecting against it.

In addition to the threat of Dutch disease are the more common risks of corruption and policies that are overly protective of lagging sectors. These occurrences tend to fall under the broader spectrum of the resource curse. It is important for countries abundant in natural resources to be aware of these equally dangerous problems, as they can cripple already unstable economies. Hence, the need for groups who invest in these countries to ensure the intelligent use of government revenues through contracts and for independent watchdog groups to pay close attention to them.

**The Case of Nigeria: Economic Mismanagement from the 70s, an Overview**

As the economic situation in Nigeria is analyzed it is important to recognize the political and historical context. Until recently, Nigeria’s government consisted of several successive military juntas dating back to the 1970s. During that time, Nigeria was plagued with violence and civil wars. The turbulence of this era led to a mismanagement of oil revenues that can be characterized as a severe form of Dutch disease. Although many were optimistic about the discovery of oil, it ultimately fueled ethnic tensions that peaked in the mid to late 60’s, culminating in civil war.

Upon the end of the war, military rule was solidified and oil became the most important factor in the country’s recovery. By the 1970’s, Nigeria was a world leader in oil production with a “centralized, state dominated economy.” Government control of the oil industry only became
stronger as the world experienced an oil shock that caused a steep rise in oil prices, starting in 1973. High oil revenues led the government to ignore traditionally strong sectors in favor of the oil industry. The end results was that Nigeria’s traditionally strong agricultural sector shrank from 62.9% of GDP in 1960 to a low of 20.6% in 1980, while the oil sector grew from .2% to 29.1% in the same years (see figure 1). The growth from the oil industry, however, was short-lived (see figure 2), as the oil boom subsided in the 1980s.

**Figure 1: Sectoral Share of Economy**

![Sectoral Share of Economy](image)

Source: Fidel Ezeala-Harrison, 1993

**Figure 2: Real GDP Growth Rates: Nigeria 1966-1986**

![Real GDP Growth Rates: Nigeria 1966-1986](image)

Source: Penn World Tables, 2006

With a decline in oil prices and revenue, debt rose sharply throughout the 80s (see figure 3). Unable to deal with its fiscal and economic problems, the government, with the help of the International Monetary Fund, instituted a Structural Adjustment Program (SAP) in 1986. The SAP began liberalizing the economy through measures such as tariff re-
ductions, de-regulation of agricultural prices, and the liquidation and sale of state-owned companies. As a result, fuel prices and exports began to rise. However, by 1992 all IMF agreements had ended, and Nigeria reverted back to a downward spiral.

Figure 3: Total External Debt (US$ Billions)


During the political chaos of 1993, General Sani Abacha assumed control of Nigeria. Under his rule most democratic institutions were dismantled and the regime became increasingly brutal, relying on arrests, detentions, and executions to exert control. At the same time, corruption and mismanagement of the economy were rampant. Some scholars attribute Abacha and a “…narrow circle of cronies…” as the “…central source of economic deterioration…” The deterioration of industry coupled with the rise of an “illicit” economy marked the end of economic reforms.

Dutch Disease in Recent Years
In 1999, military rule in Nigeria formally ended, and a democratic, civilian rule of the country began. Since then, Nigeria has faced a number of challenges, including a heavy reliance upon the oil industry at the expense of other sectors, an aging infrastructure, and regional conflict. These factors threaten to undermine the potential growth of the Nigerian economy and could fuel a second outbreak of Dutch disease.

As discussed earlier, the oil boom of the 70s led the country to neglect its other industries. The dominance of the oil industry still holds in more recent times with oil exports accounting for 90% of total exports and 70-80% of government revenue. While there has been a renewed focus on non-oil sectors since 1999, Nigeria still hopes to expand its oil reserves by an additional 40 billion barrels by 2010. If oil exports disproportionately continue to account for economic growth, it could cause the Naira, Nigeria’s currency, to appreciate which would lead to a higher demand for non-tradable goods and the reduced competitiveness of other
domestic industries.

On the other hand, Nigeria’s agricultural sector has strong potential. However, growth in this sector remains constrained as oil continues to dominate the economy and agricultural productivity continues to be low. Several programs have been implemented to attempt to improve Nigeria’s agricultural sector, and in 2006 agriculture accounted for about 40% of GDP. This renewed focus on agriculture is important to resisting a typical destruction of non-oil sectors by Dutch disease.

In order to boost the effectiveness of non-oil sectors and for that matter the oil sector, Nigeria’s infrastructure must be improved. According to a World Bank report, over two-thirds of Nigeria’s population reside in rural areas where infrastructural services such as water, energy, and telecom come at a relatively high cost compared to more urbanized locations. Over 100 million people do not have access to electricity and only 40% of the population has access to safe drinking water. Telecom services are more available in urban areas, but are virtually non-existent in poor and rural areas. Another significant infrastructure dilemma is the nation’s transportation system. The reduced federal oil revenues in the 80s led to a lack of maintenance and capacity building, which left roads and railroads in a state of disrepair. These infrastructural problems represent a significant barrier to investment, as they increase the cost of doing business, as well as slowing productivity. Nigeria’s infrastructure must be modernized to allow for growth in non-oil and oil sectors alike.

As previously mentioned, regional and ethnic conflict have played a large role in stifling development in Nigeria’s economy. Violence still persists in the region and the government has had to use the military often “...to quell the unrest.” In fact, approximately 50,000 people have been killed in regional conflicts since the return to civilian rule. Regional conflicts and violence threaten to push prices, particularly oil prices, higher. The political chaos in the 90s during General Abacha’s autocratic regime was particularly damaging to the Nigerian economy. If the violence persists, Nigeria’s risks a similar era of corruption and economic turmoil.

Since the return to civilian rule in 1999, Nigeria has been at a crossroads in terms of development. Currently, the government has pledged to make several improvements, including the development of energy infrastructure, improvement of agricultural performance, improvement of transportation infrastructure, and improvement of security throughout the country. If these goals are met, Nigeria faces new prospects for stable growth prospects. But if the government fails to implement these goals, Nigeria could enter the next decade with a turbulent economy reminiscent of the 80s and 90s. To protect against this possibility, independent international organizations should monitor and collaborate

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growth over time versus foreign direct investment, suggests an influence by foreign direct investment on GDP growth.

**Figure 5: Dependence of GDP Growth on Foreign Direct Investment**

![Graph showing dependence of GDP growth on foreign direct investment](image)


This would seem to make the argument for massive amounts of capital to escape poverty traps more credible, if the relation holds. In Chad’s situation, however, this would require more sustained investment over a lengthier period of time. Hopefully, the 25-year oil extraction project will provide just such an opportunity.

Chad has been presented with a golden opportunity. It has the potential to be boosted out of a state of continuous poverty through tactical investment of revenues received from selling its oil reserves. In order to combat the menace of instability, Chad must invest these revenues in infrastructure, education, health, and the other industrial sectors as well as agriculture. By forcing Chad to invest 70% of its revenues in these areas in order to reduce poverty, the World Bank has made it possible to prevent Dutch disease before it starts. Although some of its effects will be felt in other sectors due to a loss of competitiveness in world markets, the benefits gained from the intelligent use of oil revenues will surely outweigh its negative effects. However, it is of the utmost importance that the World Bank strictly continues to enforce these conditions on Chad, and that independent watchdog groups routinely check for corruption. If Chad reneges on its promises to the World Bank, the outcome could be similar to that of Nigeria—an economy that suffered severe losses when oil prices fell. Yet Chad stands to gain greatly if it follows the tried and true methods of Norway and Chile, two countries that saw massive gains from well-governed saving and investment policies. It is necessary for Chad to follow suit with its own policies. With careful control and guidance, Chad should have the tools and knowledge to prevent another case of Dutch disease.

**Conclusion**

Sub-Saharan Africa is generally considered the poorest and most corrupt region in the world. In order to improve the region’s socioeconomic conditions, economists must take a look at the policies that fueled success as well as those that have led to disaster. By comparing Nigeria and Chad,
the former being afflicted with Dutch disease, and the latter a country that
has recently begun exploiting oil; one can see some steps that must be
taken to prevent further Dutch disease in Africa. By failing to invest prop-
perly, these countries tend to turn resource boons into curses.

Often in the case of Africa, issues include security, poor infra-
structure, sensitivity to the market, corruption, and deleterious effects on
their agricultural sectors, and it is important that revenues gained from
oil be reinvested into reversing these trends. First of all, global investors
such as the World Bank and International Monetary Fund must force these
countries to invest revenues in infrastructure, agriculture, health, and
education. Secondly, steps must be taken to ensure that these contracts
are strictly adhered to, including allowing independent watchdog groups
that would help to weed out corruption. Finally, much of the windfall from
oil sales must be saved in case of economic downturns or decreases in
commodity prices. These conditions, if followed appropriately, could help
prevent further Dutch disease in Sub-Saharan Africa.

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Since their implementation in the 1980s and 1990s, Washington Consensus Policies employed by the International Monetary Fund (IMF) and the World Bank (WB) have been the subject of much debate. The majority of academies and policy makers seem to agree on one thing: that the strict implementation of structural adjustment programs (SAPs), such as trade liberalization, privatization, labor deregulation, and austerity policies, in Sub-Saharan Africa have not led to promised economic growth. Even prominent former World Bank employees, Joseph Stiglitz and William Easterly, have taken a stand against the inflexibility and culturally insensitive implementation of SAPs. In Africa, SAPs have been particularly ineffective and, in some cases, have negatively impacted the region today.

Sub-Saharan Africa remains one of the least developed regions of the world with a life expectancy of 47 years, the highest prevalence rates of HIV, and, in 2004, over 40 percent of the population living on less than $1 a day. However, the news is not all bad. The region does surpass other developing areas in some economic indicators, and in 2007, real GDP growth across Africa improved to about 6.5 percent, which is much better than in recent years. On average, inflation has also been held down, and “income volatility has fallen to near-30-year lows.” SAPs have not improved the state of most African nations and greater compliance will not yield better results. One potential solution is to invest in human capital, infrastructure, and a creation of business-friendly conditions to increase economic growth and hopefully, quality of life.

The Instability of SAPs
Not only have the overly rigid and expansive reforms urged by the IMF and WB failed to produce the expected growth and stability, in many areas, widespread anger over the economic downturn and resulting hardships necessarily associated with these policies in the short-term caused rioting and general unrest. In January of 2005, the IMF increased the value of added tax in Niger; which taxes the seller at each stage of production. In March of that year, many people impoverished by the tax organized a massive social mobilization. This forced the government to halt the tax increase on milk, flour, and water and electricity for the majority of the public. IMF urgings for the implementation of SAPs in Nigeria, provoked riots in 2000 against these policies and the then newly-elected president who continued them. Many people were hurt economically by privatization, subsequent price hikes and austerity policies. These actions diverted money from social services...