Why Is Nigeria -- The "Giant of Africa" -- Still Poor?

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This paper begins with a short review of the issues cited by Africa scholars to explain the relative lag in economic development in Sub-Saharan Africa, which includes Nigeria. Next, some vital statistics of Sub-Saharan Africa and Nigeria are provided, followed by a brief review of Nigeria's pre- and post-independence history. The second part -- the heart of the paper -- examines the major long-term issues that are adversely impacting the growth in living standards in Sub-Saharan Africa, with particular attention to Nigeria: demography, urbanization, insufficient infrastructure, regional, ethnic and religious stresses, over-reliance on commodities to finance indispensable government services such as education and health, and the poisonous effects of widespread public and private corruption.

Keywords: Nigeria, Sub-Saharan Africa, economic development

INTRODUCTION

According to recent projections by the United Nations Population Division almost half the growth in the world's population to 2050 is expected to take place in Africa, with the continent's population increasing from 1.26 billion in 2017 to 2.40 billion people by mid-century, or, from approximately 17% of the world's population today to 25% in 2050 (Cookson, 2019). Of the 54 African countries, today fifteen are involved in war or are experiencing post-war conflict, terrorism and tension, more than a quarter of the continent's countries. (For the purposes of clarification, throughout this paper I use the United Nations Development Programme's (UNDP, 2018) categories for Africa, which lists 46 of the continent's 54 countries as Sub-Saharan, excluding eight North African countries -- Algeria, Djibouti, Egypt, Libya, Morocco, Somalia, Sudan and Tunisia (http://hdr.undp.org/en/content/developing-regions). In addition, the Sahel is demarcated as the transitional zone in between the Sahara and the tropical savanna of the Sudan region and farther south the forest-savanna mosaic of tropical Africa).

According to the World Bank, from 1960-2017, Gross Domestic Product (GDP) per capita (in constant 2010 US dollars) -- the most widely-used metric in economics for measuring material well-being -- increased by 1.85% per year for the world, while the increase in Sub-Saharan Africa was 0.71% per year, less than 40% of the world growth rate (https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?locations=1W-ZG). For Nigeria, annual per capita GDP grew at a rate of 1.0%, only about half of the world's annual growth rate. The relatively poor performance of Nigeria in particular, and Sub-Saharan Africa in general, is in stark contrast with the more successful economic performance experienced by Brazil, Chile, China, and South Korea over a similar interval.

In part because of the absence of both security and economic opportunity, African refugees account for a third of the world's population that is displaced abroad, and since 2010 more than 1 million Sub-

Saharan Africans have migrated to Europe (Financial Times, 2019). A recent Pew Research Center survey revealed that more than 40% of Sub-Saharan Africans -- and almost 75% of Nigerians polled -- said they would live in another country if they had the means and opportunity to do so (The Economist, 2018a). The objective of this paper is to examine the prospects to mid-century for improving living standards in Sub-Saharan Africa in general, and in Nigeria in particular, that, if achieved, would improve the economic well-being of hundreds of millions of Africans and reduce the aspiration of Sub-Saharan Africans to migrate to other African countries and beyond.

Why Nigeria? Known as "the Giant of Africa", Nigeria is the world's 20th largest economy and -- since overtaking South Africa in 2014 -- is the largest economy in Africa. Nigeria's population grew by 2.6% per year over the 57 years since gaining independence in 1960, 1% more per year than world population growth over the same interval. By mid-century, the terminal year of this study, Nigeria's population -- which is likely to exceed the population of the US -- is projected to increase by more than 2.2% per year, from 191 million people in 2017 to 392 million (United Nations Population Division, 2019).

Nigeria -- one of 51 countries classified by the International Monetary Fund as "resource-rich" -- has an abundance of oil and gas reserves, fertile soil, and untapped mineral wealth, while at the same time, according to the World Bank, more than half the country is living on less than $1.90 a day of income. Nigeria has more poor people than India, a country with more than six times its population (The Economist, 2019d). While Nigeria exports 1.7m barrels of oil a day, less than half the population has access to electricity. Agricultural output represents approximately 20% of Nigeria's annual GDP, but still employs more than 70% of the labor force. Though the oil sector accounts for only about 10% of annual GDP, Nigeria's earnings from oil represent 70% of government revenue and between 80 - 90% of total export revenue, greatly exposing Nigeria's economic stability to volatile international oil prices. Even though life expectancy in Nigeria increased by 42% from 1960 to 2017 (from 37.2 years to 52.8 years), it is still about 20 years below the world average.

As a student of long-term issues for over 45 years I can argue with a reasonable degree of confidence that a country's long-term economic prospects are predominantly driven by demographic and technological parameters, along with a country's institutional and political environment. For example, the level of corruption in Nigeria -- both in the State and private sectors -- is almost without parallel in its dimensions: the funds plundered between independence in 1960 and 1999, the end of military rule, is estimated at more than $400bn (Time, 2007), and in 2015, President Muhammadu Buhari stated that between 2005 and 2015 corrupt officials stole $150bn of state revenue (BBC News, 2015). According to Transparency International (https://www.transparency.org/news/feature/cpi2018-subsaharan-africa-regional-analysis) a non-governmental organization (NGO) dedicated to fighting corruption around the world, Nigeria is among the most corrupt countries in the world, listed at 144 out of 180 countries in the organization's 2018 ranking. Needless to say, over the years, these diverted funds could have been used to reduce poverty levels and to finance development projects in the country that could have improved living standards.

The first part of the paper provides a short review of the major issues that have been cited by scholars of African history and economics to "explain" the relative lag in economic development in Sub- Saharan Africa, most of which are also shared by Nigeria. This is followed by some vital statistics of Sub- Saharan Africa and Nigeria, and the section concludes with a brief review of Nigeria's pre- and post-independence history. The second part of the paper examines the current long-term issues that are adversely impacting the growth in living standards in Sub-Saharan Africa, with particular attention to Nigeria: demography, urbanization, insufficient infrastructure (including roads, access to water and sanitation, communications, and electricity), regional, ethnic and religious stresses that are contributing to the rising tide of violence and insecurity in the region, the over-reliance on oil revenue to finance indispensable government services such as education and health, and the widespread level of public and private corruption. A future paper will focus specifically on Nigeria's feasible economic and financial policies that can be implemented -- given the political climate and the underlying constraints the country faces that result from the demographic and institutional impediments described in this paper -- to the end

of improving the performance of the economy and substantially increasing living standards by mid-century.

PART 1. ISSUES CONTRIBUTING TO THE RELATIVE LAG IN ECONOMIC DEVELOPMENT IN SUB-SAHARAN AFRICA, NIGERIA'S VITAL STATISTICS, AND A BRIEF REVIEW OF NIGERIA'S PRE- AND POST-INDEPENDENCE HISTORY

Historical Factors That Have Impeded Sub-Saharan Economic Development

Some students of economic development maintain that all that is needed for a sustained improvement in a country's standard of living is the implementation of a consistent set of macro- and micro-economic policies. Others are of the opinion that while consistent policies may be a necessary condition for higher living standards, they are not sufficient. This is the gist of the book comprising 16 essays entitled, Africa's Development in Historical Perspective (edited by Akyeampong et al, 2014). In her review of this volume, Margaret McMillan (2016) identifies the unifying theme of this collection of essays: "unless we view Africa's economic, social, and political development over the "longue durée" (the long-term), we are doomed to misunderstand the reasons for Africa's comparatively poor performance in today's global economy...It is clear that prior to the Great Divergence when Europe entered a period of sustained economic growth, Africa was home to the richest cities and towns on earth...Today, the inhabitants are some of the poorest people in the world. When, why, and how did this happen?" According to McMillan, only after these questions are answered "can we hope to find meaningful explanations for the persistence of poverty in Africa today" (p. 893).

According to The Economist (2017c), while Africa comprises about 17% of the world's population, it is home to more than half of the world's extremely poor people. Under current trends, according to a report issued by the Bill and Melinda Gates Foundation (McKay and Steinhauser, 2018), by mid-century, Sub-Saharan Africa will be home to 86% of the world's extremely poor people. To further accentuate the growing problem of extreme poverty in Sub-Saharan Africa, according to a recent World Bank report, while the global population living in extreme poverty has declined from 1 billion people in 1990 to 750 million in 2015 -- largely the result of rapid economic growth over the last two decades in China -- the number of people living in extreme poverty in Sub-Saharan Africa has increased from 278 million to over 400 million people over the same time interval (Zumbrun, 2018). Nigeria has more poor people than India, a country with more than six times its population.

McMillan asserts that according to the authors of the articles in this volume two overriding causes of why Africa became poor -- resulting in its stunted economic development -- emerge. The first is the trans-Atlantic slave trade that, before being abolished at the beginning of the 19th century, transported between 11 and 12.5 million Africans to the Americas. Once abolished it was replaced with "legitimate" trade, that is, commodity exports whose revenues enabled Africa to import manufactured goods from the rest of the world that at the time, practically speaking, was Europe.

In addition, according to one of the contributors, slavery had a negative impact on African development because it encouraged what has become known today as "rotten" governance, a system, regrettably, very much alive in 21st-century Africa. The line of thinking goes like this: "the slave trade induced individuals to relinquish political rights in favor of absolutist rulers who they thought would be better able to protect them against being sold into slavery" (McMillan, 2016, p. 897). So, the slave trade made African leaders more absolutist. This leadership absolutism extended to both the post-colonial African nation-state in the second half of the 20th century and "modern" states in the first decades of the 21st century.

Once the slave trade was replaced by commodity exports in the early 19th century this led to the other principal cause of Africa's economic stagnation between 1700 and the beginning of World War I, European colonialism. European countries were able to dictate terms of trade, and Africa's economic cycle became anchored with Europe's. As we shall see below, the over-reliance of African economies on primary resources in our time continues to serve as a destabilizing force on Africa's economic performance.

McMillan turns to the next question: Why did Africa stay poor? She enumerates five major categories gleaned from the papers in the volume she reviewed: these categories, taken together (or even only a subset of them), have enough "firepower" to provide a reasonable explanation for the continuing poverty and the increasing inability of many governments in Sub-Saharan Africa to provide the basic requirements for a modern standard of living for a majority of their populations.

They include a failure to adopt modern technology beginning in agriculture, then in transport, and finally in manufacturing, as we shall see below. The reasons for this are rooted in colonialism on the one hand, and the lack of political centralization that is caused by the ubiquitous ethnic-religious rivalries that are endemic to many Sub-Saharan countries, on the other. For example, Africa missed out on the "Green Revolution" of the 1960s and 1970s, in part because of wars and bad government. To be sure, growing conditions in Africa are considerably different than in Asia due to varying soil types, different plant diseases and pests, and very different degrees of fertilizer use. Farming, today, accounts for one-third of Sub-Saharan GDP and employs 50% of the adult labor force, implying the sector is dominated by traditional small scale farms rather than large scale commercial agriculture, with farm size averaging only 1-2 acres (Schipani, 2018; Gettleman, 2017).

Also, because of the importance of kinship and tribal affiliations in towns and villages, there is great pressure to distribute wealth with kin, discouraging "entrepreneurship" and individual effort to generate personal wealth that often acts as a catalyst for economic development. Over time, and in the composite, it leads to a misallocation of both human and capital resources. In addition, I will have much more to say about the constant internecine conflict, with a particular focus on Nigeria, that is retarding growth well below its potential because it deters foreign direct investment on the one hand, and causes fear and insecurity for the population, that has adverse consequences for the skill level and labor productivity of the labor force, and eventually results in a "brain drain" of out-migration by some of the most potentially talented and productive members of the current and future labor force.

The lack of industrialization was cited as another ingredient in the cocktail that contributed to the poor performance of Sub-Saharan economies and the resulting slow -- and in some cases, no -- growth in living standards in many Sub-Saharan countries over the long-term. The Industrial Revolution that was unfolding in the United Kingdom in the late 18th century that quickly advanced to the continent and to North America raised living standards for large swaths of the general population in an unprecedented way. The most recent manifestation of the powerful effect industrialization can exert on national living standards is the remarkable transformation of the Chinese economy -- now four-decades-old -- that has lifted hundreds of millions of Chinese people out of poverty, in part, the result of the country's re-engagement with the world economy beginning at the end of the 1970s. While there was an attempt to introduce clothing manufacturing -- one of the prime-movers of British industrialization -- in South Africa as early as 1907, the enterprise foundered. More generally, the cards were stacked against a "modern" manufacturing sector in Sub-Saharan Africa as a driver of growth largely because of a sparse population, low agricultural productivity that resulted in high input prices, and insufficient purchasing power by the local population. As a result, many of the so-called "start-ups" of the time were retired as "white elephants".

In her review McMillan also cites what today we would call the "education deficit" or, more generally, its derivative, a "skills deficit" in the labor force that, over the long-term, results in low national productivity levels of the work force, and, by extension for economists, low living standards. This shortcoming is also historically-based: Until recently there was little formal education in Sub-Saharan Africa, largely explained by a lack of a written tradition among most of the native ethnic groups. As Christian missionaries arrived and built towns, schools became part of the physical infrastructure, and not surprisingly, the ethnic groups that had closer contact with these missionaries also tended to value education more. While primary school completion rates of the relevant age group in Sub-Saharan Africa increased by 50% from 1971 to 2017 (to 68%), the regional rate, today, is only 75% of the world rate of 90% (https://data.worldbank.org/indicator/SE.PRM.CMPT.ZS?locations=1W). The quality of education is another matter altogether: A study by the Washington-based Brookings Institution (Fielding, 2014) reported that "44% of Nigerian children who completed primary school were unable to read a full

sentence", and when one Nigerian state required its teachers to take basic numeracy and literacy tests - most of the teachers failed!

In her concluding remarks McMillan questions whether the authors of these essays are over-emphasizing the role that the slave trade and colonization played in Africa becoming poor, that is, can relying on only these two events explain "why an entire continent ended up poor"? Her contention is founded on the fact that different countries had different experiences with these two events: "For example, Ethiopians used slaves extensively in their own endeavors to such an extent that it is hard to buy the argument that the slave trade robbed the country of otherwise productive males" (page 903). Ditto for colonization: For example, colonization "was also very different across the continent as Europeans settled in Kenya but not in Liberia" (page 903), or Ethiopia (though it was occupied by Italy from 1936-1941). So, a "one size fits all" explanation that caused Africa to become poor is too simplistic given the very different experiences the very different countries exhibited.

In searching for shared characteristics that can serve as guides for Africa's immiseration, McMillan introduces the concept of the "role of geography". To be sure, the term "geography" will mean very different things to different people. For example, because of its topography and latitudinal position the conventional wisdom is that Africa will be one of the regions hardest hit by global warming (Sengupta, 2019). For those countries situated "in temperate zones, rising temperatures may bring milder weather and a longer growing season. In the tropics the effects are not likely to be so benign" (The Economist, April, 2019e). Also, in part because of its "geography" -- that is, its climate and soil -- agricultural productivity in Africa is lower than it is anywhere else in the world. Finally, due in part to its climate, "the disease burden in Africa is enormous". Of course, transport costs specifically, and infrastructure in general, play a critical role in the "wealth of a nation", but this too, in part, can be subsumed under the rubric of "geography", as we shall see in much more detail below.

This said, it is important to stress that "geography", like "demography", does not dictate a nation's economic destiny. The proof is in the counterexample: in Nigeria, though among the "richest" countries of Sub-Saharan Africa because of its "geography", i.e., oil, more than half the country is living on less than $1.90 a day of income, and while Nigeria exports 1.7m barrels of oil a day, less than half the population has access to electricity. So much for having "good geography"! "Good geography", as we shall see below, often has "bad consequences": For example, though it has abundant endowments of oil -- complemented by access to the sea -- Nigeria's over-reliance on oil exports fuels macro-economic instability, and in the longer term, has subjected the country to the well-known "resource curse" to be discussed below (https://en.wikipedia.org/wiki/Resource_curse).

Needless to say, a country's escape from poverty is a much more complicated undertaking than concentrating on one (or even a few) critical activities, and is an endeavor that requires a time frame that consists of decades rather than years. As the late great Swedish physician and statistician Hans Rosling once remarked, "though you want economic development to happen in 10 years, 'you have to realize that development takes 100 years'" (Pilling, (2018e). Modern-day examples of countries that have succeeded -- or are in the process of succeeding -- in this "great escape" from national poverty are South Korea, and, of course, the most impressive "work in progress", China. For example, at the beginning of the 1990s, almost two-thirds of China's population was living in "extreme poverty" (on less than $1.90 a day), while by 2015 that percentage fell below 1% (Table 1, in the Appendix). China is on track to achieving its goal of reducing the 30 million Chinese living in "absolute poverty" (living on less than $1.00 a day) to zero by 2020 (Hornby, 2019). So, clearly, we will have to extend McMillan's list of "poverty-causing" and "poverty-maintaining" ingredients discussed above for Sub-Saharan Africa in general, and for Nigeria in particular, if a reform blueprint can be drawn up to enable both the region and the country to experience appreciable reductions in their poverty rates by mid-century. Before turning to this subject in the next section, some of Nigeria's vital statistics are provided below, followed by some comparable historical and current data for its wider region, Sub-Saharan Africa, along with comparative data for South Korea and China, two recent examples of countries who successfully "escaped" (the former) -- or are in the process of "escaping" (the latter) -- from poverty on a national scale.

Nigeria's Vital Statistics

The Federal Republic of Nigeria, comprised of 36 states, is bordered on the east and south-east by Cameroon, an 87 km-long border with Chad in the north-east, on the north by Niger, on the west by Benin, and has an 853km coastline on the Gulf of Guinea. Nigeria is the 14th largest country in Africa in land area and, with approximately 924,000 square km, it is about twice the size of the US state of California and about the same size as Venezuela.

Nigeria lies between 4 and 14 degrees north of the equator and, therefore, it is firmly in the tropical latitudes. In mid-2018, Nigeria's population was approximately 203.5 million people, and its population growth rate in 2018 was estimated at 2.54% per annum (p.a.), slightly above the population growth rate of Africa as a whole (Central Intelligence Agency (CIA), 2019).

Life expectancy at birth in 2017 was reported at approximately 52.8 years, about 22 years less than in the US, and Nigeria ranked 213 out of 223 countries in the world in life expectancy. The country's fertility rate in 2018 was estimated at 4.85, the 16th highest rate in the world, and the infant mortality rate in Nigeria was 63.3 per 1000 live births, 13th highest in the world, and more than ten times the US rate. In 2018 about 50% of Nigerians lived in urban areas, well below the 82% US rate, but the rate of urbanization -- the average rate of change of the size of the urban population over the 2015-20 period -- is projected to be 4.23%, among the 10 highest rates of urban migration in the world, an issue that will be revisited below (CIA, 2019).

Nigeria, Africa's most populous country, is composed of over 250 ethnic groups. The four largest make up about 60% of the population: Hausa (27.4%), Igbo (14.1%), Yoruba (13.9%), and Fulani (6.3%). The country is also divided religiously almost in half between Christians and Muslims, with the former predominately inhabiting the south and the latter group residing in the north. Both ethnic-related tensions and religion-based stress complicate the country's governance as we shall see below (CIA, 2019).

Nigeria registers less than 60% literacy for those 15 years and older (less than 50% for females), and as we shall see below, both the quantity and quality of education -- particularly for girls -- emerge as major impediments to improving the performance of the Nigerian economy. The World Bank classifies Nigeria as a lower middle-income country with per capita GDP in 2017 estimated at US$1,968 in 2017 current dollars, or US$5,351 (in constant 2011 international dollars) on a purchasing power parity (ppp) basis (https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD?locations=NG).

Turning to the composition of GDP, in 2016 agriculture accounted for 21.1% of GDP (but employed over 70% of the labor force); industry for 22.5% of GDP (and employed 10% of the labor force); and services for approximately 56.4% of GDP. In 2017, Gross Fixed Capital Formation as a percentage of GDP was reported at only 14.8%, and the percentage of the population below the poverty line was estimated at 70% in 2017 (CIA, 2019). Oil revenue accounts for almost 85% of Nigeria's total export revenue, with cocoa beans and rough wood accounting for about another 5% of export revenue. Almost half of the country's exports are shipped to three countries: India (31%), the US (12%), and China (5%).

In September 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at the United Nations Headquarters in New York to adopt the United Nations Millennium Declaration. The Declaration committed nations to a global partnership to reduce extreme poverty, and set out a series of eight time-bound targets -- with a deadline of 2015 -- that have become known as the Millennium Development Goals (MDGs) (https://www.who.int/topics/millennium_development_goals/about/en/). They are:

a. to eradicate extreme poverty and hunger;
b. to achieve universal primary education;
c. to promote gender equality and empower women;
d. to reduce child mortality;
e. to improve maternal health;
f. to combat HIV/AIDS, malaria, and other diseases;
g. to ensure environmental sustainability; and
h. to develop a global partnership for development.

Table 1, in the Appendix, provides comparative data on some standard economic and demographic metrics that are used by development economists to track a country's level of development over time. Some of the data refer to intervals as long as 60 years such as per capita GDP growth, while others are for the most available annual data, such as population levels. In addition to Nigeria, where possible, also included are data for these categories for the larger Sub-Saharan region, and for two of the most successful "development stories" in recent history, China and South Korea. This table also includes "progress reports" for these countries, where applicable, for selected categories of the above MDGs. The data for this table are from the on-line data banks of the World Bank and the United Nations Development Programmes's Human Development Report (http://hdr.undp.org/en/2018-update), which publishes a Human Development Index (HDI) that captures human progress, combining information on people's health, education and income in a single number.

A Brief Review of Nigeria's Pre- and Post-Independence History: 1500-2019

For our purposes -- uncovering the causes of Nigeria's persistent failure to provide a modern standard of living for most of its 200m-strong population on the one hand, and what measures need to be implemented to address these political/economic failures on the other, the slave trade -- whether intra- or inter-continental -- first documented during the Age of Exploration and lasting to the end of the 19th century, looms large in the political/economic history of modern-day Nigeria.

Various peoples in what constitutes modern-day Nigeria had for centuries engaged in overland trade with North Africa. However, by the 16th century, Spanish and Portuguese explorers were the first Europeans to engage the coastal peoples of the area in trade. The opening of trade with the Europeans was not limited to the trade in goods -- in particular, palm oil -- but also included the beginnings of the Atlantic slave trade.

A majority of the enslaved that were captured in raids and wars were taken to the ports, and others were taken back to their conquerors' territory as forced labor. The developing trans-Atlantic slave trade was fed by a number of slave routes established throughout the area of modern-day Nigeria that linked the hinterland with the major coastal ports. The most important slave traders came from the Oyo Empire (Yoruba Empire), which became one of the largest West African states; the Aro Confederacy in the south-east; and the Sokoto Caliphate in the north. To be sure, slavery was a well-established institution -- used especially in agriculture -- in areas that comprise modern-day Nigeria, and according to the Encyclopedia of African History, "it is estimated that by the 1890s the largest slave population of the world, about 2 million people, was concentrated in the territories of the Sokoto Caliphate" (https://en.wikipedia.org/wiki/ Nigeria). To be sure, with the expansion of European support for exploiting the cultivation of African agricultural products for use in European industry, there was a need for political and social stability in the region. This gave rise to greater European political and administrative involvement in the region -- in the post-Napoleonic period -- at the beginning of the 19th century.

The slave trade -- that resulted in the embarkment of an estimated 12.5m Africans from 1525-1866 according to the Transatlantic Slave Trade Data Base (The Economist, 2019f) -- engaged state and non-state actors from Great Britain, the Netherlands, and Portugal, as well as various state and non-state actors from Africa. However, with sentiment turning against the institution of slavery in Great Britain, in 1807 the British outlawed the international slave trade, and enforced it with a show of military force in West Africa (https://en.wikipedia.org/wiki/Nigeria). British naval forces intercepted ships with slaves leaving the African coast, and transported them to Freetown in the Crown Colony of Sierra Leone, which was founded in 1787 following the American Revolutionary War, specifically to give freed African-American slaves, evacuated by the British, new lives.

Over the next few decades, Britain became more involved in the Lagos power struggle between the anti-slavery faction led by Oba Akitoye and the pro-slavery faction of Oba Kosoko, deposing the latter, and eventually signing the Lagos Treaty of Cession, in August 1861, with the formal annexation of Lagos as a Crown Colony, deepening British interests in the area and facilitating British missionary expansion

Britain's claims of a West African sphere of influence were recognized by other European nations at the Berlin Conference of 1884–85 -- dubbed the 'scramble for Africa' -- that was convened to regulate

European colonization and trade in Africa during the colonial period and coincided with Germany's sudden emergence as an imperial power. It has been argued that this conference produced a diplomatic victory by Britain over France, and that even tiny Belgium was awarded "an enormous chunk of central Africa, a region of over a million and a half square miles, that was ruled with unprecedented cruelty until 1908" (Bourne, 2015; p.7). The conference ushered in a period of heightened colonial activity by European powers which eliminated or overrode most existing forms of African autonomy and self-governance. Britain subsequently began to consolidate its hold over the area comprising modern Nigeria -- however not without conflicts with some of the remaining independent kingdoms who resisted British rule -- and, at the beginning of 1901, Nigeria officially became a British protectorate, and, therefore, part of the British Empire.

Despite British efforts to unify the area under its control -- allegedly to provide a unified railway policy (Bourne, 2015; p.1) -- Nigeria remained administratively divided: Northern and Southern Protectorates, and the Lagos Colony. The fact that today Nigeria's southern region is more advanced economically than the north has been attributed, in part, to the greater economic and cultural interactions of the south with the British and other Europeans than the north -- to be sure, aided by the advantages conferred on the south by its coastal economy -- during the Colonial period. As we shall see below, the continuing North-South divide in Nigeria, whether driven by ethnic and/or religious rivalry, has political and economic consequences that impact the economic performance of the country.

For example, the Christian missions established western educational institutions in the Protectorates, but because of Britain's policy of "indirect rule" and its respect for Islamic tradition which, of course, extended to education, there was -- and is -- a very real difference between a northern versus a southern education in terms of both quantity and quality, especially for girls. In addition, because the course of secondary study in southern Nigeria was closely aligned with the British system, many well-performing southern students, upon graduation from secondary school, were able to pursue university study in the UK, an avenue generally closed to northerners. Finally, northern Nigeria did not outlaw slavery until 1936 (https://en.wikipedia.org/wiki/Nigeria).

In the wake of World War I, Germany was obliged to surrender German Cameroon, and, in 1922, the League of Nations mandated that Northern and Southern Cameroon be administered by Britain alongside Nigeria, with the bulk of the former German colony mandated to France (Bourne, 2015; p. xiii). Simultaneously with this "re-arrangement of chairs" in Africa among the European powers, by 1920 nationalist winds began to blow in Nigeria (and the larger region) with petitions to London in favor of more self-determination, an African Appeal Court, and a West African University. By 1922, a 46-member proto-legislature in southern Nigeria was established, four of whose members were elected. In the 1930s Yoruba businessmen created the National Bank of Nigeria; the National Youth Movement was founded; and the first Nigerian newspaper that outwardly campaigned for self-government and against racism, The West African Pilot, was launched in Lagos.

During World War II Nigeria played an active role in the Allied war effort: Nigerian troops were dispatched to East Africa and Burma; Nigeria served as a staging-post for supplies arriving from North America for the war campaigns in the Middle East; and Nigeria supplied essential war-related resources such as tin and other commodities. By 1945, labor unions, strengthened during the war, called a general strike resulting in wage increases, along with a demand for a blue-print to chart a 10-year course of economic development, and, by 1948, the National People's Party, the first "shoots" of an indigenous political party sprouted in the north. By 1954, the Colonial government permitted regional governments to set their own dates for self-government: 1957 for the east and west regions (which had been the unified southern region that was administratively split in 1938), and 1959 for the northern region.

In 1956, as the regions were being prepared for self-government, a "game-changing" event occurred: two European oil "majors" working jointly in the Niger Delta for over half-a-century discovered oil. Today Nigeria ranks 10th in the world in proven reserves of petroleum and produces about 1.7 million barrels a day (mbd) and, as in the more extreme example of Venezuela (and to a lesser extent in Mexico) this "embarrassment of riches", however, when accompanied by almost unparalleled levels of public and private sector corruption, extortion by militants, and managerial mismanagement of the oil sector, this

abundant endowment of oil inevitably results in the condition known to economists as the "resource curse", to be discussed below.

In the wake of assuming independence in 1960 Nigeria struggled with the normal "growing pains" of statehood: controversy regarding the proper balance between the Federal and State government rights and obligations after the country was officially christened the Federal Republic of Nigeria in 1963; containing -- with various degrees of success -- the ethnic, religious, and regional differences of the 45 million inhabitants of this "manufactured state" whose population would grow by 2.6% per year over the next 50 years; the share-out among the states and ethnic communities of the oil wealth generated from production that expanded from 5,000 barrels a day in 1958 to approximately 1.8mbd today; border adjustments that included a vote in the former German colony of Cameroon resulting in the south of that country joining Nigeria in 1961; the inevitable political instability that accompanies fledgling states that often results in successful -- and failed -- coups with the military deposing "elected" governments and dictatorships alike, and subsequent attempts to reign in the military's "mandate"; increasing levels of corruption of State officials, a by-product of which is billions of dollars of state funds disappearing into the bowels of the international financial system; conspiracies -- real and imagined; repeated attempts to return to civilian rule; initiatives by disgruntled regions to secede from the union (the 1967 declaration of independence declared by the eastern region (Biafra), followed by civil war; writing and re-writing of constitutions to erect democratic structures for governance, and followed, to be sure, by the unending shenanigans of elected officials to circumvent these mandated "checks and balances".

From 1960-1999 Nigeria experienced all of the above, often simultaneously. (Readers interested in a more expansive review of the first five decades of Nigerian independence are referred to the recent book by Richard Bourne (2015)). Nigeria began to converge towards democratization with the election of Olusegun Obasanjo in 1999 which ended almost 33 years of military rule, absent a four-year Second Republic (1979-83). To be sure, the elections that brought this former military head of state to power in 1999, and again in 2003, fell short of rising to the "free and fair" status of elections enjoyed by (most) developed countries (most of the time), but they were acknowledged as a step in the right direction. However, in the 2011 elections that resulted in Goodluck Jonathan prevailing over Muhammadu Buhari -- with the latter defeating the former in the 2015 elections, the first civilian transfer of power in Nigerian history -- the international media reported that these elections were, for the most part, free of violence and fraud. Finally, in early 2019, despite a decision to delay the scheduled February 17 presidential vote five hours before the polls opened, on March 2 President Buhari defeated his main opponent, Atiku Abubakar, a former vice-president, who was considered so corrupt by the United States that he was refused a visa for many years (Searcy, 2019). While Nigeria may have transitioned to "free and fair" elections, as we shall see below the catalog of structural and institutional problems facing the country (and more generally the Sub-Saharan region) over the next 30 years are so formidable that they narrow the policy measures that are available to the government to enhance the performance of the Nigerian economy to the end of raising the living standards of the country's growing population, a subject that will be addressed in a future paper.

PART 2. STRUCTURAL AND INSTITUTIONAL IMPEDIMENTS TO LONG-TERM GROWTH

This section provides an overview of the main structural and institutional weaknesses confronting Nigeria in particular, and the Sub-Saharan region in general, that will need to be addressed over the next 20-30 years in order for the country (and the region) to raise its growth trajectory and enhance living standards for the majority of its growing population. The issues are: demography and urbanization; physical and social infrastructure; regional, ethnic and religious stresses; over-reliance on commodity exports in the export structure for financing indispensable government services such as education and health; and the high level of public and private sector corruption that poisons Africa's economies, states, and society.

Demography and Urbanization

In the discussion that follows of the demographic trends for Nigeria and the region a number of well-known demographic-related concepts such as the "demographic dividend", the "dependency ratio", fertility rates, migration, employment opportunities, and labor force growth and skills are deployed to support the demographic picture that is being drawn.

Before examining the critical demographic issues confronting Nigeria over the next three decades it is important to acknowledge that Nigerian population statistics are extremely unreliable. According to The Economist the population numbers are "systematically exaggerated...for an obvious reason: allocations of revenue from the central government and voting power in the capital depend on population estimates, so every region has an incentive to bump up its own count" (Rosenthal, 2015, p.5).

That said, with approximately 200m people in 2019 and a population growth rate of 2.6% p.a., Nigeria is on track to become the third most populous country in the world -- after India and China -- by mid-century (International Monetary Fund, 2018, p. 4). Population growth in Africa is not slowing as quickly as demographers had expected. The United Nations Population Division (https://www.un.org/development/desa/en/news/population/world-population-prospects-2019.html) projects a world population of 9.7bn in 2050 and 10.9bn in 2100, with Africa's population increasing from 1.1bn today to 2.4bn in 2050 and to 4.5bn in 2100. The last two figures translate into Africa comprising about 25% and 40% of the world's population, respectively, equal to Asia's projected share and four times the projected population of North America and Europe combined in 2100. It is worth recalling that in 1970, Africa's share of the world's population was 10%, and while Asia's population will peak by 2040, it will continue to grow in Africa (The Economist, 2014a). The UN projects that the world's population will increase by 2.2bn people between now and mid-century, of which 1.3bn will be added in Africa, mostly in its poorest countries, i.e. Sub-Saharan Africa.

With respect to Nigeria, its current population of 200m is projected to grow to 410m by 2050 and 794m by 2100, the result of a still very elevated -- and slowly declining -- fertility rate of 5.4 children per woman in 2018. Globally, women today give birth to an average 2.5 children, half as many as in the early 1950s, and in 40% of the world's nations, the fertility rate is at or below the "replacement" level of 2.1 children per woman (Engelman, 2016). In 1960, from Table 1, in the Appendix, China, Nigeria and South Korea had comparable fertility rates, and within two generations (about 60 years), the fertility rate declined by more than 70% in both China -- to be sure principally the result of the country's one-child policy in place from 1980-2016 -- and South Korea, while in Nigeria it fell by only 15%.

Arguably, South Korea's economic miracle which began in the 1960s and China's spectacular performance since the late 1970s can be attributed, in part, to exploiting the "demographic dividend", which refers to the enhanced growth potential in an economy that is the result of a change in the age structure of a country's population, that is, an increasing share of the population that is of working age. The logic is as follows: relative to Sub-Saharan Africa, the rest of the world is aging, therefore Sub-Saharan Africa should become a major source of growth for the global labor force. A change in age structure is typically brought on by a decline in fertility -- that is often accompanied by an increase in the participation rate of women in the labor force -- and declining mortality rates, usually the result of improved public health systems and a more educated population (Thakoor and Wakeman-Linn, 2016). To be sure, a changing age structure in a country's population is only one component of the cocktail of ingredients that have been identified for enhancing long-term growth. Others include a high national savings rate, an efficient public sector, and national unity (Pilling, 2016). Since Nigeria has none of these, it risks squandering this "demographic dividend" because of these structural and institutional shortcomings.

A failure to slow population growth has consequences for improving living standards especially when economic growth is as anemic as it has been for Nigeria in recent years. The first and foremost component needed to reduce the growth rate in population is a serious and sustained reduction in the nation's fertility rate. It is important to note that even though Nigeria's national fertility rate is about four times the Asian rate, the northern state of Zamfara recently registered a fertility rate as high as 8.4 per woman, threatening the country with a "demographic disaster" (Fick, 2016b).

The demographer's recipe for reducing fertility rates over the long-term includes improved educational access for women and an increased awareness and use of contraceptives, alongside major improvements in pre- and post-natal care that would reduce the still very elevated infant mortality rate in Nigeria and throughout Sub-Saharan Africa. (Please see Table 1, in the Appendix). An increased concentration of the population in urban areas has also been identified as playing a self-enforcing role in reducing fertility rates. It is noteworthy that Africa has become the world's most rapidly urbanizing continent, with the amount of urbanized Sub-Saharan Africans expected to double to more than one billion people by 2040 (Pilling, 2018f). Given the projected population levels of Lagos to mid-century, urbanization in Nigeria is growing by 3% per year, and a similar trend is expected to prevail throughout the continent with urban Africa expected to grow from 500m today to 1.4bn by 2050, an increase of 3.5% p.a. (Iyare and Searcey, 2019).

In 1960, only 15% of Africans lived in cities, about the same percentage as in Europe in the 1600s. However, by 2018, two generations later, the urbanization rate rose to 38%, and it is expected to reach 50% of Africa's population by 2050 (The Economist, 2018c). Needless to say part of the increase in urbanization can be attributed to the high fertility rate as well as migration from the rural areas in search of employment. For example, Lagos, the commercial capital of Nigeria, with a population of 11m in 2010, is projected to reach 30-5m by 2030 and become the fourth largest urban area in the world after Tokyo and Delhi, with a further increase to 40m people by mid-century (Engleman, 2016; Riordan, 2019).

Historically, migration to urban areas was motivated by employment opportunities in the manufacturing sector, but today most of the labor migrating to urban areas in Nigeria is absorbed by informal jobs -- operating outside the "safety net" -- that pay out incomes that simultaneously escape the tax authorities. In 2014 an estimated 65% of Nigeria's GDP was transacted in the informal economy, while the corresponding percentage for the countries in the Organization of Economic Cooperation and Development (OECD) -- a group of 34 mostly rich countries -- was 18% (The Economist, 2017a). In addition, large segments of the labor force are engaged in "vulnerable" employment -- people who are employed under relatively precarious circumstances and less likely to have formal work arrangements, access to benefits or social protection programs, and are more "at risk" to economic cycles. According to the International Labor Organization, Africa, at 77.4%, is the continent with the highest proportion of workers in "vulnerable" employment (Blas, 2014).

Finally, we arrive at the increasingly intractable problem of international migration to Europe and North America from poverty-stricken regions such as Sub-Saharan Africa, violence-stricken areas such as North Africa and the Middle-East, or from regions confronting both, such as Central America. In 2017, 60% of Africans were under 25 years of age, and between now and mid-century the youth population will double from 230m to 452m people. Insufficient job creation in both the public and private sectors to absorb this cohort as productive members of the labor force over the next 30 years -- and equipping them with the appropriate job skills -- could trigger massive out-migration from these increasingly economically depressed and violent regions (Caldwell, 2019).

The outsized -- legal and illegal -- migration experienced in recent years into Europe and North America would pale next to the potential of millions fleeing Africa and the Middle-East during the next three decades because of a lack of economic opportunity and personal security. Already, the European Union and some of its affiliated institutions such as the European Bank for Reconstruction and Development are exploring the feasibility of developing regional development initiatives to promote investment and opportunity in these economically challenged regions, along with programs designed to address the high level of violence and personal insecurity in these regions to the end of reducing the need to migrate (Hall, 2019). The US, despite the Trump administration's decision to temporarily cease foreign assistance to the three Northern Triangle countries in Central America, is also considering a long-term development program whose objective is to improve economic opportunity and personal security in the poverty- and violence-stricken countries of El Salvador, Guatemala, and Honduras to the end of slowing, if not eliminating, the current levels of (mostly illegal) migration to the US from these "failing states" (Esposito, 2018). To be sure, mass out-migration is not only a problem for the "recipient" countries.

Insufficient economic security and daily doses of violence can easily spawn a "brain drain", whereby the "donor" nation's "best and brightest" are first-out-the-door, exacerbating an already problematic national skills deficit.

Physical and Social Infrastructure

The second of Nigeria's structural weaknesses cited above -- that also extends to Sub-Saharan Africa -- is the insufficient quantity and quality of its physical and social infrastructure (Sy, 2016). The former includes, but is not limited to, transport, electricity, water and sewer services, and telecommunications; the latter refers to the country's education and health systems. For many of the world's countries during most of the second half of the 20th century rapid economic growth led to increased living standards that were accompanied by marked improvements in public health systems, nutrition, greater access to education (including family planning), and, as a result of all of these, significant increases in life expectancy, and reductions in both infant mortality and adult morbidity rates (Gordon, 2016; Ip, 2019). While Nigeria experienced improvements in most of these metrics since independence, in most cases, the progress has been too little and too slow relative to the advances achieved in the developed countries and even in comparison with "one-time" developing-country cohorts, China and South Korea. (Please see Table 1, in the Appendix).

Given the demographic picture described above of Sub-Saharan Africa and of Nigeria in particular, according to the IMF, "rising populations will strain public resources and countries' ability to cater to their people's needs. To provide these growing populations with even the current level of services, Sub-Saharan African countries must not only expand their road networks, power, water and sewer systems; and delivery of health and education services, but must also increase per capita investments in health, education and physical infrastructure" (Thakoor and Wakeman-Linn, 2016).

Physical Infrastructure: Electricity, Transport, Water and Sewage, and Communications

In the case of Nigeria slower economic growth can be attributed, in part, to insufficient public investment in roads, bridges, and railways. In addition, to enhance growth there is a need to encourage more foreign direct investment, but in Nigeria that is often impeded by insufficient and/or unreliable infrastructure, in particular rural transport and electricity systems. According to McKinsey, reforming these sectors could result in a doubling of Nigeria's agricultural output by 2030, reducing the need to import food, and as a result, freeing-up scarce foreign exchange to pay for imports of capital goods. Current electricity inefficiencies were estimated to cost Nigeria 31/2% of its annual GDP, while excessive transport costs translate into higher business costs, and, eventually, into higher prices to consumers (Rosenthal, 2015, p. 10).

Turning to the critical sector of electricity, across Sub-Saharan Africa shortages of electricity are restraining economic growth by as much as 4% of GDP per year. In 1991, according to the World Bank, only 19% of Africans had access to the electricity grid which increased to only 45% by 2015, still leaving a majority -- 600 million -- of Africa's 1.1bn people without access to the electrical grid. In 2017, more than two-thirds of Africans still had no access to reliable electricity, and Sub-Saharan Africa -- with a population of 1bn -- generated less electricity than South Korea (The Economist, 2017e). In nine African countries, fewer than 20% of primary schools had lights, and 25% of clinics and hospitals in 11 countries have no power (Rosenthal, 2017, p. 5). It is important to note that without power there is no refrigeration, and with no refrigeration, there is no ability to store vaccines safely. This lack of reliable power forced people to spend as much as 16% of their incomes on expensive alternative power sources such as kerosene or disposable batteries for cooking and lighting, costing up to $10 per kwh, about 100 times more than people in the developed countries pay per unit of electricity. The power deficit is enormous: In 2015, Africa needed approximately $55bn of annual investment in the electricity sector, but was investing only about $8bn a year (The Economist, 2015b).

One consequence is that this power-starved continent has failed to industrialize. In fact, over the last 30 years, the share of Africa's share in the developing world's manufacturing output has declined: in 1990 Africa's share was 9% that declined to 4% in 2014 (Rosenthal, 2017, p. 14). While red tape,

corruption, and skills shortages in the labor force are all contributing factors, insufficient infrastructure -- specifically electricity and transport -- is the leading culprit of Africa's failure to industrialize. To be sure, the ghost of the continent's Colonial past is also present: since Africa was broken into more than 50 pieces, few of the countries have the required scale -- Nigeria and South Africa are the exceptions -- to attract sufficient investment to power up their manufacturing sectors to be world class competitors able to export efficiently. There are 16 land-locked countries in Africa, and as a result of their Colonial past, they were (and, arguably still are) trapped in extractive activities with transport infrastructure built only to connect mines to ports. Africa's historical trade relationship with the rest of the world was simple: "export raw materials and import everything else". Though there are new initiatives to redress this pan-African integration deficit -- such as the recently signed African Continental Free Trade Agreement of 40+ nations that now includes Nigeria, a "holdout" until July 2019 -- there is still little integration within the continent (and even with neighboring countries) compared with other continents. In 2016, only 18% of total African exports were traded intra-Africa, compared with 59% and 69% of total exports traded intra-Asia and intra-Europe, respectively (Pilling, 2018d; Pilling, 2018g).

Turning specifically to Nigeria's infrastructure problems, with a population of about 200m, daily electricity output is comparable to the Scottish city of Edinburgh with about 500,000 residents. Only about 60% of Nigerians have access to the grid despite the (incomplete) privatization of the electricity sector which began in 2013. While the country has 12 gigawatts (GW) of installed generating capacity, only 4 GW are functioning (Sanderson, 2019). The US, with a population of 327m, has 1,000 GW of capacity. Of those who are on the grid, extensive outages are the norm, resulting in only 33% of Nigerians having reliable electricity connections. In Lagos and other cities, electricity outages force banks and shops to close early. In part as a result of the unreliable electricity sector, manufacturing comprises only about 9% of GDP, a percentage customarily associated with rich countries such as the United States (Feng and Pilling, 2019).

With respect to the Nigerian road network that is critical for moving goods and people around the country, Stears Business (https://www.stearsng.com/article/rethinking-roads-in-nigeria) -- a Nigerian publication that focuses on business, economic and political news -- reported that only 28,980 kms (15%) of Nigeria's road network of 193,200 kms is paved. For example, "sending a container from China to Lagos is sometimes cheaper than moving one from the Lagos port across the city", and "if you are shipping coffee from Kenya, you actually have to go to Europe first before it comes to Nigeria" [as there are no roads connecting the two countries]. Finally, moving goods from Nigeria to Ghana -- 460 km -- takes 16 days (Munshi, 2019c). Besides the cost in human lives and injuries that result from poor road conditions and the economic impact of increasing the cost of bringing goods and commodities to market -- that ultimately translates into higher prices to consumers -- poor road infrastructure also reduces the chance for enhanced commercialization and industrialization of the country, and, consequently, contributes to maintaining high poverty rates and the social exclusion of Nigeria's large rural population.

According to the CIA (2019), in 2015, an estimated 70% of Nigeria's drinking water was designated "improved" (piped, public tap or standpipe, protected dug well, protected spring or collected from rainwater), and, as expected, the percentage rises to 80% in urban areas. The quality of this water, to be sure, is a "lower bar" to the metric presented in Table 1, in the Appendix, of "safely managed drinking water". As for "improved" sanitation facilities -- defined as the "use of flush to a piped sewer system, septic tank or a pit latrine, or a composting toilet -- in 2015, less than 40% of Sub-Saharan Africans and less than a third of Nigerians enjoyed access to proper toilets", with urban areas recording a marginally higher percentage (The Economist, 2016c).

Turning to communications, Nigeria had only 100,000 working fixed-line phones in the early 2000s, while today there are 170m mobile phone subscribers (Pilling, 2019). The penetration of mobile phones in Nigeria has been rapid and widespread -- a text-book example of what is commonly referred to today as technological "leap-frogging" -- with 76 mobile phones per 100 inhabitants, ranking Nigeria ninth in the world in 2017 (CIA, 2019).

Social Infrastructure: Health and Education

In addition to the health and education metrics presented in Table 1, in the Appendix, such as the long-term trends in the infant mortality rate, life expectancy, and the primary education completion rate, data on child malnutrition (the percentage of children under the age 5 who exhibit symptoms of stunted growth) show Nigeria's average over the 2010-16 interval at 43.6%, 20% above the percentage for Sub-Saharan Africa. For the purposes of comparison, South Korea and China had rates of child malnutrition equal to 2.9% and 8.1%, respectively. More generally, the percentage of GDP spent on health expenditures in 2015 was only 3.6%, about two-thirds of the percent of GDP spent on health in the Sub-Saharan region as a whole, compared with 7.2% and 5.3% for South Korea and China, respectively (United Nations Development Programme, 2018, pp. 52-3).

One of the critical components that propels economic growth is the productivity of the labor force, with education strongly correlated with labor productivity. One necessary -- though not sufficient -- marker of an educated labor force is the "youth literacy rate" reported in the UNs' Human Development Report. Because of the entrenched cultural preference for males over females in Nigerian society, supplemented by Sharia law in some northern states, there were -- and still are -- significant differences in literacy rates of young people (ages 15-24) according to gender, arguably the labor force of the future. For example, during the 2006-16 interval, youth literacy rates for Nigerians were 58% for females and 76% for males. The same metric for the "comparison" countries, South Korea and China, were 100% for both males and females (United Nations Development Programme, 2018, pp. 55-6). Because of the weak education system, the job market is not keeping pace with population growth, which is adding 2m young people to the labor force annually, generating, simultaneously, a skills-deficit for the business sector, high unemployment rates for the young, and social unrest that could easily evolve into civil unrest, a subject discussed below. In mid-2019, "nearly a quarter of the [working-age] population in Nigeria was unemployed" (Munshi, 2019c).

To mitigate Nigeria's large infrastructure gap -- equal to about 35% of GDP relative to the emerging market average -- the Nigerian government has undertaken "a large scale-up in public and private investment" called the Economic Growth and Recovery Plan that has targeted major investments in physical capital (roads and electricity) and social capital (education and health). According to the IMF (2018), "Nigeria's infrastructure is generally less than half the size of the average Sub-Saharan Africa country and only a fraction of that of emerging market countries" in general (page 59).

Ethnic, Religious, and Regional Stresses

One of the critical ingredients mentioned earlier to enhance long-term growth was the term "national unity", a kind of "national glue" that binds the country's citizens together. These could include a common language, religion, ethnicity, a shared history, or even a "common purpose". The latter, "common purpose", could also extend to a national "culture". In his pathbreaking book, A Culture of Growth: The Origin of the Modern Economy, on the subject of the role of culture and cultural evolution in kick-starting industrialization Joel Mokyr, arguably among the leading economic historians of our time, described culture as a "set of beliefs, values, and preferences, capable of affecting behavior, that are socially (not genetically) transmitted and that are shared by some subset of society" (The Economist, 2019g). As we shall see below, Nigeria enjoys none of these. Nigeria, a country with 250 ethnic groups and evenly split between Christians and Muslims, also has a number of distinct regions, each with their respective ethnicities and religious affiliations, in addition to each being endowed with more -- or less -- of what is paramount in Nigeria, oil wealth. Not surprisingly, the country is often convulsed by the consequences that these stresses exert on "national cohesion", or its lack thereof.

Well in advance of the political jockeying that, more often than not, either precedes or follows independence (and in some cases both), the sharp cultural and political differences between Nigeria's dominant ethnic groups from the north, east, and west were already evident, and they eventually precipitated so much turmoil and disorder that, by 1966, back-to-back military coups raised tensions between the north and south to the breaking-point. Christian Igbo residing in northern cities suffered persecutions and fled to the eastern region, and in May 1967, the eastern region declared itself the

independent State of Biafra, triggering the Nigerian Civil War that lasted until January 1970. Biafra was supported by France, while the Soviet Union and Britain supplied arms to the federal government. The 30-month war was a major humanitarian tragedy for the Igbo, who sustained an estimated one million people dead from warfare, disease, and starvation. Revenue from Nigeria's increasing oil output was used to aid the post-war reconstruction efforts (The Economist, 2017d).

The unintended consequences from Nigeria's rapidly increasing oil wealth became visible: the over-dependence of the country on oil revenue damaged agriculture and other industries, and successive governments signed off on a growing list of inappropriate and wasteful development projects that spawned egregious levels of corruption, theft, and misrule that fragmented Nigerian society from which the country still suffers. (More about this below).

Nigeria, today, is confronting disunity in every corner of the country. The longest lasting "stress point" has its roots in the merging of two British colonial territories in 1914 that comprise most of Nigeria's territory today. The consolidation was an act of colonial convenience: the British desired a contiguous colonial territory stretching from the arid Sahel to the Atlantic Coast, and because Northern Nigeria was not paying its way while Southern Nigeria generated revenue in excess of its administrative expenses, according to "Colonial" thinking it made practical administrative sense for the latter to subsidize the former.

The two regions share no real commonalities: the north is predominantly Muslim and its Muslim population generally "looks to the Middle East and the wider Muslim world for solidarity and sociopolitical example" (Ochonu, 2014). The south, an ethnically diverse region containing many states and three geopolitical units, is largely Christian, consequently, their major sociopolitical influences are Western and traditional African. These differences have been a source of political disagreement and suspicion between the two regions since colonial times. For example, during President Goodluck Jonathan term in office (2011-2015), despite a rise in Nigeria's per capita income from $4,740 to $5,360, according to the World Bank income inequality between the north and south increased, resulting in southern incomes being more than twice as high as incomes in the north. Many attribute the rise in regional inequality, in part, to the reduced share of government resources that were allocated to the north, especially funding for vital infrastructure projects such as improving the electrical grid that is restraining economic growth (Vogt and McGroarty, 2015).

In Nigeria's national politics, Christian anxieties about Muslim domination of the national institutions and fears that politically dominant Muslims would use their privileged position to Islamize national institutions and impose Islamic Sharia law on non-Muslims date back to colonial times. On the other hand, Muslims, especially those from the north, have fiercely resisted what they regard as the creeping westernization of the "national" culture, and often turn to their religion to seek solutions for socio-economic and political problems. In extremis, between 2000 and 2002, a number of Muslim-majority states adopted the Sharia criminal legal system, and once introduced, it confirmed Christian fears that they would be persecuted, and their freedoms -- guaranteed by the Nigerian constitution -- curtailed. These clashes between the Christian and Muslim communities periodically result in the death of thousands of people, the displacement of hundreds of thousands, along with large swaths of property destroyed. The most serious manifestation of this clash of cultures is the decade-old jihadi insurgency Boko Haram, discussed below (Ochonu, 2014).

Religious differences have played a central role in most of Nigeria's national conflicts such as the Nigerian civil war (1967-70), the on-going insurgency by Boko Haram and its offshoots, the simmering tensions for a renewed separatist Biafra, the battles over grazing/farming rights being waged by Christian farmers and Fulani Muslim herdsmen in Nigeria's "Middle Belt", and the uprising in the oil-rich Niger Delta by the self-described "avengers" who have been sabotaging the nation's oil infrastructure -- the centerpiece of Nigeria's economy -- because of alleged government "oppression" of the oil-rich region, all of which are discussed below.

Since 2009, Boko Haram (BH) -- a group inspired by ISIS and Queda -- and one of the world's deadliest jihadist insurgencies is responsible for attacks that have killed at least 27,000 and displaced two million people in the past ten years (Munshi, 2018d). The group operates in the state of Borno in the

impoverished north-east of the country, which is considered a "failed state within a dysfunctional one", and blames the legacy of colonialism and corruption for the problems in Nigeria (The Economist, 2018b). The group favors a pan-Africa jihad to replace secular regimes with strict Sharia rule. One of the leaders of BH, Abubakar Shekau, was considered to be so depraved that even ISIS disowned him (Taub, 2017). BH funding originates in Iran and Saudi Arabia, and following the playbook of Hezbollah, ISIS, and the Taliban, they distribute welfare funds and services to their members to maintain loyalty and discipline. The group routinely slaughters "infidels" and Muslims, torches houses and dismembers people, and loots military garrisons for arms and mechanized vehicles. In 2014, BH kidnapped 276 school girls from Chibok, a Christian-majority hamlet in the state of Borno, and they completely destroyed Bama, a north-east city of 250,000. In 2017, the government swapped 82 of the 276 girls kidnapped in 2014 for five BH prisoners and 3m euros.

In early 2018, 110 girls from a school in Dapchi in the state of Yobo in the north-east were taken by a splinter group of BH, called Islamic State West Africa Province (ISWAP), mirroring the 2014 kidnapping in Chibok, with a view towards exchanging them for jihadis held by the government and/or cash.The group has attacked and looted a dozen military bases, killing hundreds of soldiers and seizing huge stocks of weapons. While BH concentrates its attacks against civilians, ISWAP focuses its violence against security forces and non-governmental organizations. By the end of 2018, an estimated $9bn was spent by the Nigerian government waging war against BH and ISWAP (Parkinson and Hinshaw, 2019).

A half century after the Nigerian civil war began unhealed wounds have been reopened. Separatist sentiment that had been dormant since the Nigerian state suppressed the breakaway Republic of Biafra is simmering again. The underlying cause -- as ever in the various regions of Nigeria -- is the perception that the region that constituted Biafra is not receiving a fair share of government expenditures for physical and social infrastructure projects. Protests have been orchestrated by the Indigenous People of Biafra (IPOB), a separatist group, which the government declared a terrorist organization. Given this status -- real or imagined -- the Nigerian army has responded on a number of occasions with deadly force to provocations or the hint of resurgent nationalism by the Igbo, the Christian ethnic group that fled the north in the 1960s for the south-east region that formed the core of the Republic of Biafra. The Igbo maintain that the army is a northern institution, and, therefore biased against the Igbo, increasing the tensions between the two opposing sides. In September 2017, in the capital of Abia state in southeastern Nigeria, government forces allegedly conducted a raid that resulted in the loss of 28 people. Unsurprisingly, the army denies the raid ever took place. But their have been other attacks by the army: in the same month Nigerian soldiers attacked an office belonging to the Nigerian Union of Journalists, also in Abia state.

With the perception of many Igbo that the army has a "northern bias", complemented with the fact that President Buhari is from the north, there is a palpable feeling of alienation among many Igbo. Contributing to the Igbo claim that their region is not being fairly treated by the federal government, they cite President Buhari's 2015 comment, "constituencies that gave him 5% of the vote (mainly those in the south-east) cannot expect the same treatment as those that gave him 97%" (The Economist, 2017d). One reliable indictor that the separatist aspirations of the south-east are very much alive, and the more general claim that Nigeria still lacks "national cohesion", is the August 2017 statement by President Buhari that "Nigeria's unity is settled and not negotiable" (The Economist, 2017d). If it were so self-evident, why would it even be mentioned?

Another manifestation of regional/ethnic/religious stress in Nigeria that is dividing the country is a dispute over land use that began at the beginning of the new century -- but has intensified since 2011 -- between Christian farmers in the ethnically-mixed north central region (also referred to a Nigeria's "Middle Belt") and Muslim nomadic herdsmen belonging to the Fulani ethnic group. For centuries, Muslim herdsmen and Christian farmers, mostly from the Bachama tribe, have co-existed in relative harmony. The Fulani, who are concentrated in the Sahel (the semi-arid strip below the Sahara desert running across west Africa), traditionally migrated south with their animals during the long dry season, and in return for being allowed to graze their herds their animals would fertilize the farmers' land.

In part because of climate change, desertification, and population pressures this symbiotic arrangement is being tested. In some northern states, as much as 75% of the land is becoming desert

forcing the nomadic Fulani to extend the duration of their annual migration and to move their herds farther south, and this result has claimed more lives each year than those killed by BH (Parkinson and Akingbule, 2018). In 2016, 2,500 people were killed in conflicts between the two groups, and the violence is now concentrated in one-third of Nigeria's 36 states. As ever, this dispute, although it appears as another ethnic/religious controversy causing civil strife and increased terrorism, is emerging as a "fight over resources". That is, how to manage the increasingly scarce land and water among competing uses -- for cattle (that are over-grazing) or growing crops (on land whose yields are declining) -- under changing demographic and environmental conditions (Pilling, 2018c)?

A fourth insurgency has been operating in Nigeria's "oil patch". Militants who call themselves the "Niger Delta Avengers" are sabotaging Nigeria's oil infrastructure in the oil-rich delta, which produces about half of Nigeria's oil output, the country's main source of government revenue and export earnings. This group of militants has been protesting the region's neglect and under-development as revenue from region's oil output is diverted to other parts of the country, in addition to allegations that much of the region's oil revenue is stolen by federal and local politicians (Searcey, 2016). In the decade between 2007-2017, annual oil output declined by 26% to approximately 1.5mbd, in part because of this insurgency as the militants attacked the operations of two of the oil majors, Chevron and Royal Dutch Shell (Munshi, 2018c). In addition to bombing oil pipelines, the militants also kidnapped oil workers. The forgone oil revenue that results from the reduced production levels adds to Nigeria's budget stress, and also deters foreign direct investment because of the insecurity generated by the pipeline sabotage and kidnapping.

Because of the strategic importance of this region the Jonathan administration implemented a costly amnesty program that transferred monthly payments of about $326 to approximately 30,000 militants, as well as promising education and training programs to enhance the prospects for their employment in the region in return for a end to the disruptions of oil operations in the delta (Fick, 2015a). However the amnesty program was terminated by the Buhari administration in 2016 because of budgetary considerations, and the attacks on Nigeria's oil assets resumed, costing the country billions of dollars in damages and lost exports (Raval and Fick, 2016b). The religious/ethnic/regional stresses outlined above accurately portray the disunity that Nigeria is confronting in every corner of the country. Besides the economic cost to the various governments of "putting out the fires" these stresses generate, and the cost in human lives, suffering, and property losses that accompanies the violence of these "domestic wars", the lack of national unity in this "manufactured country" has consequences for the prospects of improving Nigerian living standards on a long-term basis.

The Over-Reliance on Commodity Exports in Powering the Economy

International organizations such as the United Nations, the World Bank, and the International Monetary Fund regularly classify countries in their studies -- especially developing countries -- as "resource-rich" or "resource-poor", with Nigeria being included in the group of "resource-rich" Sub-Saharan Africa countries. More specific to this paper, in a recent study on resource-rich Sub-Saharan Africa countries by the Washington-based Brookings Institution (https://www.brookings.edu/blog/future-development/2018/08/01/7-surprising-findings-about-resource-rich-sub-saharan-africa/), among other metrics, the authors also ranked these countries by their "dependency on natural resources, an index based on the percentage of a country's GDP that is generated by resource rents; the share of commodity exports in total exports; and the share of resource-sector value-added in total value-added.

Nigeria's values for the first two metrics demonstrated an over-dependence on natural resources that, as we will see below, greatly exposes the Nigerian economy to the unpredictable headwinds of the global economy, in particular the high volatility of international oil prices. According to Figure 3 in the Brookings study, among the 10 countries in Sub-Saharan Africa that are considered the most resource-rich, Nigeria's resource dependency based on these three metrics was second only to the Democratic Republic of Congo and greater than South Africa.

In order to convey the centrality of the energy sector in the Nigerian economy, this section is divided into four parts. At the outset it would not be an exaggeration to refer to the oil sector as the "crown jewel"

of the Nigerian economy. The section begins with some statistics about oil production, consumption, exports, and, almost oxymoronically, imports! Next is a discussion of the "micro- economic" features of Nigeria's oil sector that include the role of the international "oil majors" in the sector, the heavy hand of the State in the determination of domestic prices for the resource, i.e., subsidies and taxes, and other regulatory measures that affect output and prices The next part of this section considers the "macro-economic" impact on the Nigerian economy of international influences such as global oil prices, the ebb and flow of activity in the global economy, and the impact of oil price volatility on the public finances. This is followed by a digression on two relevant economic concepts -- the Dutch disease and the resource curse -- that are unfortunate by-products of the over-reliance of the Nigerian economy on oil. Not to be ignored in any discussion of the energy sector in Nigeria is the outsized level of theft, corruption and, often a logical consequence of these, money laundering, all of which are institutionally integrated into the oil sector, and play a major role in restraining economic growth, which is discussed in the last part of this section.

Output of crude oil in the first quarter of 2019 averaged a little over 1.7 mbd -- of which approximately 95% was exported -- about two-thirds of the 2.5 mbd produced in 2005. The following forces aligned to arrive at this decline in daily production: the sector is starved of investment (and deprived of funds to maintain aging equipment); it is in dire need of reform; it is the "epicenter of corruption" as we will see below; and, as was discussed above, it is the object of sabotage by the militant Niger Delta Avengers group. As a result of all of these forces, Nigeria's output of crude oil has been on a downward trajectory since peaking in 2005 (Ceicdata, 2019). Oil experts have estimated that Nigeria's annual oil output could be as much as 4 mbd if the oil company was run on commercial terms (Wallis, 2015). It is important to note that, even in 2019, revenue earned from oil still contributes 70% of the federal government's annual revenue, therefore the fiscal consequences of declining oil production has outsized effects on financing government programs and on Nigeria's trade and current account balances (The Economist, 2019a).

Nigeria has four State-owned oil refineries but together they operate at only 11% of their 445 tbd capacity mainly because the refining capacity is poorly maintained. Even if they operated at capacity, Nigeria would still be obliged to import most of its refined oil because of insufficient refinery capacity (Fick, 2016a). Consequently, Nigeria is forced to import 90% of its refined fuel (comprising 40% of Nigeria's total import bill), which offsets the benefits the country could be reaping from higher international oil prices. Nigeria's largest and newest oil refinery (outside of Lagos) is expected to come on stream in 2020.

Nigeria has the largest proven reserves of natural gas in Africa, more than Algeria, Egypt, and Libya -- and the ninth largest in the world -- but they are undeveloped, in part, because of low international oil prices but mostly because the pipelines and other infrastructure needed to move natural gas -- a by-product of oil output -- were never built, so the gas is being flared, relinquishing growth potential from the forgone gas revenue.

The Nigerian National Petroleum Corporation (NNPC) was established in the aftermath of the 1970s oil boom by its then petroleum minister, Muhammadu Buhari, the current president of Nigeria. The company is "responsible for all aspects of the industry, from exploration to production and regulation, and is accountable to no one" (The Economist, 2015a). It is easy to see the inherent conflict of interest for a company that simultaneously participates in the market -- via its joint ventures with the oil majors -- and regulates it. The company is mismanaged and suffers from chronic corruption and industrial-scale theft. It is estimated that between 100-500 tbd of oil output is syphoned off or stolen by politicians, oil workers, militants, and security forces (Rosenthal, 2015, p. 12). In 2014, the former governor of the Nigeria's central bank, Lamido Sanusi, alleged, that over a period of about 18 months, $20bn in oil revenues were missing from the state's treasury (Sanusi, 2015).

Because the company has such murky accounting practices it cannot raise finance commercially, forcing it to amass billions of dollars of debt from its joint venture partners, Shell and Exxon Mobil (Wallis, 2015). Earlier in this decade the NNCP was ranked the least transparent company in the world (Hinshaw, 2014). For example, the NNPC did not report its annual financial reports over the decade of

2005-2014 making it virtually impossible to ascertain if the company was making profits or losses (Raval and Fick, 2016a). The company pays illegal subsidies for kerosene, and since it sells crude oil and buys refined oil, lots of money from its oil sales is diverted. Short of full privatization, an alternative recommendation is to sell off 55% of the company and deploy the revenue for development purposes, including new infrastructure for the oil sector that would translate into higher oil output levels, offsetting the revenue reduction from the sell-off (Wallis, 2015).

Nigeria's domestic price of gasoline -- $0.43 a liter, which incorporates the 67% price increase in 2016 that risked mass protests -- is still heavily subsidized ostensibly to protect the poor, but as is always the case with administratively set price ceilings, the policy leads to shortages and black markets. Since Nigeria imports 90% of its refined oil, importers are paid the difference between the market price and the controlled domestic price. However, the importers are in collusion with employees of NNPC and government officials, and in the peak year for imports in 2011, a reported $14bn (!) was squandered on these gasoline subsidies (The Economist, 2016b). Also, the incentives are in place to smuggle oil out of Nigeria into Cameroon and Benin and sell it in those countries for more than twice the price, a simple arbitrage operation (Munshi, 2018a).

Turning to the role played by the international oil companies (IOCs) in Nigeria, their participation began when a license was granted in 1937 to a consortium of Shell and British Petroleum to undertake exploratory work, and in 1957 the production of crude oil in commercial quantities began. Over the next five years non-British firms -- Mobil, Tenneco, Gulf Oil, Chevron, Agip, and Elf -- were also granted licenses to explore for oil. The relationship between the government and the operating companies are governed by three types of agreements -- joint ventures, production sharing contracts and service contracts. The run-up in international oil prices during the 1970-79 interval coincided with: a doubling of Nigeria's oil output from 396m barrels a year to 840m barrels a year; oil exports as a percentage of total exports rising from 58% to 93%; and oil revenue as a percentage of total government revenue increasing from 26% to 81% (Bourne, 2015, p. 138).

Nigeria followed the practice of other members of OPEC in becoming more involved in the oil industry specifically by increasing the royalties paid by foreign companies for its oil; the NNOC took a 100% interest in new concessions; Nigeria demanded, first, a 35%, and then a 60%, participation in existing contracts; and nationalized the local operations of BP, which was holding a 20% joint operation with Shell, both of whom, as mentioned above, pioneered oil production in Nigeria in the 1930s (Bourne, 2015, p. 139).

The oil majors have moved to sell-off onshore oil assets or shift to offshore production which is managed under different contractual arrangements, i.e., through production sharing contracts, and, as a result, allows the "majors" the freedom to operate under more favorable commercial terms (Wallis, 2015). This has resulted in a huge spike in offshore production in the last decade. Some of the "majors" -- Royal Dutch Shell, ENI, and Total -- have been selling off their onshore oilfields to indigenous companies in favor of offshore sites, in part, because of the increasing problem of security in Nigeria's "oil belt", that is, the rising level of theft and violence in the Niger Delta that was discussed above. For the "oil majors" certainty is paramount, and when production is interrupted by security issues, violence, and extortion (please see below), foreign investment begins to dry up (Wheatley, 2017).

The "macroeconomic" impacts of the oil sector on the economy are transmitted through three principal channels: through international oil prices, through the government's fiscal balance that depends on the volume of oil exports and international oil prices, and through the impact that oil prices have on the exchange rate and the current account deficit.

Both the fiscal and current account deficits are very sensitive to changes in oil prices. Increasing and decreasing international oil prices create huge problems for the Nigerian government and economy because so much of government revenue is dependent on revenue from oil output. Until recently, government budget officials typically designed the federal budget based on a level of oil output of 2.4 mbd, with a large deficit occurring if oil output falls below 2 mbd, unless international oil prices firm.

Over the last decade, international oil prices fluctuated between $30 and $125 a barrel, a factor of four! It is important to recall that oil revenue still contributes more than 60% of the federal government's

annual budget, and generates 80-90% of Nigeria's export revenue (Munshi, 2019a; Munshi, 2018b). For example, in 2016 when oil prices fell to $30 a barrel the economy went into recession -- triggering the first contraction in GDP of -1.6% in a quarter century and increasing the budget deficit above 4% of GDP -- that was compounded by the decline in oil output in 2016 to 1.83 mbd from 2.13 mbd in 2015 as a result of the attacks by the Niger Delta militants on the pipeline infrastructure, as discussed above. However, when oil prices recovered to $85 a barrel in late 2018 it triggered $4 bn in additional subsidies because of social and political reasons, as discussed above, either increasing the fiscal deficit or crowding out other already budgeted government expenditures.

It is important to note that Nigeria's tax base is very narrow, which is reflected by a tax-to-GDP ratio of only 3.5%, a ratio which, according to the World Bank, is less than half the world average, and only 25% of Sweden's ratio (Pilling, 2018b; Tax Revenue: Percent of GDP, 2019). This very low ratio highlights the vulnerability of the budget to oil price volatility. Another negative by-product of higher oil prices is the "rush to borrow" by many indigenous oil producers, who fall into financial distress when oil prices retreat since they are unable to service their debts, often resulting in bankruptcy, which also introduces the risk of a banking crisis when these loans are deemed non-performing (The Economist, 2016a). One-third of all commercial loans made by banks are to the oil and gas sectors -- and that percentage increases to 50% if all "upstream" and "downstream" activities are included -- so banks' non-performing loan ratios are strongly tied to the oil market (Munshi, 2018c).

A short digression follows on two interesting concepts that are integral for a study on economic development in resource-rich countries: the Dutch disease and the resource curse, both of which are in place when discussing the Nigerian economy.

Nigeria's "Dutch Disease" and "Resource Curse"

The Dutch disease is the statistical relationship between the increase in the development of a specific sector (for example natural resources) and a decline in other sectors such as agriculture or manufacturing. The term was coined in 1977 by The Economist to describe the decline of the manufacturing sector in the Netherlands after the discovery of the large Groningen natural gas field in 1959. The transmission of the "disease" is through the following mechanism: as revenues increase in the growing sector, the nation's currency appreciates compared to currencies of its trading partners. This results in the nation's other exports becoming more expensive for other countries to buy. In addition, imports become cheaper in all sectors, domestic employment suffers and with it, over the longer term, the skill infrastructure and manufacturing capabilities of the nation are compromised, harming the long-term performance of the economy (https://en.wikipedia.org/wiki/Dutch_disease).

To compensate for the loss of domestic employment opportunities, government resources are used to artificially create employment and the increasing national revenue from the enhanced resource exports will also result in higher government spending, often corruptly and/or inefficiently. As the sectors exposed to international competition decline, the ever greater dependence on natural resource revenue leaves the economy vulnerable to price changes in the natural resource, which in the case of Nigeria is oil.

In the case of Nigeria, as oil revenues started to flow in the 1960s the country's currency appreciated, making it cheaper to import food and textiles at the expense of domestic production (and employment). As mentioned above, today, in part because of the legacy of the Dutch disease, manufacturing comprises only about 9% of GDP in Nigeria, and while approximately 70% of Nigeria's labor force is engaged in agriculture, the country is, after China, the world's second largest importer of rice, which is among the most important food staples of Nigerians, accounting for about 10% of household food spending (Munshi, 2019b). It is important to note that food costs account for roughly 60% of the average Nigerian's personal consumption expenditures (Munshi, 2019e).

Until the 1960s, Nigeria was a net exporter of food, but in 2015 the country had a trade deficit in food equal to $3bn, increasing the demand for precious foreign exchange (The Economist, 2015b). In 2015, Nigeria reportedly had more than 200,000 farmers who grew tomatoes, but more than 50% of the crop rotted before reaching a market (Fick, 2015b). To its credit, the Buhari administration is trying to mitigate the over-dependence of the Nigerian economy on oil by increasing domestic food production to preserve

scarce foreign exchange for capital-goods imports that are growth-enhancing in nature. However, this policy involves an unorthodox currency regime that has adverse effects on the economy because of decisions made by foreign investors, in addition to fostering the culture of corruption by "special interests" pleading for waivers, exclusions, and preferential treatment in obtaining import licenses and access to foreign exchange. To boost domestic rice production, Nigeria implemented special loan schemes and a virtual (official) ban on rice imports, with the latter brought about by the Central Bank of Nigeria denying importers of 42 items -- rice being among them -- access to foreign exchange at preferential rates. While domestic rice production has increased by 60% since 2013 -- to 4.8 mmt in 2018 -- imports are expected to rise to 3.4 mmt in 2019, belying the government's claim that rice imports have been eliminated. How to square this circle? Rice imports are entering Nigeria illegally through the porous border with Benin, and then being sold at a discount to the more expensive domestically produced rice (Munshi, 2019b). The ease of importing smuggled rice is central to the discussion in the next section that argues that the endemic corruption and theft that pervade Nigerian society in both the public and private sectors undermines the long-term growth potential of the economy.

The idea that resources might be more of an economic curse than a blessing was recognized more than three centuries ago by Richard Steele, the co-founder of the daily English newspaper, The Spectator, who wrote: "It is generally observed, That in Countries of the greatest Plenty there is the poorest Living" (https://en.wikipedia.org/wiki/Resource_curse). The issue was revived during the debates in the 1950s and 1960s regarding the problems facing low- and middle-income resource-rich countries in their quest to accelerate their economic development. The term itself, the "resource curse", was coined by British economist Richard Auty (1993) to describe how countries rich in mineral resources were unable to use that wealth to boost their economies, and how these countries had lower economic growth than countries without an abundance of natural resources.

A statistical study of the resource curse, completed in 1995 by Jeffrey Sachs and Andrew Warner that was summarized and extended by the authors (Sachs and Warner, 2001), concluded that "countries with great natural resource wealth tend nevertheless to grow more slowly than resource-poor countries", that is, the statistical evidence indicates that the "resource curse" is real. Since the publication of the Sachs-Warner study subsequent research on the resource curse has been focused on the variables that are behind the negative correlation between resource wealth and economic development. As these are enumerated below, it will become apparent that Nigeria could serve as the "poster child" supporting the case that the resource curse exists, especially when compounded by the Dutch disease, discussed above, that is also at work in the economy.

The volatility in government revenue can cause enormous budgeting problems not only for meeting debt service obligations and efficiently managing multi-year physical infrastructure projects, but also for health and education budgets, both of which affect the long-term performance of the economy. When debt service is interrupted and social programs are canceled or cut, it generates mistrust among creditors -- domestic and foreign -- and popular support for the government is eroded, often leading to civil unrest. Again, it is important to recall that more than 85% of Nigeria's export revenue is derived from oil exports and about 70% of the federal government's revenue is generated from oil revenue. It is easy to see how vulnerable Nigeria's public finances are to oil price volatility and/or changes in oil output/export levels when the oil infrastructure is subject to attacks from militants.

Blinded by the temporarily bloated cash inflow from the resource exports, often much needed diversification of the economy is delayed or abandoned because the resource extraction is so lucrative relative to the manufacturing sectors that must compete in the global economy. The successful resource sector becomes divorced from the rest of the economy, that is, the extraction industries build their own infrastructure, such as roads, rail links, and port facilities. As the "private" infrastructure is built, there is no coordination to link it to the wider economy that is necessary for a diversified economy. (Please see the discussion above on Nigeria's need for -- and deficit in -- physical and social infrastructure).

The salary structure of the resource-exporting sector is also often detached from the nation's labor market, siphoning off the nation's "best and brightest", or worse, creating jobs for relatives of the political elite and other "insiders". On the subject of the skill level of the labor force, countries that rely on natural

resource exports tend to neglect education because they see no immediate need for it, exacerbating the "skills deficit" that, in part, deters foreign direct investment in the non-resource sectors of the economy. As a counter-example, resource-poor economies like South Korea spent enormous amounts on education which, in part, contributed to the country's successful climb out of poverty over the last 50 years to membership in the OECD, the club of mostly-rich countries. (Please see Table 1, in the Appendix).

Finally, the income from natural resources is generally considered an economic rent, a payment to an owner or factor of production in excess of the costs needed to bring that factor into production. The existence of the "rent" -- an example of an "excess profit" -- is a potential source of conflict between factions fighting for a share of that revenue, which may take the form of separatist conflicts in regions where the resources are produced (please see above) and/or internal conflict between government departments inviting egregious levels of corruption and theft (the subject of the next section). Lamido Sanusi, the current Emir of Kano, the commercial center of northern Nigeria, and the former governor of Nigeria's Central Bank who, in 2014, exposed the $20bn shortfall in government revenue mentioned above, conceded that "for decades Nigeria has been nothing but a rentier state, a site of the extraction of rent by an elite" group of people (Pilling, 2018a). Regrettably, both factional and internal conflict are painfully embedded into the fabric of Nigeria's politics and society.

The Role of Theft, Bribes, and Corruption in Undermining the Nigerian State

The egregious levels of corruption in Nigeria -- and for that matter throughout Sub-Saharan Africa -- is the last of the structural and institutional impediments to long-term growth that is discussed in this paper. Transparency International's 2018 Corruption Perceptions Index (CPI) presents a largely gloomy picture of Africa: only eight of 49 countries score more than 43 out of 100 on the index. With an average score of just 32, Sub-Saharan Africa has the world's lowest regional CPI score. The report cites that "while a large number of countries have adopted democratic principles of governance, several are still governed by authoritarian and semi-authoritarian leaders. Autocratic regimes, civil strife, weak institutions and unresponsive political systems continue to undermine anti-corruption efforts" (Transparency International, 2018). The World Justice Project, a Washington-based NGO, which compiles an annual Rule of Law Index comprised of 44 factors, ranked Nigeria 96th of 113 countries included in its 2016 survey (The Economist, 2017b).

With a score of 27, Nigeria remained unchanged from the 2017 CPI. Corruption was one of the biggest topics in Nigeria's 2015 presidential election -- and it was a leading issue in the 2019 presidential election as well. The first Buhari administration took a number of steps to confront the issue that included the establishment of a presidential advisory committee against corruption, the improvement of the anti-corruption legal and policy framework in areas like public procurement and asset declaration, and the development of a national anti-corruption strategy, among others. However, the deeply entrenched culture of corruption -- including theft, bribery and money laundering -- cannot be uprooted in four or even eight years. According to a Gallup poll released in February 2019, 84% of Nigerians believed that government corruption was widespread, down only slightly from 86% in 2014. It is important to note that large scale corruption in Nigeria dates back to the 1960s when the term "kleptocracy" was coined to describe Nigeria because of the extensive amount of corruption and theft suffered by the country, especially in the oil sector which was beginning to dominate the economy (Munshi, 2019a).

Ostensibly to extol the lengths to which the Swiss will go to ensure depositors of that country's world-renown reputation for bank secrecy, the late Sir David Tang recounted a segment of a short story written by Jeffrey Archer, the British author and politician. Apocryphal or not, for the purposes of this paper it is included here because it serves as an example of the extent of the perception of official corruption -- implemented through bribes, theft and money laundering -- that modern-day Nigeria is confronting:

> "A new finance minister of Nigeria visits the head of a Swiss bank, demanding to know how many Nigerians have stashed away their bribes. The Swiss banker refuses to break his code of confidentiality, whereupon the minister puts a gun to his head. Still the banker

> does not relent, saying he would rather die than besmirch the Swiss code of secrecy. At that point the minister, satisfied with the response, lowers his gun and asks the banker to open a numbered account for him so he can deposit the $5m in cash he has brought along with him" (Tang, 2017).

While corruption is widespread in Nigeria, the amount of corruption in the oil sector is unmatched by the amount of corruption in any other sector simply because, paraphrasing the infamous bank robber, Willie Sutton, "that's where the money is". (Please see above). Many anti-corruption activists believe that revealing the assets purchased with looted oil money will concentrate minds in Nigeria and in the countries that receive these funds, and this will facilitate the eventual repatriation of these stolen funds. This was the thinking behind a recent publicity-seeking event in London called the "Kleptocracy Tour, Nigerian edition" (Raval, 2017). A bus loaded with London sightseers stopped at none of the customary tourist sights such as Big Ben or Westminster Abbey but instead pulled up at carefully designated addresses in some of London's tonier neighborhoods. These multimillion-pound properties were named in a US Department of Justice civil lawsuit that exposed an alleged international bribery scheme from 2007 involving a former Nigerian oil minister, Diezani Alison-Madueke. The purpose of this expose was to underscore and demonstrate the complicity of the financial systems of the United States, the United Kingdom, and the United Arab Emirates in facilitating these corrupt practices. While this particular suit involves only $144 million in assets, Nigeria is missing tens of billions of dollars of oil revenue, as discussed above.

In addition to the allegations made by Lamido Sanusi (please see above), one of the worst oil- related scandals involved two multinational oil companies, Shell and ENI, who, in 2011, were awarded a license to drill at an offshore site -- referred to as OPL245 -- after paying $1.36bn to a Nigerian company, Malabu, which was awarded the site for $2m in 1998. As it happens, the latter company was linked to the country's then-oil minister, Dan Etete. This suit alleges that most of the money paid for the license went to Mr. Etete and a group of Nigerian politicians and officials and constituted a bribe. Trials are either ongoing -- or planned -- in Italy and the Netherlands. The expenses incurred to identify the corrupt activities, to assemble the facts, and then to litigate the alleged crimes are formidable -- even for a sovereign, oil-rich country like Nigeria, and involve years -- if not decades -- of legal wrangling before, or if, the funds are finally repatriated. For example, $600m that were part of the theft of billions of dollars during the period of 1995-98 by the late dictator Sani Abacha were only recently returned to Nigeria by the US and Switzerland (Burgis and Fick, 2016). In April 2019, Nigeria sued JPMorgan Chase in a British court in an attempt to recover another $900m that Nigeria alleges Chase should not have transferred in 2011 (Flitter, 2019).

Corruption and mismanagement in Nigeria are not limited to the oil sector. The state-owned Ajaokuta Steel Company, which was founded 40 years ago and has received $8bn of public money -- and even pays the pensions of 10,000 "retired employees" -- never produced a "beam of steel" (The Economist, 2019a). In addition, as discussed above, with an "official" ban on importing rice into Nigeria, neighboring Benin, a country of 11m people, has become the world's largest importer of rice. Most of Benin's imported rice eventually finds its way to Nigeria, with or without bribes at the border (Munshi, 2019b).

Regarding textiles, Benin, again, serves as the main conduit for transporting counterfeit consignments of textiles -- produced in 16 Chinese factories with labels "Made in Nigeria" -- that used to be produced in Nigeria. The value of textiles smuggled into Nigeria was estimated at $2.2bn a year, while the value of local production declined to $40m! In the mid-1980s Nigeria's textile sector employed 350,000 people, but by 2015 employment declined to 25,000 people. The lack of reliable power and poor physical infrastructure are largely responsible for the sector's decline, but corruption, i.e., bribes, has also been cited for the demise of domestic production (Burgis, 2015).

Bribery of judges and civil servants is rampant and kidnapping of judges (and their wives and/or children) -- and especially celebrities and clergymen -- for ransom is widespread (The Economist, 2014b; The Economist, 2017b). For example, Ngozi Okonjo-Iweala, who twice served as Nigeria's Minister of Finance and was a Managing Director at the World Bank, writes in her recent book, Fighting Corruption

is Dangerous, that her "83-year-old mother was kidnapped and bound for days" by oil marketers because the minister had blocked the payment of a fraudulent subsidy claim (Wallis, 2018). Procurement contracts are notorious for graft universally, and Nigeria is no exception. Wasteful expensing of travel and accommodations by politicians and government employees also reduces government funds available for socially-useful projects. According to The Economist, "the legislature gets in on the act too": kickbacks are requested by chairmen of parliamentary committees in exchange for a favorable outcome at hearings; shakedowns by local government officials are dressed up as local taxes; and small business owners routinely complain of gratuitous license fees being imposed around major holidays when corrupt officials' need for cash rises (Rosenthal, 2015, p. 12). As for the average citizen, a 2013 survey by the Berlin-based anti-corruption watchdog, Transparency International, revealed that more than 80% of respondents admitted that, within the preceding 12 months, a member of his (her) household paid a bribe to a policeman, and 30% made payments to teachers, local officials who issue permits and register legal documents, and utility workers (Rosenthal, 2015, p. 12).

Theft of public monies was particularly abusive during the administration of Goodluck Jonathan (2011-15), who permitted politicians and their acolytes to steal with impunity. According to The Economist (2016a), from 2010-16 just 55 people successfully stole $6.8bn of state funds! Some of these funds were allocated to buy weapons for the military's campaign against Boko Haram, and much of the diverted money was used to buy votes for President Jonathan's unsuccessful bid for re-election in 2015. Despite the current president's reputation for "clean" government, in December 2017 $1bn was diverted from Nigeria's emergency oil-fund to the armed forces to pay for the various ongoing military operations (please see above), but there has been little oversight for the use of these funds, implying that much of the funds were stolen (The Economist, 2019b). The endemic corruption in Nigeria's political system also extends to the state and local governments. Governors of most of Nigeria's 36 states -- where governance is often abysmal -- run them like "personal fiefs, amassing fortunes" (The Economist, 2019c). The culture of crime and fraud has even invaded Nigeria's higher education system: In a recent book on Nigerian crime and corruption, Stephen Ellis (2016), an expert on African affairs, writes that private colleges in Lagos offer courses in credit-card and advanced-fee fraud!

As a developing country, Nigeria should be aggressively encouraging foreign direct investment (FDI) which brings many micro- and macro-economic benefits including new technology, jobs, hard currency, etc. However, foreign investors are deterred by the level and extent of corruption since it introduces the uncertainty of whether -- and at what price -- contracts will be honored, and, of course as discussed above, lurking in the background is the vexing issue of the personal security of company executives in light of the kidnapping and ransom practices of Nigeria's various insurgent and militant groups, complemented by the bribery and extortion practices of Nigeria's federal, state and local officials (Rosenthal, 2015, p.13). According to the World Bank, foreign direct investment as a percentage of GDP for 2017 (the most recent data available) was 0.93% for Nigeria, 1.86% for all middle-income countries (including Nigeria), and 2.56% for the world. Only once in the last 20 years, in 2009, did Nigeria's ratio exceed the ratio of all middle-income countries (Foreign Direct Investment, Net Inflows (Percent of GDP)).

Finally, Nigeria's "patronage economy" that was spawned by the country's political system encourages legislators to increase the number of government agencies -- many of which duplicate the work of existing agencies -- to provide jobs for family and friends. In addition, these new agencies, eager to justify their existence, serve up a bevy of new regulations and license requirements for small businesses to comply with, discouraging new business formation and increasing business costs. In its 2019 edition of "Doing Business", the World Bank ranked Nigeria 146 out of 190 countries in its "ease of doing business" index (World Bank, 2019), though, most recently, Nigeria's ranking improved to 131 (Munshi, 2019d).

CONCLUSION

The objective of this paper is to examine the prospects for improving living standards in Sub- Saharan Africa, in general -- and in Nigeria, in particular. The first part of this paper provides a short review of the historical issues that have been cited by scholars of African history and economics to "explain" the relative lag in Sub-Saharan economic development over the last half century. These include: the trans-Atlantic slave trade; serious continent-wide governance failures; European colonization, a failure to adopt modern technology in agriculture, transport, and manufacturing; cultural biases that discourage "entrepreneurship" and individual effort to generate personal wealth; a lack of industrialization; an "education"-- or more generally, a "skills" -- deficit in the labor force; and "unfavorable geography". This part of the paper concludes with a "snapshot" of 50-year development indicators for, on the one hand, China and South Korea -- two examples of successful countries escaping from poverty on a national scale -- and Nigeria and its larger region, Sub-Saharan Africa, on the other hand, which continue to be mired in egregiously high poverty and population growth rates.

The second part of the paper provides an overview of the principal structural and institutional weaknesses confronting the region, in general, and Nigeria, in particular. These issues are: the serious demographic and urbanization trends; the deficit in physical and social infrastructure; regional, ethnic, and religious stresses that are spawning violence, crime, the breakdown in the rule of law that is increasing personal and economic insecurity; the over-reliance on commodity exports in the export structure, a perennial problem of resource-rich developing countries; and the egregious level of public and private sector corruption that poisons Africa's economies, states, and societies.

Needless to say the structural and institutional failures discussed above that are facing Nigeria and other Sub-Saharan African countries cannot be addressed in a single -- or even two -- presidential terms, that is a decade or so, but, as Hans Rosling said, "development takes 100 years". In light of the still elevated UN population projections for Sub-Saharan Africa (and Nigeria) described earlier in this paper, combined with the equally high percentage of Nigeria's population living in extreme poverty -- almost 50% of the population (The Economist, 2019d) -- can Nigerians, Sub-Saharan Africans, and the world wait 100 years for these issues to be addressed and resolved?

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APPENDIX

TABLE 1
COMPARATIVE DEVELOPMENT STATISTICS

Indicator	Source	China	Nigeria	South Korea	Sub-Saharan Africa
Population					
2017 Level (millions)	WB	1,386.00	190.9	51.5	1,061
Annual Percentage Growth:1960-2017	HDR	1.3	2.56	1.30	2.73
Projected Annual Percentage Growth: 2015-2020	HDR	0.4	2.6	0.4	2.7
Life Expectancy					
Life Expectancy at Birth:1960	WB	43.8	37.0	53.0	40.4
Life Expectancy at Birth:2017	WB	76.4	53.9	82.6	60.8
Avg. Annual Increase in Life Expectancy (years): 1960-2017	WB	0.57	0.30	0.52	0.36
Fertility Rate (Births per woman)					
1960	WB	5.8	6.4	6.1	6.7
1990	WB	2.4	6.5	1.6	6.4
2017	WB	1.6	5.5	1.1	4.8
Infant Mortality Rate (Per 1000 live births)					
1960	WB	82.9 (1969)	193.7 (1964)	79.2	na
1990	WB	42.1	125.6	13.3	107.8
2017	WB	8.0	64.6	2.8	57.5
2017 rate / 1960 rate	WB	0.10	0.33	0.04	na
Gross Domestic Product					
GDP per Capita: 2017 (In 2011 dollars, ppp)	HDR	15,270	5,231.00	35,945.00	3,399
GDP per Capita: (In constant 2010 dollars):1960	WB	191.8	1,367.60	944.30	1,103.70

Indicator	Source				
GDP per Capita: (In constant 2010 dollars):1990	WB	730.8	1,514.10	8,464.90	1,286.90
GDP per Capita: (In constant 2010 dollars):2017	WB	7,329.10	2,412.00	26,152.00	1,652.20
Annual Percentage Change:1960-2017	WB	6.6	1.0	6.0	0.7
Poverty Headcount Ratio: Percent of the Pop. (at $1.90-a-day of 2011 dollars, ppp)					
1990-2	WB	66.2	57.1	na	54.7
2015 (unless otherwise indicated)	WB	0.7	53.5 (2009)	0.2	41.0
Vulnerable Employment as a Percent of Total Employment					
1991	WB	66.8	82.6	35.4	78.2
2018	WB	43.8	78.4	23.5	74.0
Primary Education Completion Rate: Percent of Relevant Age Group					
1970	WB	na	na	96	46
1990	WB	100	82 (2000)	99	na
2016	WB	100	74 (2010)	96	69
Percent of Population Using Safely Managed Drinking Water Services					
2000	WB	na	16.8	96.8	18.3
2015	WB	na	19.4	98	24.2
Human Development Index					
2017 Ranking	HDR	86	157	22	na
1990 Score	HDR	0.502	0.484 (2010)	0.728	0.398
2017 Score	HDR	0.752	0.532	0.903	0.537

Source:
United Nations Development Programme (UNDP). (2018). Retrieved from http://hdr.undp.org/en/2018-update
World Bank at https://data.worldbank.org/