COVID-19, Energy Volatility, and Implications for the Oil-producing States in Africa

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ABSTRACT

This chapter examines the severity of the 2020 energy crisis in the United States of America and its implications for oil-producing African states, employing a qualitative research methodology. By using Case studies from Nigeria, Angola,, and some selected Middle East and North African states,, along with secondary literature from books, journal articles,, and institutional reports, the paper strives to better illuminate the depth and severity of the energy crisis, with the supply and demand theoretical underpinning further underscoring the situation. Since the energy crisis was not a permanent phenomenon, this paper argues that it was both a transient occurrence and a game-changer. The detrimental economic effects on African economies in 2020 were primarily caused by the COVID-19 pandemic and exacerbated by the United States' energy crisis. Such a cataclysmic energy and economic downturn led to 2020 being entirely written off in the energy fraternity. Energy events of the year caused an economic blizzard that affected the energy sector in the United States, with far-reaching effects on energy-producing states in Africa, such as Nigeria and Angola. For the first time, U.S. oil prices plummeted into negative territory, reaching their worst record. West Texas Intermediate futures, the United States' benchmark, plummeted to unprecedented levels, triggering a domino effect in the oil market and causing ripple effects in African energy-producing states such as Nigeria, Angola, Algeria, and Egypt. A decline in global oil demand, induced by the COVID-19 pandemic, created a supply glut due to the sudden drop in energy demand. Crude oil volumes held in the United States reservoirs rose exponentially, while the COVID-19 pandemic caused retrogressive effects on its supply by drastically curtailing consumption. Travel restrictions imposed worldwide virtually shut down the world by suffocating energy demand, causing fuel prices to fall drastically as both onshore and offshore storage space quickly filled up. A shortage of storage facilities compelled U.S. oil producers to pay buyers to take away deliveries, causing over-supply and falling prices in energy-producing states in Africa. Job fatalities have become a significant negative externality of economic stagnation in the energy sector in the United States, as approximately ten million people are employed in the oil industry, either directly or indirectly. The overabundance of crude oil in the USA also led to far-reaching ripple effects in energy-producing states in Africa, including job losses, economic downturns, and reduced revenue in countries such as Nigeria, Egypt, Angola, and Algeria.

INTRODUCTION

By being affected by two significant setbacks concurrently—the collapse of oil prices in 2020 and the escalating costs of thwarting the spread of the COVID-19 pandemic—the Nigerian economy was dealt a heavy economic blow. One of these setbacks alone was sufficient to disrupt and frustrate 2020 economic growth. Nevertheless, both the economic blizzards co-occurring proved to be devastating. Evolving during a fragile period characterized by stunted global growth, the two 2020 regressive phenomena affected Nigeria, which was at its lowest point since the 2007-08 global financial crisis. Since the impacts of the two phenomena are intertwined, they have far-reaching ramifications (Gopaldas, 2020). Being dubbed by many as the second world disaster of monumental proportions from World War 2, the COVID-19 outbreak had calamitous ramifications on lives and economies. Unlike World War II, the COVID-19 pandemic brought devastation in an invisible form, causing retrogressive effects in the health sector, business, transportation, and energy sectors. States' impositions of internal, regional, and international travel restrictions meant that all forms of transport had to park, diminishing the fuel demand and price. Crude stocks accumulated due to a lack of demand, resulting in lower prices. Many economies were exposed to external shocks, forced to shrink, and experience liquidity crunches. Oil-producing

states that rely heavily on crude oil production for survival were fiscally squeezed by the tumultuous economic event, which left such economies in chaos and limited fiscal space. Such states include African oil-producing states such as Nigeria, Algeria, Angola, and Egypt. As states gradually lifted lockdowns worldwide, business was anticipated to gradually normalize and improve oil supplies, thereby salvaging states and companies from bankruptcy, shutdowns, and mass job losses.

Theoretical Framework

Two theoretical perspectives inform this study of supply and demand. A product's quantity or service that a manufacturer can provide to the market at a given price in a given time frame denotes the supply law (Riley, 2020). Such a law is a fundamental rule that forms an essential feature, whereby, as the price of a commodity under supply rises, the business also expands its supply to the market. As the price of the commodity or service in supply falls, the business also curtails supply to the market (Riley, 2020). All other factors being constant, the law of supply technically states that the quantity of a good or service produced and offered for sale increases with an increase in its price and decreases as the price drops (Chappelow, 2018). Such is an economic law where the relationship between price and quantity demanded is symbiotic. Other essential factors being constant, the quantity of a good demanded per period relates inversely to its price (Hayes, 2019). Embedded in profit, production, and cost motives, the law of supply strikes a meticulous balance to avoid oversupply and maintain profitability. In the profit motive, businesses increase output when demand increases, aiming to maximize profits (Shikha, 2019). In the production and costs motive, a firm's production costs typically rise when output expands; therefore, a higher price is needed to cover the extra costs (Hayes, 2019).

Demand refers to the quantity of a good or service that consumers are willing to buy at a given price within a specified period. Factors such as the price of goods or services, consumer incomes, the expected future price of the product, and the number of consumers in a market (Riley, 2020) influence demand. An inverse relationship exists between the price of a good or service and demand, indicating that demand increases when the price falls and decreases if the price rises (Heakal, 2019). As the price falls, a consumer switches from rival products towards the product, and as the price falls, a customer's willingness and ability to buy the product increases. Likewise, as the price rises, a client's opportunity costs of purchasing the product fall (Liviu and Claudia, 2011). Thus, the effects of income and substitution make demand rise as the price falls. Regarding the income effect, there is an income outcome when the price of a good or service falls, allowing the consumer to maintain the same level of consumption at a lower expenditure. If the good is expected, some of the resulting increase in real income is used to buy more stock (Van der Vorst, 2004). Conversely, when the relative price (opportunity cost) of a good or service rises, consumers seek substitutes, resulting in a decrease in the quantity demanded of the commodity or service (Van der Vorst, 2004). Regarding the substitution effect, there is a substitution influence when the price of a good or service falls, as the product is now relatively cheaper than an alternative item, and some consumers switch their spending from the alternative good or service (Whelan and Msefer, 1996).

RESEARCH METHODOLOGY

This study utilizes qualitative research methodology. Data were gathered from secondary sources, including books, journal articles, media sources, and institutional reports, to gather relevant information on the impact of COVID-19 on the United States of America and the African oil industries. Apart from complementary research, case study research is also utilized to analyse the impact of the COVID-19 pandemic on oil-producing states in Nigeria, Angola, and select Middle East and North African states. The document's inclusion criteria were primarily based on academic sources, focusing on the impact of the 2020 pandemic on energy economics in the United States and selected African and Middle Eastern states. Exclusion criteria for documents included those that did not focus on the COVID-19 pandemic or those that generally addressed the pandemic but did not address any of the paper's themes. Since books were scarce and published journals on the effects of the COVID-19 pandemic on the United States were limited, the study has also incorporated media sources to supplement its findings. The data collected was analysed using a thematic analytical approach, where themes were identified and the data were arranged according to these themes.

RESEARCH FINDINGS

1. In comparison to African oil-producing states such as Nigeria, Angola, South Sudan, Egypt, and Algeria,

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the effects of the COVID-19 pandemic on West Texas Intermediate futures, particularly Brent, and the United States economy in general have been less severe. In African oil-producing economies, the consequences were more calamitous and far-reaching.

2. Since oil prices began to improve and normalize as lockdowns started to be lifted, the fall of crude oil to negative territory in the United States proved to be a fleeting phenomenon. When lockdowns were lifted, the move led to an increase in demand for energy as transportation resumed, shifting the crude oil price from negative to positive territory.
3. Contrary to the situation in the United States, the COVID-19 outbreak caused more severe recessions and layoffs in African oil-producing states. Many companies in Africa failed to reopen even after lockdown regulations were lifted. Many of those that managed to reopen did not operate at total capacity, with some operating at a low rate of 20%.
4. Apart from being gripped with death fears from the pandemic, the COVID-19 era cultivated fears of a post-COVID-19 job loss. Many employees during lockdown had seemingly lost confidence and remained sceptical about whether they would be recalled to work due to the uncertainties and complexities of the pandemic. Such fears were rampant in Africa, where states have no cushioning mechanisms to protect their citizens in times of disaster and unemployment. In the United States, such fears were minimal since United States citizens receive unemployment benefits in both good and bad times.
5. The demands of the pandemic compelled many African states to concentrate their budgets on fighting the epidemic, for example, by acquiring medical and sanitary facilities and disseminating health education. Such prioritizations resulted in the neglect of other sectors, such as education, food supply, and agriculture, ultimately leading to stunted growth. On the contrary, the United States, which has the largest budget in the world, managed to withstand such economic scenarios as all its economic sectors maintained equilibrium.
6. Unlike African oil-producing economies, the United States economy managed to recover from the scorching effects of the crude crash expeditiously. American economic turnaround strategies drove the economy to implement sound economic measures, leading to massive job creation, mitigating the effects of unemployment, and stabilizing crude prices. African oil-producing states were heavily impacted by the pandemic's effects and continued to bear the brunt of the COVID-19 pandemic on both economic and social fronts.

LITERATURE REVIEW

A Distinctive Oil Retrogressive Scenario

Induced by the 2020 coronavirus lockdowns, the United States' crude oil production reached its worst record ever as demand dwindled, prompting crude oil storage facilities to fill up as customer demand plummeted, resulting in industry-wide suffocation. Due to the novel lockdowns, industries shut down, airplanes and trains were grounded, and automobiles were parked as businesses virtually halted worldwide. As the volume in the U.S. storage system continued to rise daily, the COVID-19 pandemic severely truncated consumption (Meredith, 2020). U.S. oil prices plummeted, falling below $0 to $ 37.63 a barrel. Such a slump became the lowest since NYMEX opened oil futures trading in 1983 (Harowitz, 2020). New York Cable News Network (2020) posits that the American oil industry experienced challenging times due to the COVID-19 pandemic, which led to a scarcity of storage space resulting from severely reduced demand. A demand shortfall was also exacerbated by Saudi Arabia and Russia's oversupply, resulting in a drastic decline in oil prices. Consequently, the oil oversupply drastically curtailed the profitability of the United States' oil companies as crude oil prices turned negative. Oil prices plummeted to unprecedented levels, marking the worst record in the United States' energy history (Abramov, 2020). As demonstrated in the United States, transportation and industrial activity account for more than 90% of crude oil demand. Therefore, the energy slump inevitably forced such sectors to remain depressed due to the coronavirus lockdowns.

However, some energy optimists believe that this phenomenon might be a temporary issue that will be alleviated as soon as economies reopen and demand returns to normal. Schieldrop (2020) notes that the 2020 oil scenario indicates the United States faced an oil storage problem. In the second half of 2020, energy experts anticipated that the oil storage capacity problem, which had been bedeviling the country, would disappear quickly as demand for oil was expected to bounce back robustly, with investors also resuming business. Such an optimistic energy

restoration explains why the Brent crude average oil price for 2021 remained fixed at $40 a barrel. Analysts at Goldman Sachs noted that landlocked crude oil prices were the most severely affected, compared to waterborne crudes such as Brent. Waterborne crudes, such as Brent, were expected to be far less affected by the coronavirus shock**,** with prices likely to remain near the cash costs of $20 a barrel—albeit with temporary spikes below (Meredith, 2020).

Meanwhile, Brent Crude, the benchmark used by Europe and the rest of the world, which was already trading based on June contracts, was also weaker, down 8.9% to less than $26 a barrel (Rudakov, 2020). Unlike West Texas Intermediate (WTI), Brent is waterborne and has the advantage of abundant tanker storage. Brent is located on an island in the North Sea, approximately 500 meters from the water, with nearby tanker storage facilities. In contrast, WTI is landlocked and located 500 miles from the nearest water (Meredith, 2020). Therefore, due to their advantageous storage position, waterborne crudes are better positioned to cushion the storage and price shocks than landlocked ones in the U.S., Russia, and Canada. Senior Commodity Strategist Daniel Hynes emphasized that, being landlocked, West Texas Intermediate futures would likely continue to experience storage pressure due to a decline in oil demand. Prices would remain under intense pressure unless the situation ameliorated quickly over the next few months (Haynes, 2020). Tanker Trackers.com founder Samir Madani advised Consumer News and Business Channel (CNBC)'s Capital Connection that an expectation of production cuts in the United States due to the energy crisis would be anticipated. Being vital to global energy, the United States' energy viability stands as the world's energy sanctuary, as prices would have been exponential and insurmountable without the country's energy (Madani, 2020).

Companies that acquired excessive debt during the good times might have found it difficult to survive the harsh economic times brought on by COVID-19. Artem Abramov, Head of Shale Research at Rystad Energy, warned that in a $20 oil environment, 533 United States oil exploration and processing corporations were expected to file for bankruptcy by the end of 2021. At S10, energy experts estimated that there would be 1,1001,100 bankruptcies. At $10, energy experts also anticipated that every United States Energy and Petroleum (E&P) company with debt would have to consider strategic opportunities or file for Chapter 11 (Abramov, 2020). The most painful aspect of the crash is that it occurred when the world was starting to experience an era of energy tranquility, following then-US President Donald Trump's intervention in the Russian-Saudi Arabian oil price war. According to Trump, the agreement saved millions of jobs and enhanced stability in the oil market (Egan, 2020). In appreciating the milestone agreement, Trump (2020) remarks that such an economic maneuver protected many energy jobs in the country. Trump (2020) congratulated Russian President Vladimir Putin and Saudi Arabian King Salman for reaching a compromise. Saudi Arabia, Russia, and other producers attempted to increase prices through a deal to reduce production by 9.7 million barrels for May and June. Such a drastic cut was perceived as insufficient due to the advent of the COVID-19 lockdowns, which significantly constricted the energy demand.

Furthermore, oil production could not be shut off, as production wells depend on pressure, and a shut-off valve would complicate matters. Oil storage facilities remained at risk of overflowing, increasing the likelihood that some oil producers in the United States and Canada might start paying customers to take crude off their hands, according to Staunovo (Harowitz, 2020). A global oil glut sent prices so low that sellers holding U.S. crude contracts paid buyers as much as $30 per barrel to take it off their hands (Heath, 2020). American oil experts and economists believe that Saudi Arabia needs to reduce its oil supply to the U.S. due to the storage crisis. Kilduff John of Again Capital reports that energy analysts predict 40 million barrels of Saudi Arabian oil will be delivered to the United States, adding to the already abundant supplies available. Such a delivery might be the last one due to the critical energy development. The Wall Street Journal (2020) notes that the surplus is so prevalent that producers store oil in giant vessels, which roam the oceans in search of a place to offload their excess. Price slumps induced by the coronavirus lockdowns and declines in demand have particularly battered the U.S. shale oil industry. U.S. oil producers had to shut in wells and lay off tens of thousands of workers (Suleymanova, 2020).

Impact of Energy Volatility on the Oil-producing States in Africa

Unlike the USA, which has a diverse economy that does not solely depend on oil production, African oil-producing states were caught in a dilemma by the sudden shift in energy events, as their economies were likely

to crumble due to their heavy reliance on oil. In times of economic turmoil, the United States is a country that benefits from diversity. Beattie (2020) notes that, even in the era of constrained economic growth, the United States' economy is not as closely tied to the price of oil as that of other top oil-producing countries. Its economy is diversified, and although oil and gas have been at the forefront of its recent economic growth, such commodities do not qualify as the economy's most important sector. Although the slump in growth may weaken other sectors, divisions such as manufacturing remain largely unmoved by the crisis and continue to propel the economy**.** Thus, the United States economy can continue to flourish because no single sector dominates the economy**.** Due to the country's diversity, its economy can withstand economic shocks relatively comfortably. A similar scenario does not apply to states such as Venezuela or Russia, whose fortunes depend on the appreciation or depreciation of oil prices. Due to its diversification, the United States economy is resilient, and the price of oil does not determine its fortunes. Therefore, the country's economy can withstand prolonged harsh economic conditions, such as high or low oil prices; consequently, factors beyond low oil prices can still shake the country's economy.

DISCUSSION:

The Case of Nigeria

Experiencing a double tragedy, the Nigerian economy was confronted with the 2007-2008 global financial crisis, which destabilized its economy. Furthermore, the 2020 collapse in oil prices, resulting from COVID-19 lockdowns and the costs incurred to combat the pandemic, imposed a significant financial burden on its economy. Such two economic blizzards had ripple and enduring repercussions on the country's development. Since Nigeria heavily depends on oil for its economic survival, the crude oil price crash also negatively impacted the country's exchange rate. BudgIT (2014) asserts that the depreciation of the naira necessitated inflation in Nigeria, which was further exacerbated by the increased costs required to purchase goods and services within the country. A dire economic situation has led to the continued skyrocketing of prices for goods and services in the country, resulting in high import costs due to the depreciation of the naira. Due to the reduced revenue in dollar terms, the naira was under continuous pressure as the country continued to earn reduced revenue from gas and oil exports. Consequently, the scenario made importing items costly, inflicting a heavy economic and social burden on the Nigerians. Inflation was envisaged to persist and become more pronounced in Nigeria if efforts were not made to forestall the deteriorating crude oil prices (Imimole and Enoma, 2011). An absence of funds in financial institutions to execute financial services efficiently and effectively was another consequence of the crash in crude oil prices. Vanguard (2016) supports this proposition by stating that the decrease in oil prices has led to liquidity problems for financial services in many Nigerian banks. Several banks have also been unsettled by the oil marketers' inability to repay the bank loans they had previously borrowed. Such failure to pay hurt most banks' financial balance sheets, culminating in a scarcity of funds required to pay employees and potentially resulting in retrenchments, unemployment, bank inefficiency, and closures. Furthermore, declining crude oil prices caused a significant financial issue in the capital market and the Nigerian oil sector, as oil prices play an integral role in the country's economy (Chris and Onyinye, 2015).

According to the World Bank, Nigeria was set to emerge from recession by its estimates in 2020. Due to the 2020 energy crisis, the economy is expected to continue experiencing a deep contraction, which could be protracted given revisions to global growth forecasts. An unfavourable economic situation will potentially have severe consequences for the country's revenue collection figures and finances (Gopaldas, 2020). Plummeting crude oil prices will continually offset the government's 2020 US$35 billion budget, which was to be partly financed by local and offshore debt. Such a budget was based on an oil price of US$57 per barrel and production levels exceeding two million barrels per day. By 2020, oil prices were languishing between US$20 and $30 per barrel (Gopaldas, 2020). Nigeria is a large, unstable, and highly exposed exporter with a small Sovereign Wealth Fund and is vulnerable to a lasting, low oil price (Kitous et al., 2016). Therefore**,** the country is susceptible to fragility even under minor energy shocks, let alone the 2020 oil blizzard. Additionally, the Nigerian energy predicament was exacerbated by OPEC's production control measures, which resulted from the decline in crude oil prices. More oil production to cover the shortfall was impossible due to the Organisation of the Petroleum Exporting Countries (OPEC)'s regulation of truncating production by ten million barrels daily in May and June (Africa News, 2020). Producing more to offset some of the shortfalls would be a departure from OPEC's regulations, a risky move that would put further downward pressure on prices (Gopaldas, 2020). Crashing crude

oil prices cause a domino effect of stagnated savings culminating in stalled inflows of funds into the Excess Crude Account. Diminishing crude oil prices led to austerity measures in various parts of the country, making the economy struggle to increase its savings (Gopaldas, 2020).

Constricted revenue problems also confronted the Nigerian economy, leading to limited fiscal space. With more than half of the country's revenue coming from oil taxes and royalties, the impact on revenue and the fiscal situation was immense, and the economy had little ability to influence either price or volume. There were limited fiscal buffers and foreign exchange reserves of just US$34 billion, which were depleted by US$10 billion in one year while defending the naira, which was devalued in March (Vanguard, 2016; BudgIT, 2014; Gopaldas, 2020). Crashing crude oil prices led to inflation, massive layoffs of employees in private companies, and an increased cost of living. Additionally, deteriorating crude oil prices also led to the non-payment of salaries by the state governments, increased the sovereign exchange rate, reduced the amount of funds flowing into the foreign reserve, and depleted the excess crude oil account (Adeoye and Atanda, 2011). Crude oil impulsiveness also poses a threat to the states' capital expenditures, as can be demonstrated from the Nigerian scenario. A debt crunch and currency weakness were triggered by the 2020 energy instability in oil-producing African states, particularly Nigeria and even after rejigging its 2020 budget and drawing down US$150 million from its Sovereign Wealth Fund, Nigeria still approached the International Monetary Fund (IMF) for US$3.4 billion and the World Bank for US$ 1 billion. Without debt suspension or cancellation, the result will be a material deterioration in the debt-to-GDP ratio (and debt service costs), further currency weakness, and deeper falls into sub-investment grade territory (Gopaldas, 2020). The crude oil price crash was projected to increase incurred debts in Nigeria, as the country required additional funds to cover the deficit, considering the stagnation of the excess crude oil account. However, more than this might be needed to bridge the gap between the country's expenditure and the decrease in revenue (Sanusi, BudgIT, and Ogochukwu, 2016).

A lack of investor confidence and foreign capital flight potentially hampered the country’s economic development efforts due to the 2020 energy crisis. Access to capital markets was already prohibitively expensive, and despite countermeasures, a flight of foreign capital and investment occurred, according to figures from the Institute of International Finance. Already, the country’s policy space was highly constrained, and Standard and Poor’s recently put the country's B rating on a negative outlook (from stable). Fitch lowered Nigeria's credit rating from B+ to B and kept the country on negative watch. Investors became increasingly and rightly concerned (Gopaldas, 2020; Africa News, 2020). Stakeholders initially interested in Nigeria's massive potential for growth became nervous due to the depreciation of the local currency. Such a scenario was evident in sovereign bond yields, which peaked in 2015 (Vanguard, 2016; Gopaldas, 2020; Ogochukwu, 2016). Abysmally low economic activities in the country’s capital market were among the problems expected to intensify in Nigeria due to the precariousness of oil prices in 2020. The decrease in crude oil prices affected economic activities in the capital market, resulting in a gloomy atmosphere. Nigerian economic managers strove to respond to fiscal and twin monetary crises caused by dropping crude oil prices (Ogochukwu, 2016). Crushing crude oil prices in the country were also associated with unethical business practices, including financial scandals. Most companies strove to maintain luxurious lifestyles during the crash in crude oil prices. Consequently, the executives and directors of such companies conducted business activities that were inconsistent with the company's policies. Such executives meddled with firms’ accounts and assigned bonuses to themselves and their cohorts (Gopaldas, 2020). A notable example of such a scandal in Nigeria occurred at Afren Oil and Gas Company, resulting in the sacking of the company's executive directors and the establishment of a new administration (Odupitan, 2017).

The Case of Angola

In Angola, the COVID-19 pandemic inflicted a health and economic crisis in 2020. Consequently, the country’s economy, which relies heavily on oil exports, was adversely affected by the decline in oil prices. In addition to the economic challenges already faced by the country, the pandemic brought oil drilling to a standstill, further endangering a nation that heavily relies on oil revenues and is burdened with a substantial debt that exceeds its economic output (Browning, Zhdannikov & George, 2020). An oil price crash compelled all international petroleum drilling corporations in the country, such as ExxonMobil, Total, BP, Chevron, and ENI, to either ditch or halt their drilling rigs. Total, a French oil company responsible for 50% of Angola's oil output, halted drilling for new oil due to the COVID-19 pandemic, focusing instead on the consignment they had in place at the time. The cessation of drilling processes marked the first time since 1984 (Browning, Zhdannikov, & George, 2020).

Due to the economic strain and the ever-souring international debt, the country presented itself for debt service suspension at the G20 Debt Service Suspension Initiative. Additionally, the government also agreed with some of its large creditors to schedule debt re-profiling processes (IMF, 2020). The oil price plunge during the pandemic was a significant economic blizzard for Angola, compelling the country to defer graduating from the U.N. group of least-developed states, a prestigious political and national achievement (Farand 2021). As oil revenues plummeted with increased expenditures needed to address the COVID-19 crisis, the country's debt was projected to soar to more than 130% of its GDP by the end of 2020. Angola's graduation from the world's poorest countries means the country loses support measures, such as capital building, preferential market access, and specific funding opportunities, including those addressing climate change (Farand, 2021).

Angola was compelled to seek financial assistance from the IMF in 2020 due to the COVID-19 crisis, the decline of the country's economy, and the decline of the oil sector, factors that pushed the country to the brink. A bailout package of US$1 billion was approved by the IMF for Angola, bringing the country's total financial support to US$4.5 billion under the three-year program (IMF, 2020). Capital Economics (2020) forecasted a 3.5% decline in the Angolan economy in 2020 and an 18% devaluation of the kwanza due to the global oil price slump induced by the coronavirus pandemic. In total, oil prices were projected to fall by 35% in 2020, which would be detrimental for major African producers such as Nigeria. However, Angola's prospects looked optimistic towards 2020. Reforms to investment legislation by João Lourenço, the country's president, increased the country's exposure to energy measures as reforms were instituted. Such reforms enhanced excellent transparency and eradicated corruption. Towards 2020, the country planned to operate more drilling ships than any other African country (Browning, Zhdannikov & George, 2020). The COVID-19 pandemic significantly disrupted Angola's economic trajectory, as the epidemic halted the country's plans and economic progress when global lockdowns were implemented. Consequently, the lockdowns culminated in stifling demand for energy and compelling international energy investors to cut billions of dollars from Angola's planned spending. A truncated demand from China, the coronavirus's first victim, and Angola's major buyer hit the Angolan economy hard (Browning, Zhdannikov & George, 2020). Additionally, the pandemic exacerbated the country's debt burden due to the halt in oil exports. Apart from receiving a US$3.7 billion loan from the IMF in 2019, the country also owes billions to China and has a substantial single bilateral debt burden in Sub-Saharan Africa. Its debt-to-GDP ratio has increased by an astronomical leap in 20 years to above 100%, and servicing its debts consumes up to US$9 billion annually (IMF, 2020; Browning, Zhdannikov, & George, 2020).

A Case of Other African Oil-Producing States

African oil-producing states were confronted with similar and more diverse effects of the crash in crude oil on a political, economic, and social divide. Such effects sometimes led to project deferrals in the oil and gas sector. Vast amounts of money are incurred in the exploration of crude oil. However, the expenditure on oil exploration no longer matched the revenue due to the decrease in oil prices in 2020. Diminishing oil prices led to the downsizing of personnel in companies, potentially affecting the decisions of international oil companies to undertake offshore projects that require a substantial investment (Price Water Coopers, 2014). Many airlines, in particular, and the aviation industry as a whole were affected by the slump in crude oil prices, which had ripple effects on their businesses. On the contrary, the crash in crude oil prices impacted short-term benefits for many airlines, enabling the industry to boost revenue with reduced costs. However, the benefits might not be as substantial as many anticipated, considering that the profitability of the airline business was low despite a 50% decrease in unit costs (Saketa, 2016). A worse scenario for the aviation sector in the COVID-19 era was that all airplanes were being parked, as domestic, regional, and international air travel was suspended to reduce the transmission of the virus and flatten the curve of new infections. Airlines, therefore, did not make a profit despite the crash in crude oil prices. If comparisons are made to measure countries' exposure to the oil market in relation to political stability, African oil-producing countries such as Sudan and South Sudan were not exposed. However, the two states were volatile due to prolonged and incessant conflicts. A persistent low oil price was more likely to worsen the situation by limiting the state's capacity to provide essential services (Gopaldas, 2020). Without sound support from the Sovereign Wealth Fund, the rest of the Sub-Saharan countries appeared highly exposed. Among the less unstable, Angola had the largest population and requested backup support from the IMF (Zhu, 2016). North African countries such as Algeria, a relatively large country with 40 million inhabitants, are susceptible to oil price changes, with low reserves per capita, a limited SWF, and a low political stability index. Algeria appears vulnerable to a prolonged period of low oil prices, particularly in the current context of

rising extremism in the region and conflicts at its eastern border (Libya) and in the South (Niger, Mali) (Adeoye & Atanda, 2011; Africa News, 2020). For conflict-ridden Libya, a relatively low oil price period could either exacerbate the situation by reducing the remaining capacity to provide essential services to the population or diminish the factions' ability to finance the war (Africa News, 2020). Oil-importing countries of the Middle East and North Africa (MENA) were not spared from the energy interruption. Sayed (2016) professes that some MENA oil-importing countries benefited from the 2020 decrease in oil prices. On the one hand, countries such as Lebanon, Tunisia, Egypt, and Jordan enjoyed lower import and subsidy bills. However, such states experienced decreased investments, expatriate remittances from oil-exporting countries in the region, and a decline in tourism revenues. Also affected by the decrease in oil prices, the Gulf Cooperation Council (GCC) countries reduced public salaries, cut spending on fuel subsidies, and drew down reserves. Dwindling oil prices had corrosive effects, either directly or indirectly.

Crude oil fragility has had scorching effects on the MENA countries through tempestuous exchange rates, which resulted in inflation. When roping in expert research and information, the Global Economic Prospects Flagship Report (2016), which does energy and anomic coverage reports for the MENA countries such as Egypt, notes that the real effective exchange rate (REER) appreciated in 2016, weighing on export competitiveness and further casting the exchange rate into jeopardy due to the 2020 rough economic times. Such an economic circumstance reflected high inflation, which averaged 10.3 percent in the first ten months of 2015. To mitigate the negative externalities resulting from the economic conundrum, the Egyptian Central Bank implemented austerity measures, including restricted access to foreign currency and nominal devaluations, to address an acute shortage of foreign currency. The currencies of oil-exporting countries, such as those of Libya and Algeria, depreciated, partially offsetting the local currency revenue loss from lower United States dollar prices of oil exports. On the contrary, the fall in crude oil prices has yielded positive results for the betterment of other productive sectors of the economy and the consumers. Energy accounts for up to 50% of the production cost of many commodities. Therefore, the drop in oil prices reduced the production costs of many other commodities. In terms of agricultural commodities, corn, for instance, was the most affected by lower oil prices, as lower energy costs reduced production costs, increased margins, and encouraged more planting (Sainsbury, 2015). Furthermore, the decline in oil prices had already affected the prices of some commodities; for instance, the prices of fertilizers declined by 8.5 percent; food prices declined by 4.8 percent; metal prices declined by 2 percent, and raw materials prices declined by 1 percent, (Africa News, 2020; Gopaldas, 2020). Falling oil prices reduced the need for fuel subsidies and presented an opportunity for subsidy reform with a limited impact on consumer prices. Such subsidy reform led to a comprehensive and permanent shift towards more market-based fuel prices, and, accordingly, the distortions and inefficiencies associated with the subsidy were removed (Gopaldas, 2020; Africa News, 2020).

A Passing Wind or Game-Changer?

Although they were ephemeral and cataclysmic, the COVID-19 pandemic lockdowns and the United States' West Texas Intermediate oil crash had a profound global impact on the economy and society. The West Texas Intermediate Oil Price crash gradually normalized as COVID-19 restrictions were eased. All forms of transport could operate, and fuel was in demand once again. Demand normalized as the pandemic subsided due to the advent of COVID-19 vaccines, such as those developed by Johnson & Johnson, Pfizer, BioNTech, AstraZeneca, Moderna, and Sputnik V. Similarly, the COVID-19 pandemic also subsided as vaccines were developed and administered, prompting the World Health Organization to declare the pandemic a menace. Justifiably, the two disasters in this regard were, therefore, passing winds. Admittedly, the two misadventures were passing winds of change as they altered how African states would conduct their businesses in the post-pandemic era. Such passing winds also compelled African states to enact legislation to institute policies to ameliorate their economies and revamp the lives of their people. Although the COVID-19 pandemic had adverse effects, such as a high mortality rate, it ultimately became a catalyst for change that altered the African landscape for the better, creating new opportunities that states and their citizens harnessed for their betterment. Many policies and regulations enacted by states in the pandemic era to benefit the people remain in place. In South Africa, for instance, the Social Security Grant was increased from R350 to R550, and the government continues to review the grant. In Angola, relief policies to support vulnerable individuals remain in place, including those related to tax exemptions, value-added taxes on imported goods, and price regulation for certain medical goods (IMF, 2020). Government spending austerity measures, such as the reduction in the number of ministries and monetary measures enacted in the COVID-19 era to help financial institutions remain in place, bear testimony that the

COVID-19 era, a passing wind, became a game-changer.

What New Opportunities Do We Realise Now from the COVID-19 Pandemic and the 2020 Energy Volatility Crisis?

Some of the opportunities in the post-COVID-19 and oil crash crises that African states can realize now are to focus on enacting legislation and policies that help mitigate the downturns in the short term, with a long-term focus on navigating ways to have leveraging mechanisms for future downturns such as pandemics, rapid and sudden inflations and unforeseeable hazards (Ayeni, 2020). African states also realize an opportunity for accelerated economic diversification, especially those heavily dependent on oil for their economic survival. Most states, such as Angola and Nigeria, advocated for utilizing oil and gas revenue as a catalyst for diversification. States such as Ghana, for instance, have taken advantage of the fact that they are not predominantly dependent on oil and possess a semi-diverse economy, which sustains them in the post-pandemic era. With Angola deferring its graduation from the Low Developed Countries index to 2024, the deferment has exposed the precariousness of its oil dependency and the need to diversify. Angola has, therefore, embarked on economic diversification and promoting small and medium enterprises such as honey production (Farand, 2021). Since oil accounts for one-third of its GDP and more than 90% of its exports (World Bank, 2020), relying solely on oil without diversification could be suicidal. Diversification is thus the most incredible opportunity that African states have learned in the post-pandemic era. For instance, Nigeria and Angola, Africa's two largest oil producers, earn 70-75% of export revenue from oil (Gerval & Hansen, 2022). A slump in oil prices certainly upsets the economies of the two countries, plunging them into economic and social turmoil. Between January 2014 and June 2021, for instance, there were 37 epochs of oil price slumps, averaging about 10%. During the 2008-2009 economic recession, the price of petroleum declined by more than 25% in March and April 2020 during the COVID-19 pandemic. Since World War 2, the coronavirus era energy fall was the second-largest drop (Gerval & Hansen, 2022); hence, an accelerated drive by Nigeria, Angola, and other African oil-producing states to diversify is highly regarded as one of the new opportunities.

Diversification is fundamental; for instance, the Nigerian Naira depreciated 140% between 2010 and 2020 as the West Texas Intermediate average oil price plummeted from US$79.48 to US$39.68 per barrel (IMF, 2020; World Bank, 2021). When the COVID-19 pandemic struck the global market in 2020, prices had not yet recovered to their pre-2014 levels, exerting a double impact on Nigeria's oil-dependent economy. Moreover, the naira depreciated by more than 7% further from February 2020 (IMF, 2020; World Bank, 2021), with Angola's kwanza depreciating by more than 400% since 2010, and experiencing an exacerbated depreciation of 22.5% since the beginning of the COVID-19 pandemic (Gerval & Hansen, 2022). Ayeni (2020) also proposes that the most lucrative opportunities lie in the distribution and infrastructure sectors at the consumer level, which have the potential to attract investment. There has been an outpouring of interest from investors in renewable energy, leading to increased investment in this area, which has compelled governments, such as Angola's, to amend legislation to facilitate more investment. Angolan oil and gas companies, such as Equinor, ENI, and Total, showed the most interest and were at the forefront of global investments among the oil majors. Import diversification is another opportunity that predominantly African oil-producing states can capitalize on and harness in the post-COVID-19 pandemic era. Nigeria and Angola, for instance, have embarked on accelerated import diversification, which has been stimulated by the fact that these two states generate oil export earnings amounting to 90%. The U.S. dollar shortages in their coffers have given U.S. competitors a competitive advantage. A depletion of the U.S. dollar coffers naturally leads to a decline in U.S. exports to those countries, reflecting declines in world oil prices since fluctuations in oil prices parallel the trends in exports. Consequently, Nigeria and Angola have resorted to non-US exporters for their agricultural imports. For instance, the E.U., the largest importer of Nigerian oil, expanded its share of the Nigerian wheat market by almost five times in 2020 compared to 2019, following the slump in oil prices. Similarly, Russia and Ukraine gained more significant market shares in the Nigerian wheat market due to their affordable pricing (Gerval & Hansen, 2022).

CONCLUSION

Crude oil prices hit a record low, causing stir, alarm, and despondency in the energy sector. Such an exceptional energy instability was caused by suffocation in demand due to the COVID-19 pandemic, which compelled rail, air, and road transport systems to halt operations. Travel was suspended to curb the transmission of the virus,

resulting in significant effects on energy demand. West Texas Intermediate and Brent were not spared from the slump, and the energy whirlwind took a significant toll on African oil-producing countries, which generally rely on crude for their economic survival. As economies were expected to shrink continuously and extensively as the virus continued to rage, and as infections continued to rise exponentially daily, many people considered 2020 to be entirely written off.

RECOMMENDATIONS

1. Diversification of economies and shifting away from over-reliance on a single resource, such as oil, is a fundamental move that oil-producing African states should adopt. Apart from crude oil, economies must focus on manufacturing, mining, beef production, agriculture, and textiles, so that if unplanned and unexpected disasters, such as the outbreak of COVID-19, occur, states will be able to sustain their economies through other non-energy sectors.
2. African countries may also diversify by focusing on Small and Medium Scale Enterprises (SMEs). SMEs increase output and per capita income, create job opportunities, play critical roles in economic growth and industrialization, and improve sectoral and regional economic balance by promoting resource use and industrial dispersal. Thus, African central banks need to inform other smaller banks to diversify and increase their lending portfolios to non-oil sectors of the economy, thereby bolstering a country's budget in catastrophic conditions such as the COVID-19 outbreak.
3. Increased privatization and deregulation of the market, along with the relinquishment of stringent price controls, will positively impact consumers, resulting in increased fiscal space and improved spending. Suppose African oil-producing states adopt privatization and deregulation in an efficient and effective manner. In that case, the results may positively transform their economies and improve the financial and economic status of their populations during pandemics like COVID-19.
4. African oil-producing countries must establish contingent and emergency budgets to mitigate the impact of global disasters, such as the COVID-19 pandemic, and minimize their consequences on their populations.
5. States can also establish and maintain Stabilization Funds, which help insulate their economies from volatility stemming from fluctuating commodity prices and unplanned occurrences such as the COVID-19 pandemic.

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