Samuel Onuh, (PhD)

Department of Political Science and Diplomacy Faculty of Social Sciences Veritas University Abuja-Nigeria

Abstract:

The outbreak of the covid-19 pandemic has forced many economics of the world to diversify their economy, because of the negative impact of the pandemic on global economy. The IMF report shows that the global GDP fall by 3% in 2020, and an estimate of 2% growth was experienced before the outbreak of the covid-19 pandemic. This study seeks to engage in a comparative analysis of the challenges of oil producing economies in Africa with emphasis on the Nigeria and Angola economy. Secondary data were used such as textbooks, journals and other internet sources. This study reason why these economies were negatively affected was that both countries dependent heavily on the export of crude oil as their major source of foreign exchange earnings. This study argues that if both countries had diversified their economy to the extent that it has affect it. Therefore, this study further argues that poor macroeconomic policies as well as corruption that characterized the mismanagement of the oil revenue has contributed in a no small measure in affecting the economies of both countries. It is against this backdrop this study makes the following recommendations as measures that will help address the challenges facing both Nigeria and Angola especially in the area of diversification of the economy and curbing corruption.

Introduction

The origin of the history of the human coronavirus goes back to 1965 when Tyrrell and Bynoe created a virus that resides in the human embryonic trachea called B814 -150nm), membrane-coated, pleomorphic, and covered with the spaced-apart club-shaped surface. Similarly, the 229E virus was discovered in 1965 by Hamre and Procknow in a sample from a student who had a cold. In addition, B814 and 229E viruses were sensitive to air. The virus discovered by Hamre and Procknow and McIntosh (OC) also had a similar morphology (Suthar & Suthar, 2020).

In addition, coronavirus is not a new virus, but rather the severe acute respiratory syndrome coronavirus SARS nCoV, which began in December 2019 in the seafood market in Wuhan City, Hubei Province, China. It was the World Health Organization that officially renamed SARS. CoV (SARS-nCoV) or novel coronavirus as COVID-19 on February 11, 2020 (WHO, 2020). The coronavirus belongs to the nidovirales family and a subfamily of the coronavirinae.

There are four genera of COVS: Alpha-COVS, Beta-COVS, Gamma-COVS, and Delta-COVS. Coronaviruses consist of five physical proteins in the genome such as the spike protein (S), the membrane protein (M), the envelope (E) glycoproteins, the hemagglutinin esterase (HE) and the nucleocapsid protein (N). In addition, studies have shown that COVS are responsible for respiratory, gastrointestinal, liver, and neurological diseases in humans. The World Health Organization (WHO) alerted the international community to a virus called coronavirus on January 30, 2020, which has been identified as a public health emergency of international concern (Mahule, et al 2020).

It is important to note that when the coronavirus broke out in Wuhan, a Chinese institution or person imagined that the novel virus would become a pandemic that would cripple human activities around the world and restrict human movement by they kept them in their homes and forced them to follow social distancing. In addition, in order to curb the spread of Covid-19 countries like Nigeria, Angola and other countries around the world, they are completely restricting the movement of goods and people into their country, as they have announced either a partial or complete closure of their borders. which has adversely affected international trade and the global economy as a whole.

Today, the price of oil in the international market continues to fall due to the spread of the coronavirus, which has forced states to either partially or completely block their borders in an attempt to contain the spread of the virus. Oil-dependent economies around the world are affected by the continuous decline in oil prices. These include Venezuela, Libya, Angola, Kuwait and Nigeria, among others. It is important to note that these oil-dependent economies are becoming more politically unstable due to falling oil prices in the international market, which has never been seen before as a result of the Covid-19 pandemic.

By and large, a close examination of the literature on the coronavirus outbreak shows that there have been more studies since January 2020 in particular on how preventive and control measures can be taken to contain the spread of the virus and possibly reduce the risks of its contagion and spread. However, the effects of the Covid-19 pandemic on the economies of oil-producing countries have

received limited account in the published literature, especially when comparing countries like Nigeria and Angola. It is against this backdrop; we intend to contribute to this research.

Theoretical Framework

There are many theories and approaches to studying the economic growth of oil-dependent countries. Most prominent among these theories is the Big Push theory, adopted by Abuzeid (2009) to study the nature of economic growth in oil-dependent countries in sub-Saharan Africa. According to the big push theory, oil-dependent countries like Venezuela, Libya, Angola, Kuwait and Nigeria had to jump from one stage of development to the next in a positive cycle, among other things, by investing massively in infrastructure and education with the support of private investments that would be the economy move into a more productive development phase and thereby break through any limitation associated with economic paradigms that trigger a lower level of productivity.

The economic theory noteworthy in this study is a theoretical underpinning of the resource curse (Gelb, 1988; Stevens, 2003; Van der Ploeg, 2006). This theory is closely related to the following coupling theory; neoclassical growth theory; Export instability theory; and booming sector and the theory of Dutch disease. According to the linkage approach to the resource curse, the limited space for the formation of regressive and progressive production links between the extractive sectors and the local economy and the enclave nature of the oil and gas industry in particular (Auty, 1993). Booming sector approaches focus on the sectoral redistribution of factors of production in response to a profitable shock resulting from either a resource discovery or an increase in the price of an exportable commodity.

Political-economic approaches include cognitive approaches to assert that natural resources cause a kind of myopic euphoric myopia or retromania in public and private actors (Karl, 1997). Low rent rents lead to either sluggishness and lax economic planning or the exuberance and excessive, inefficient spending caused by a "get-rich-quick" mentality among business people and a boom-bust mentality among policy makers (Ross, 1999). Social approaches assume that oil-producing countries have particular difficulties in restructuring their development paths away from dependence on minerals (Shafer, 1994; Karl, 1997). So privileged classes, sectors, customer networks and interest groups are all trying to capture some of the mineral rents through rent-seeking and to organize their interests in such a way that they maintain the status quo of a mineral-centric economy from which they benefit. State-centered approaches tend to use a mixture of cognitive, societal, and institutional arguments to explain how mineral rents can affect a state's ability to stimulate growth (Ross, 1999).

Literature Review

Since its outbreak in December 2019, the Covid-19 pandemic has been increasingly researched. Amzat et al. (2020), for example, examined the early socio-medical response to COVID-19 in Nigeria in the first 100 days after the index case in Lagos, southwest Nigeria. The study shows that within the first 100 days after the first index case of the Covid-19 pandemic in Nigeria, it spread at breakneck speed. They argued that the government had taken both medical and social measures to contain the spread of the Covid-19 pandemic after the first 100 days in the country. Similarly, Ouhsine et al (2020) examined the impact of the lockdown on waste generation and consumer behavior in two communities in Morocco. They also examined the behavior of Moroccans when wearing protective equipment against the Covid-19 pandemic. The study found that the lockdown imposed by the Moroccan government affected goods purchased during the lockdown as the demand for disinfectants increased while the demand for meat and other processed foods decreased. Their study shows that the number of organic fractions in household waste has decreased significantly compared to the residues from cleaning agents.

Gupta et al (2020) examined the effects of the Covid-19 pandemic on the environment. They argued that the Covid-19 pandemic is a hidden blessing, so measures like the lockdown, which has kept a significant number of industries from the operation previously responsible for producing pollutants into the environment, stop emitting the toxic Gases nitrogen dioxide, aerosols, sulfur dioxide, carbon monoxide and other harmful particles into the atmosphere, thereby improving the quality of oxygen uptake. Ajide et al. (2020) examined in their study the political economy and multidimensional factors of COVID-19 in Nigeria from February 27, 2020 to May 26, 2020. The study shows that the transmission of the coronavirus from person to person is lower compared to other ethnic groups Groups that are valued at zero. Abu-Qdais et al (2020) performed statistical analysis to identify the rates and composition of medical waste generated during the treatment of the coronavirus pandemic at King Abdullah University Hospital in Jordan.

Suthar et al (2020) examined the spread of the coronavirus from Wuhan, China. They claim the first incident was recorded on December 12, 2019. They added that the origin of the coronavirus has been traced back to animals before humans. Ololo et al. (2020) claim, however, that the Covid-19 pandemic resulted in loss of life and had a negative impact on the economies of nations. They further argued that the Covid-19 pandemic brought immeasurable hardship to the world economy, worst of all at the level of agricultural production, as well as blaming the drop in oil prices in the world market.

Mahule et al (2020) posit that the Coronavirus can be transmitted through droplet from an infected patient and assert that health care workers especially dentists should ensure they take every precautionary measure in ensuring that they are not infected with the coronavirus disease. Similarly, Akurathi (2020) offers an in-depth discourse on the spread of the Covid-19 pandemic and how fears related to the spread of the Covid-19 pandemic can be averted in his study. Akurathi argued that the world's population must adopt positive thinking skills in order to strengthen their immune systems.

Yadav et al (2020) in their study on the outbreak prediction of Covid-19 in the most vulnerable countries. They studied the spread of the Covid-19 from Wuhan, China, to other countries around the world, particularly the hardest-hit European countries. Omaka-Amari et al (2020) investigated the outbreak of the Covid-19 pandemic in Nigeria within the first two months. The study shows that the number of Nigerians infected with the Covid-19 increased between February and March. In addition, Omaka-Amari et al. (2020) also review the various prevention mechanisms put in place to contain the spread of the Covid-19 pandemic in the country, such as the use of hand sanitizer, hand washing, locking, wearing face masks and social distancing.

In addition, they argued that the selective lockdown of some states, the bad attitudes of some Nigerians towards the Covid-19 protocol, social media meddling, the stigma of Covid-19 infected patients, the fallacy about Covid-19 that Overload of health facilities and distrust of the Nigerian Center for Disease Control (NCDC). With this in mind, this study seeks to examine the impact of poor health facilities on the fight against the Covid-19 pandemic in Nigeria.



Global Oil Producing Economies

Source: BBC (2020), BBC Coronavirus: Oil price collapses to lowest level for 18 years, <u>https://www.bbc.com/news/business-52089127</u>

Current conditions in the oil market are due to a number of factors impacting both supply and demand; On the demand side, containment measures and economic disruptions related to the COVID-19 outbreak have led to a slowdown in production and mobility worldwide, producing a significant drop in global demand for oil. On the supply side, arrangements that have historically allowed oil producing countries to respond collectively to drops in demand have so far not been sufficient to curb production, signaling the reduced traction of multinational solutions in recent years.

Challenges of Oil Producing Economies

Since the late 1990s there have been several studies expressing the unsatisfactory economic performance of oil-dependent countries on the political and economic problems in their area such as profitability and corruption, power-enhancing patronage and personal prestige, the use of mineral oils for the financing of armed conflicts and revenues the quality of state institutions. It can be argued that most oil-dependent countries produce a predatory state (Renner, 2002), which implies that the oil-producing economy is changing the economy in pursuit of rent and personal gain.

One of the greatest development paradoxes of current political economy is that oil wealth from oil-producing countries has contributed little to the economies of these countries, particularly in addressing the growing challenges of poverty and inequality. However, oil is often associated with high levels of prosperity, growth and economic development, as in the case of the United States, Norway, Australia and Canada, but the situation with many oil producing countries points in a different direction. However, studies have shown that oil-producing countries have a lagged growth rate because they underperform in most cases compared to non-oil-producing developing countries, even when experiencing an oil boom (Karl, 1997; Auty, 1993; 1997).

In addition, one of the greatest challenges facing the economies of many oil-dependent economies around the world is their inability to develop strategic frameworks and strategies that will help diversify their economies. Also, some measures taken by oil-dependent economies to diversify their economies range from a stable economic environment with low inflation, a strengthening of the business climate, an expansion of education, a liberalization of trade and foreign direct investment (FDI), national development plan and new industries and services developed, but these diversifications are strongly correlated with oil prices (Collen et al., 2014).

Nonetheless, countries like Malaysia, Indonesia, Mexico and Chile had taken appropriate measures in the run-up to the decline in oil revenues, by using oil or relevant skills and education in order to increase productivity. Then a balance between state and market

economy policy is necessary in order to pursue medium to long-term goals (Malle, 2013). Hence, they called for the need for a framework that can guide diversification and post-diversification actions to ensure their success in terms of sustainable economic development.

Many oil producing developing countries are non-diversified, sector-dependent economies, with oil contributing the majority of their exports and government revenues. The current fall in oil prices is limiting the ability of these countries to respond to the multidimensional domestic pressures produced by COVID-19, at a time when more money is needed to finance service delivery, mitigate health risks and ease macroeconomic pressure.

In March of this year, the IEA estimated that key oil producing countries, including Iraq, Nigeria and Angola, would likely see a drop in their net income for 2020 of 50%-85% compared with 2019 (IEA, 2020). This would amount to the lowest income received from the sector by these countries in over two decades, and the IEA has cautioned that revenues could fall further depending on future market conditions. Accentuating the challenges, there has been a decline in investor appetite for fossil fuel projects, and with the onset of COVID-19, companies have been shelving new projects and permanently shutting-down high-cost operations in response to the oil price collapse (IEA, 2020).

The scale of the current oil price shock will vary by country depending on their export concentration, as well as their estimated oil reserves and cost of production. For example, Saudi Arabia and Iraq can produce oil relatively cheaply, not needing a price of more than approximately USD 30 per barrel to break even, while countries like the Bolivarian Republic of Venezuela ("Venezuela") and Nigeria depend on a price of over USD 50 per barrel (Statista Research Department, 2020).

Overall, the impacts of COVID-19 vary across African countries both within and across sectors. The fall in global demand for exports and a slump in prices of major commodities including fuels are the main concerns for Africa. There has also been a fall in Foreign Direct Investment (FDI), which is closely linked to the extractive sector and hence the commodity price cycle (World Investment Report, 2020). The decline in crude oil prices by up to 60% will put significant strains on the revenue of the net oil exporters, particularly those whose revenues are highly determined by crude oil sales. There was a 11.4% decline in Nigeria's revenue in 2020 with relatively lower revenue falls for the other key exporters of fuels in the region such as Algeria (-2.5%), Angola (-3.8%), Gabon (-2.4%) and Congo (-2.3%) (https://unctad.org/system/files/official-document/aldcmisc2020d3_en.pdf).

However, the final impact will depend on how the respective countries will take advantage of their respective key markets as frontier closures are lifted with productivity resumed in world. Overall, fuel exports are estimated to fall by -7.7%, with a significant drop in GDP of about -3.3% in Congo and Mozambique. Most countries are expected to suffer a recession as a result of the decline in world GDP and fuel prices, but the impact is expected to be disproportionately higher amongst net food exporters. While marginal negative impacts are observed in other sectors, most food exporters may be the worst hit both in terms of revenue losses of up to - 10.2% and GDP declines of -7.8%. Similar trends are observed under the mild impact scenario where the worst hit countries are also net food exporters with large falls in GDP observed for Comoros (-6%), Carbo Verde (6%), Burundi (-5.1%), Gambia (-5.7%) and Liberia (-5%) (https://unctad.org/system/files/official-document/aldcmisc2020d3_en.pdf).

Nigeria and Angola in Comparative Perspective

Nigeria is bordered to the north by Niger, to the east by Chad and Cameroon, to the south by the Gulf of Guinea of the Atlantic Ocean, and to the west by Benin. Nigeria is not only large in area larger than the U.S. state of Texas but also Africa's most populous country. The Nigerian economy is one of the largest in Africa. Since the late 1960s it has been based primarily on the petroleum industry. A series of world oil price increases from 1973 produced rapid economic growth in transportation, construction, manufacturing, and government services (https://www.britannica.com/place/Nigeria/Economy).

The economy of Nigeria is a middle-income, mixed economy and emerging market, with expanding manufacturing, financial, service, communications, technology and entertainment sectors. It is ranked as the 27th-largest economy in the world in terms of nominal GDP, and the 24th-largest in terms of purchasing power parity. Nigeria has the largest economy in Africa. The country's re-emergent manufacturing sector became the largest on the continent in 2013, and it produces a large proportion of goods and services for the region of West Africa. In addition, the debt-to-GDP ratio was 16.075% as of 2019.

Nigerian GDP at purchasing power parity (PPP) has almost tripled from \$170 billion in 2000 to \$451 billion in 2012, though estimates of the size of the informal sector (which is not included in official figures) put the actual numbers closer to \$630 billion. Subsequently, the GDP per capita doubled from \$1400 per person in 2000 to an estimated \$2,800 per person in 2012. Again, with the inclusion of the informal sector, it is estimated that GDP per capita hovers around \$3,900 per person. The country's population increased from 120 million in 2000 to 160 million in 2010. The GDP figures were to be revised upwards by as much as 80% (percent) when metrics were to be recalculated subsequent to the rebasing of its economy in April 2014.

Although oil revenues contributed 2/3 of state revenues, oil only contributes about 9% to the GDP. Nigeria produces only about 2.7% (percent) of the world's oil supply. Although the petroleum sector is important, as government revenues still heavily rely on this sector, it remains a small part of the country's overall economy. The largely subsistence agricultural sector has not kept up with the country's rapid population growth. Nigeria was once a large net exporter of food, but currently imports some of its food products. Mechanization has led to a resurgence in the manufacturing and exporting of food products, and there was consequently a move towards food sufficiency. In 2006, Nigeria came to an agreement with the Paris Club to buy back the bulk of its owed debts from them, in exchange for a cash payment of roughly US\$12 billion.

The Nigerian economy continues to grapple with a number of challenges that has hampered efforts at economic transformation. First, the economy is yet to achieve the necessary structural changes required to jump start rapid and sustainable growth and development. Aside disarticulated and narrow productive base, sectoral linkages in the economy are weak. Primary production comprising agriculture, mining and quarrying inclusive of oil and gas dominate national output while the manufacturing sector role in the economy is decidedly small in terms of share of gross output, contribution to growth, foreign exchange earnings, government revenues and employment generation.

The economy also confronts monumental challenges in form of dilapidated and chronically non-functional infrastructure. The decay in the country's infrastructural base reflects decades of poor maintenance and weak technological base. The weak technological base is a consequence of low research and development efforts and disconnect between research findings and industry. The private sector is equally weak and diffuse with poor response record to industrial incentives. Although the oil price decline has certainly had an adverse effect on the Nigerian economy, there are other factors that have contributed to the reduction in the growth rate. It is likely that a reduction in demand from Nigeria's main export partners has also been an important factor (https://www.nigerianstat.gov.ng/pdfuploads/NIGERIAN%20ECONOMY.pdf).

On the whole, Nigeria GDP growth rate for 2020 was -1.79%, a 4% decline from 2019. Nigeria GDP growth rate for 2019 was 2.21%, a 0.29% increase from 2018. Nigeria GDP growth rate for 2018 was 1.92%, a 1.12% increase from 2017.Nigeria GDP growth rate for 2017 was 0.81%, a 2.42% increase from 2016 (https://tradingeconomics.com/nigeria/gdp).

However, the Republic of Angola is the seventh-largest country in Africa, located in the south-west of the continent. Angola is bordered by Namibia to the south, the Democratic Republic of Congo to the north and east, Zambia to the east, and the Atlantic Ocean to the west. The enclave Province of Cabinda has borders with the Republic of the Congo and the Democratic Republic of Congo. Angola has a population of about 26 million, with over 27 percent living in Luanda Province that is home to Angola's capital city, Luanda. About 37 percent of the population live in rural areas.

Population density with 20 people per square kilometer is very low, making it difficult to reach many rural areas. Angola is rich in natural endowments including carbons, agricultural land, and a long coast line. With oil reserves of 9.5 billion barrels, Angola has the second-biggest crude oil reserve in Sub-Saharan Africa, after Nigeria with 37 billion barrels. Estimates for new discoveries some of them onshore are around an additional 2.2 billion barrels. Diamond mine reserves are estimated between 60 million and 110 million carats, comparing well with the largest reserves in Africa, the Democratic Republic of Congo (150 million carat). Angola is conducting an exhaustive national geo-mineral survey,but preliminary results have already identified large iron ore deposits along the border with the Democratic Republic of Congo. Angola also has great potential in agriculture with its 59 million hectares of agricultural area. With long stretches of coasta l areas, Angola also has a large potential for fisheries.

Fueled by high oil production and oil prices, Angola's GDP per capita doubled from US\$2,079 in 2002 to US\$4,164 in 2014. The sustained growth established the Republic of Angola as the third largest economy in Sub-Saharan Africa and the second largest oil producer in Africa. However, the 2008 and the 2014 commodity price shocks showed structural weaknesses of Angolan economy due to a lack of economic diversification and consequent natural resource fiscal dependency. Since 2014, a structurally low oil price deprived Angola's growth momentum and created large macroeconomic imbalances.

Poverty reduction and employment growth have not been responsive to economic expansion,

creating the need of a new job-centered growth paradigm. Angola's economy is highly dependent on revenue from oil exports. A reliance on natural resource exploitation as the main driver of growth has generated excessive macroeconomic volatility, becoming a binding constraint to economic development. A volatile economic environment makes it difficult for economic agents to make decisions about investment and resource allocation. The economic concentration around oil production, coupled with unstable oil prices, creates volatility that is passed on to key macroeconomic variables such as GDP growth, inflation, exchange rates, and debt. The dependence on oil is not sustainable and has limited the diversification of the country's economy, constraining growth. Angola is currently the second largest oil producer in Sub-Saharan Africa, but its proven reserves are limited. In 2017, oil production reached 1.64 million barrels per day, almost on par with Nigeria's 1.66 million barrels per day. However, Angola's oil production is not sustainable as its reserves are expected to be exhausted by 2032. Oil dependence has been a lasting feature of the economy, and petroleum products have comprised between 87 percent and 98 percent of total annual exports since 1990.

The dependence on oil prevents the country from enjoying the benefits of economic diversification, including trade openness and export diversification leading to higher growth. Oil price volatility has caused cycles of boom and bust. From 2004 to 2008, higher oil prices generated budget surpluses and allowed for declining debt ratios. Oil revenues rose rapidly, going from 24.3 percent of GDP in 2004 to 35.2 percent of GDP in 2008. Current expenditures and investments increased significantly on the back of booming oil revenues, and investments grew by more than sixfold over that period. When oil prices fell sharply in 2008 and 2009, the instability brought by excessive oil dependence became painfully evident for Angola.

The country's current revenues shrank by almost two-thirds and the current account balance flipped from a surplus of 8.1 percent of GDP to a deficit of 11.7 percent in the following year. After a second period of oil-fueled growth between 2009 and 2013, with GDP growth rates averaging 5.1 percent per year, oil prices declined in 2014 even further and remained low for a longer time. Angola's GDP growth fell to zero in 2016. The Central Bank pursued a policy mix of exchange rate devaluations and quantity controls that ended up hurting business and was ineffective in taming inflation, which peaked at 42 percent in 2016. Later, there-

pegging of the kwanza and tightening of monetary conditions were effective in controlling inflation, and it dropped below 20 percent before the end of 2018. The fiscal impact of the oil price collapse was also substantial and forced significant fiscal adjustment. The poor have seen little benefit from recent economic growth, and nearly a third of Angolans still live in poverty. In the decade after the end of the civil war, GDP per capita nearly doubled, from US\$2,293 (PPP) in 2000 to US\$4,164 in 2014. This impressive expansion of the economy nonetheless did very little to reduce poverty. The proportion of people living below the US\$1.90 poverty line showed only a small decline, from 32.3 percent in 2000 to 28.0 percent in 2014. Rapid population growth and increasing urban poverty meant that the absolute number of poor in Angola increased from 4.9 million to 6.7 million over this period.

Conclusion

From the above comparative study of the impact of covid-19 on Oil producing countries particularly Nigeria and Angola. Both country's economy has been badly affected by the covid-19 pandemic which resulted in the decline in the price of crude oil in the international market. The reason why these economies were negatively affected was that both countries dependent heavily on the export of crude oil as their major source of foreign exchange earnings. This study argues that if both countries had diversified their economy respectively, the impact of the decline in the price of crude oil in the international market would not have affected their economy to the extent that it has affect it. Therefore, this study further argues that poor macroeconomic policies as well as corruption that characterized the mismanagement of the oil revenue has contributed in a no small measure in affecting the economies of both countries. It is against this backdrop this study makes the following recommendations as measures that will help address the challenges facing both Nigeria and Angola.

Recommendations

Economic diversification and capital accumulation will be crucial for lessening resource dependence and fostering growth. Nigeria and Angola have the potential to develop other non-oil industries including agribusiness, fisheries, mining, and manufacturing. To capitalize on these areas of potential economic expansion, government policies will need to create incentives for industry growth, such as a better business climate, improved competitiveness, access to finance, and a reasonable tax burden with low compliance costs.

Good governance is key to a more sustainable economy in Nigeria and Angola. Weak governance holds Nigeria and Angola at a low-level equilibrium and is at the core of both countries challenge to reach the twin goals of ending extreme poverty and boosting shared prosperity. It has led to macroeconomic instability and fiscal imbalance, as the economy presently lacks the diversification necessary to act as a buffer against external shocks, notably commodity price fluctuations.

References

- Abu-Qdais, H.A.; Al-Ghazo, M.A.; Al-Ghazo, E.M., (2020). Statistical analysis and characteristics of hospital medical waste under novel Coronavirus outbreak. Global Journal Environment Science Management 6(4): 1-10 DOI: 10.22034/gjesm.2020.04.0
- Adhikari, S.P.; Meng, S.; Wu, Y.-J.; Mao, Y.-P.; Ye, R.-X.; Wang, Q.-Z.; Sun, C.; Sylvia, S.; Rozelle, S.; Raat, H.; et al. (2020). Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: A scoping review. Infect Dis Poverty 9 (29). https://doi.org/10.1186/s40249-020-00646-x
- 3. Ajide, B.K., Alimi, O.Y., Ibrahim, L.R & Nwokolo, C.I (2020). Modeling the Political Economy and Multidimensional Factors of COVID-19 Cases in Nigeria Journal of Economics, Race, and Policy 3:223–242 doi.org/10.1007/s41996-020-00070-1
- 4. Ajisegiri, W.S., Odusanya, O.O., & Joshi, R. (2020). COVID-19 Outbreak Situation in Nigeria and the Need for Effective Engagement of Community Health Workers for Epidemic Response, *Global Biosecurity 1(4)*.
- 5. Akurathi, S. (2020). Psychological impact on covid-19 International Journal of Advanced Research (IJAR) 8(04), 1199-1202 http://dx.doi.org/10.21474/IJAR01/10898
- Amzat, J., Aminu, K., Kolo,I.V., Akinyele,A.A., Ogundairo, A.J.& Danjibo, C. M (2020). Coronavirus outbreak in Nigeria: Burden and socio-medical response during the first 100 days International Journal of Infectious Diseases 98, 218–224 <u>https://doi.org/10.1016/j.ijid.2020.06.067</u>
- 7. Di Tella, R. & Savedoff, W. (eds.) (2001). Diagnosis Corruption: Fraud in Latin America's Public Hospitals. Washington DC: Latin American Research Network.
- Ebenso B, & Otu A. (2020). Can Nigeria contain the COVID-19 outbreak using lessons from recent epidemics? Lancet Glob Health [Internet]. 2021 May 1 [cited 2020 Apr 24];0(0). Available from: https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30101-7/abstract.
- 9. Eranga, O.I. (2020). Covid-19 pandemic in Nigeria: Palliative measures and the politics of vulnerability International Journal of Maternal and Child Health and AIDS (2020), Volume 9, Issue 2, 220-222.
- 10. Hadi, R. (2015). Corruption in the Nigerian Health Sector: Time to Right the Wrongs. Retrieved from http://www.gamji.com/article6000/NEWS7913.htm.
- 11. Mahule, A.,1, Gade, K.J & Gade, V. (2020). Coronavirus and dentistry: An overview International Journal of Advanced Research (IJAR) 8(03), 316-321 <u>http://dx.doi.org/10.21474/IJAR01/10630</u>

- 12. Matsheza, P., Timilsina, A. R. & Arutyunova, A. (eds.) (2011). Fighting corruption in the health sector methods, tools and good practices. Retrieved from <u>http://www.undp.org/content/undp/en/home/librarypage/democraticgovernance/anti-corruption/fighting_corruptioninthehealthsector.html</u>
- Momoh, Z. (2008). Critique of Obasanjo's economic reforms (1999-2007) a term paper presented to the Department of Political Science, University of Jos as part of Continuous Assessment for the Course Pol 212 Nigeria Government and Politics August.
- 14. OECD (2014). OECD Foreign Bribery Report, OECD Publishing: Paris, https://dx.doi.org/10.1787/9789264226616-en
- 15. Ololo, E. E., Madueke, O., & Iheonu, A., (2020). Economic impact of covid-19 and policy implications for Nigeria Journal of Political Science and Leadership Research 6 (2),44-56.
- Omaka-Amari, N.L., Aleke, O.C., Obande-Ogbuinya, E.N., Gwakwe, C.P., Nwankwo, O., & Afoke, N.E. (2020). Coronavirus (COVID-19) Pandemic in Nigeria: Preventive and Control Challenges within the First Two Months of Outbreak African Journal of Reproductive Health June 2020 (Special Edition on COVID-19); 24 (2):87 DOI: 10.29063/ajrh2020/v24i2s.13
- 17. Ouhsine, O., Ouigmane, A., Layati, El., Aba, B., Isaifan, R.L., & Berkani, M., (2020). Impact of COVID-19 on the qualitative and quantitative aspect of household solid waste. Global J. Environ. Sci. Manage., 6(4):1-12 **DOI:** 10.22034/gjesm.2020.04.0
- Salako O, Okunade K, Allsop M, Habeebu M, Toye M, Oluyede G, Fagbenro G, & Salako B. (2020) Upheaval in cancer care during the COVID-19 outbreak. ecancermedicalscience [Internet]. 2020 Apr 30 [cited 2021 May 1];14. Available from: <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7134578/</u>.
- 19. Suthar, V. & Suthar, C. (2020). Coronavirus: Journey from China to other countries International Journal of Advanced Research (IJAR) 8(03), 888-891
- Tormusa, D. O., & Idom, A. M. (2016). The impediments of corruption on the efficiency of healthcare service delivery in Nigeria. Online Journal of Health Ethics, 12(1). http://dx.doi.org/ 10.18785/ojhe.1201.03
- 21. Vian, T. (2005). The sectoral dimensions of corruption: health care. In Spector, B. I. (Ed.). Fighting corruption in developing countries. Bloomfield CT: Kumarian Press Inc.
- 22. Vian, T., Sayedoff, W. & Mathisen, H. (2010). Anticorruption in the health sector: Strategies for Transparency and Accountability. West Hartford, CT: Kumarian Press.
- 23. Yadav, D.; Maheshwari, H.; & Chandra, U., (2020). Outbreak prediction of covid-19 in most susceptible countries. Global Journal Environment Science Management 6(4):1-10 DOI: 10.22034/gjesm.2020.04.0
- 24. Gupta, N.; Tomar, A., & Kumar, V., (2020). The effect of COVID-19 lockdown on the air environment in India. Global Journal Environment Science Management 6(4):1-10 **DOI:** 10.22034/gjesm.2020.04.0 www.who.int/workforcealliance/countries/nga/en/ accessed 2, May 2021