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MACROECONOMIC EFFECT OF COVID-19 ON A CONSUMING OIL ECONOMY: EVIDENCE FROM NIGERIA

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ABSTRACT

This study examines the macroeconomic effect of COVID-19 on the Nigerian consuming oil economy. Descriptive tests and correlation analysis were used for data analysis. The study found that the COVID-19 pandemic has portended severe economic consequences on the Nigerian economy leading to unprecedented oil price crash and lower demand which resulted in negative effects on key macroeconomic variables in the country. The COVID 19 pandemic has also exerted negative effect on the exchange rate, real growth rate, consumer price indices, and unemployment in the country. Therefore, the study recommends for the full implementation of the Nigeria "Economic Sustainability Plan" to mitigate the effects of the COVID-19 pandemic on Nigeria's economy. The study further recommends that the Nigerian government should support agricultural production with the aim of diversifying her economy to improve export potentials and also engage SMEs through granting of soft loans with extended moratorium or grants to SMEs.
Keywords: COVID-19, Consumer price index, Crude oil price, Exchange rate, and real growth rate
JEL Classification: E31, I15, O47, O24

INTRODUCTION

The world from December 2019 is facing a Severe Acute Respiratory Syndrome (SARS) caused by a novel coronavirus. The coronavirus was originally called human coronavirus and over time, it has been renamed by the coronavirus study group of the International Committee for Taxonomy of virus as Middle East Respiratory Syndrome Coronavirus (MERS-COV); as it was first detected in the city of Wuhan in Hubei province of China. The World Health Organization (WHO) declared the novel coronavirus disease as a global public health emergency on 30th January, 2020 and called it COVID-19 (name of the disease caused by novel coronavirus) pandemic and it is first index case in Nigeria's was February 27th, 2020 (Ohia, Bakarey, & Ahmad, 2020). According to Moti (2020), the COVID-19 pandemic can be used as an independent international standard world-wide country macroeconomic assessor; because every sector of the economy in all countries around the world is affected. Dcode EFC Analysis (2020) while decoding the economics of COVID-19 regarding potential winners and losers in the short term in Egypt also emphasized the effect of the effect of the pandemic as covering all sectors of the economy. See Figure 1.

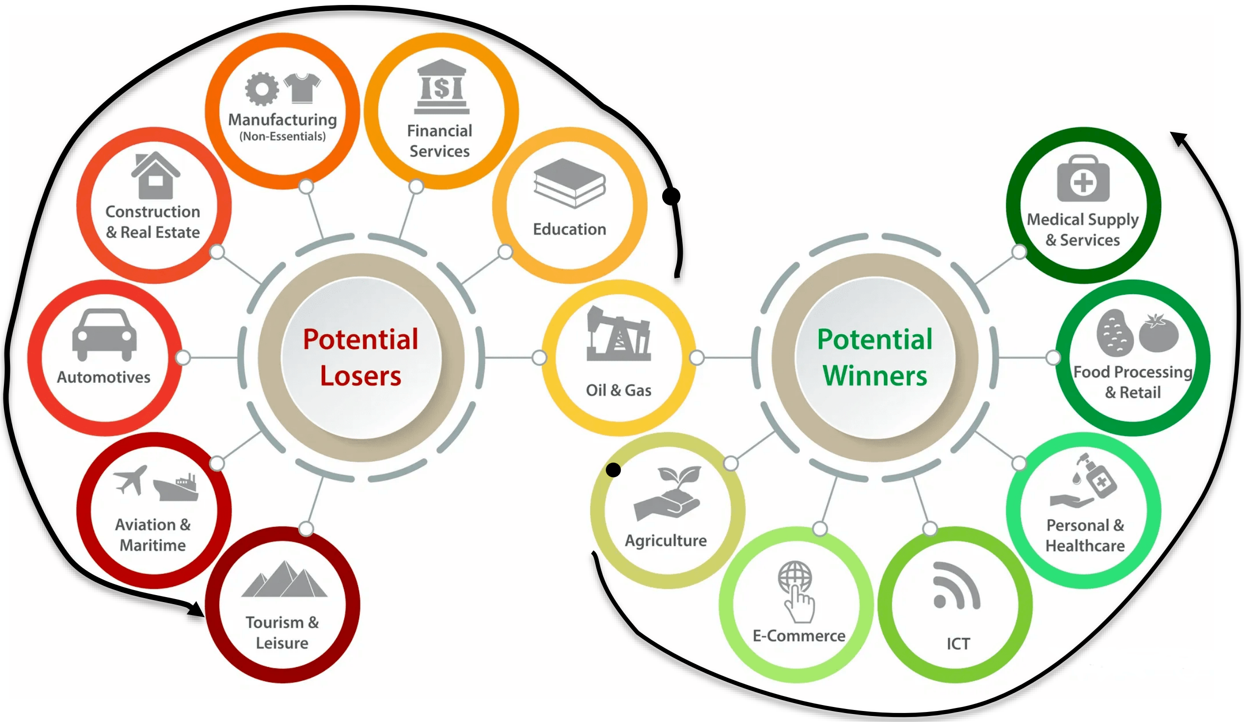

Figure 1: Decoding the Economics of COVID-19 (Winners and Losers in the Short-Term)
Source: Dcode EFC Analysis, 2020

The disease has indeed locked down sectors of economies and created severe economic consequences such as massive job losses and supply chain disruptions where artisans and petty traders have been suffered the brunt as some small-scale firms and even large-scale firms' sales and output have also plummeted (especially where there is total lockdown) due largely to low demand for goods and services except for consumables and health care. The detrimental consequences is the dwindling government revenue been experienced by most governments of the World. The COVID-19 pandemic has also caused a fall in the demand for crude oil and hustled an unprecedented or unaccustomed oil price crash. Also, some of the COVID-19 preventative measures applied (such as social distance, regular hand washing, limiting unnecessary movement and gathering) directly or indirectly affect the economy negatively.

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Over the years, according to Fefa (2016), the economy of Nigeria has grown heavily dependent on proceeds from crude oil exports for her revenue which is mostly used on import of consumption goods and services. In other words, Nigeria is dubbed a consuming oil economy as it is characterised by gross private domestic investors, government recurrent spending and imports netted against proceeds from exports of her oil revenue; without adequate foreign reserves that can be used as collateral for attracting foreign investments into the country. As a consuming economy, there are tendencies of skyrocket prices in the wake of daunting productive activities caused by COVID-19 unlike productive economies and more worrisome, the weakening of domestic currency through high importations of food products and refined crude oil for domestic consumption. It is in the light of this that this study examines the macroeconomic effect of COVID-19 on the Nigerian consuming oil economy. The rest of this paper is organized as follows: section two presents the literature review while section three presents methodology. Section four covers results and discussion on macroeconomic effect of COVID-19 on Nigerian consuming oil economy while section five offers conclusion and policy recommendations.

LITERATURE REVIEW

The outbreak of coronavirus disease (COVID-19) has disrupted the global economy. McKibbin and Fernando (2020) examined the effects of COVID 19 on the Chinese economy using different scenarios on macroeconomic outcomes and financial markets in a global hybrid DSGE/CGE general equilibrium model. The study found that even a contained outbreak could significantly impact the global economy in the short run. However, the study also found that the scale of costs by the COVID 19 can be avoided by greater investment in public health systems in all economies but particularly in less developed economies where health care systems are less developed and population density is high. In answering whether COVID-19 can generate inflation and unemployment simultaneously, Estrada (2020a) explored the impact of COVID-19 on the worldwide inflation and unemployment through the construction of the Multidimensional Phillips Surface (MPSurface). The study evaluates the Pre-COVID-19, COVID-19, and Post-COVID-19 impact on the worldwide inflation and unemployment between 2019 and 2021. The study affirms that the Post-COVID-19 can generate inflation and unemployment simultaneously. Again, Estrada (2020b) evaluated the way in which an economic recession from the Wuhan COVID-19 contagious infectious disease damage simultaneously affected five different markets economic hotspots viz; East Asia (Japan, South Korea, Taiwan, and Hong Kong), China, ASEAN, United States and the European Union (EU). The study found that there is high possibility of being affected by strong economic waves damaged from the epidemic contagious diseases (Wuhan COVID-19) on a number of markets is real and latent at any time.

Adesoji and Asongu (2020) examined the macroeconomic impact of the COVID-19 pandemic in Nigeria using the aggregate supply and aggregate demand model. Findings from Dynamic Ordinary Least Squares (DOLS) show that nexus between the number of confirmed cases and attendant macroeconomic outcomes are largely insignificant with the expected signs implying that the COVID-19 pandemic has insignificant negative impacts on basic macroeconomic variables in Nigeria such as inflation, employment, exchange rate, GDP growth, among others.

Similarly, Boissay and Rungcharoenkitkul (2020) also analysed the macroeconomic effect of COVID-19 using US data. The study found that COVID-19 pandemic has caused a fall in GDP growth and decline in manufacturing production activities, among others. KPMG (2020) also examined the economic impact of COVID-19 in Nigeria with emphasis on business activities. The study found that the pandemic has a twin shock on the Nigerian oil-dependent economy, namely, global and domestic shocks as well as oil price shock. All the shocks have negatively affected the economy through the supply, demand and financial channels. Fornaro and Wolf (2020) also modelled the impact of COVID-19 on macroeconomic policy to assess the macroeconomic implications of the pandemic. They asserted that COVID-19 would cause a negative supply shock to the world economy by forcing factories to shut down and disrupting global supply chains (OECD, 2020).

Cavallo (2020) also examined how COVID-19 Pandemic has led to changes in consumer expenditure patterns. The study used data collected from credit and debit transactions in the US to update the official basket weights. The study found that the COVID 19 inflation rate is higher for both headline and core CPIs, particularly for low-income households. The link between inflation financial instruments are widely used in market-based inflation expectations

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and inflation risk (Broeders, Goy, Petersen & Vette, 2020). The outbreak of COVID-19 and an unprecedented oil price shock has leaved effects on market-based economy. According to Broeders, Goy, Petersen and Vette (2020), the markets expect the outbreak of COVID-19 to be a persistent disinflationary shock. Similarly, Jaravel and O'Connell (2020) posit that the coronavirus pandemic has also resulted in large shocks to both demand and supply, which results in deflation, disinflation, or higher inflation. The studies were based on real-time scanner data in UK on inflation among fast-moving consumer goods during the pandemic. To them, the COVID-19 pandemic and the containment measures has necessitated profoundly disrupted people's lives and the economy with global demand, supply chains, labour supply, industrial output, commodity prices, foreign trade and capital flows been affected.

METHODOLOGY

The study used descriptive tools and correlation analysis of the macroeconomic effect of COVID 19 on Nigerian consuming oil economy. The study primarily utilized data from secondary sources such as Central Bank of Nigeria, National Bureau of Statistics (NBS) quarterly reports and annual statistics and other published data evidence. The study employed the use of trend analysis before and during the COVID 19 pandemic period. The study considered macroeconomic variables such as exchange rate, crude oil prices, inflation rate, unemployment and gross domestic product. These variables are considered very pertinent since they are interrelated. This is because higher crude oil prices improves Nigerian currency and reduces shortages of foreign reserves thereby curtailing the adverse effect of inflationary pressures due to importation of goods, and vice versa. The correlation analysis was used to examine the relationship that exist among the macroeconomic variables in the pre-COVID-19 lockdown period and COVI 19 lockdown periods.

Nigeria: Stylized Facts for a Consuming oil Economy

Generally, a consumer economy is described as an economy driven by consumer spending as a percent of Gross Domestic Product as opposed to the other major components of Gross private domestic investment, government spending, and imports netted against exports. The study compares capital investment (formerly gross domestic investment) as a percent of GDP and household final consumption expenditure (formerly private consumption) as a percent of GDP from Figure 2.

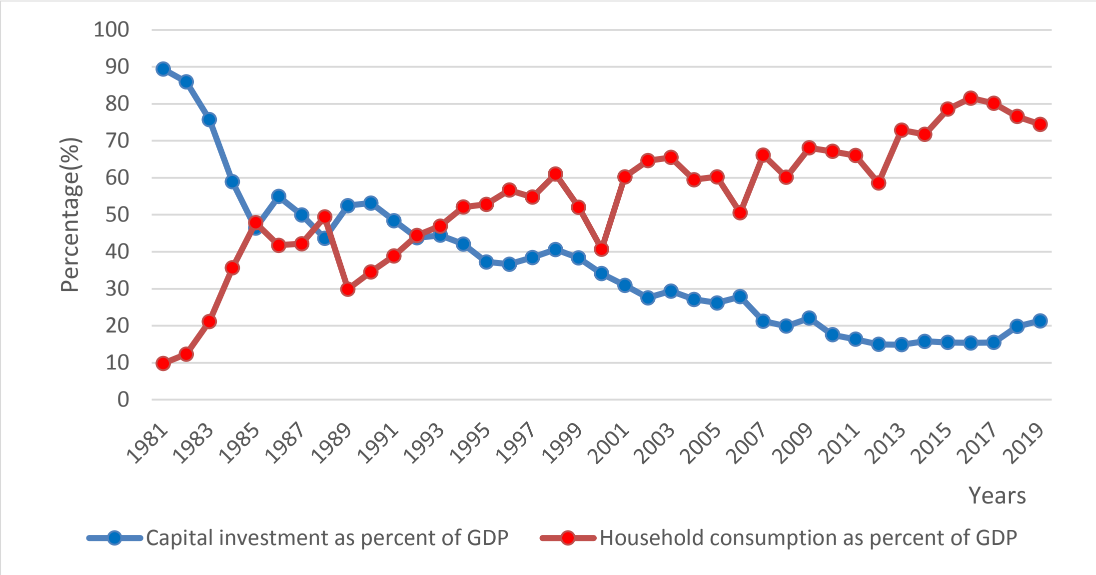

Figure 2: Comparison of capital investment to consumption expenditure in Nigeria
Source: World Bank, 2020

Nigeria experienced high domestic investment as a percent of GDP in 1981, unlike consumption expenditure during the year. However, capital investment as a percent of GDP declined overtime while household consumption as a percent of GDP exhibits an upward trending pattern. Between 1985 and 1992, Nigeria experienced fluctuations in capital investment and household consumption as a percent of GDP. After 1992. Nigeria recorded increasing household consumption as percent of GDP relatively higher than the capital investment as a percent of GDP. While household consumption as percent of GDP exhibits an upward trending pattern, capital investment as a percent of GDP exhibits a downward trending pattern. This clearly shows that the Nigerian is consuming especially between 1992 and 2019. This is because the country is characterized by high consumer spending as a percent of GDP as opposed to capital investment as a percent of GDP. More worrisome is the nature of the consumption expenditure in Nigeria that is directed mostly to goods that satisfy human desires or wants directly or immediately (final consumption).

In netting the imports against exports of goods and services as a percent of GDP in Nigeria, the study depicts the trends in Figure 3.

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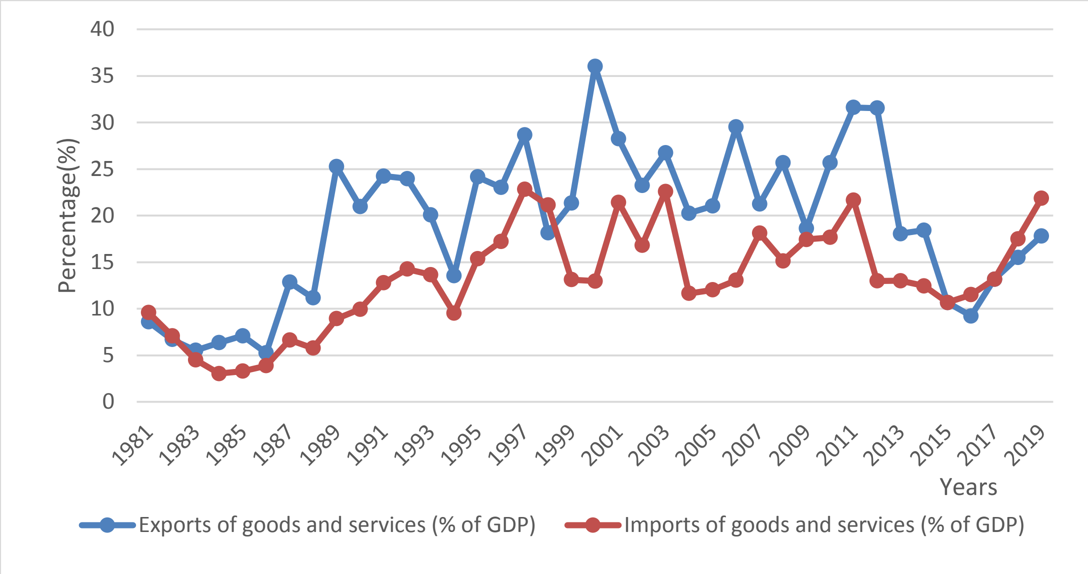

Figure 3: Exports and Imports as a percent of GDP in Nigeria
Source: World Bank, 2020

The trends show that Nigeria recorded slightly more exports as a percent of GDP as compared to imports as a percent of GDP. The trends have witnessed a lot of fluctuations that reflect ups and downs in the trade of goods and services. However, in recent periods, (particularly, between 2017 and 2019), the country has recorded unfavourable trade with higher imports of goods and services as a percent of GDP than exports as a percent of GDP. This further explains the consuming nature of the Nigerian economy. Although consumption is a vital factor of gross domestic product or income in an economy, the nature of the consumption expenditure is very crucial. Nigeria's import goods are dominated by final goods as opposed to intermediate goods or raw materials. A high percentage of imports in Nigeria is composed of manufactured goods. The study further depicts some selected major imports set of goods. The trends are depicted in Figure 4a and Figure 4b.

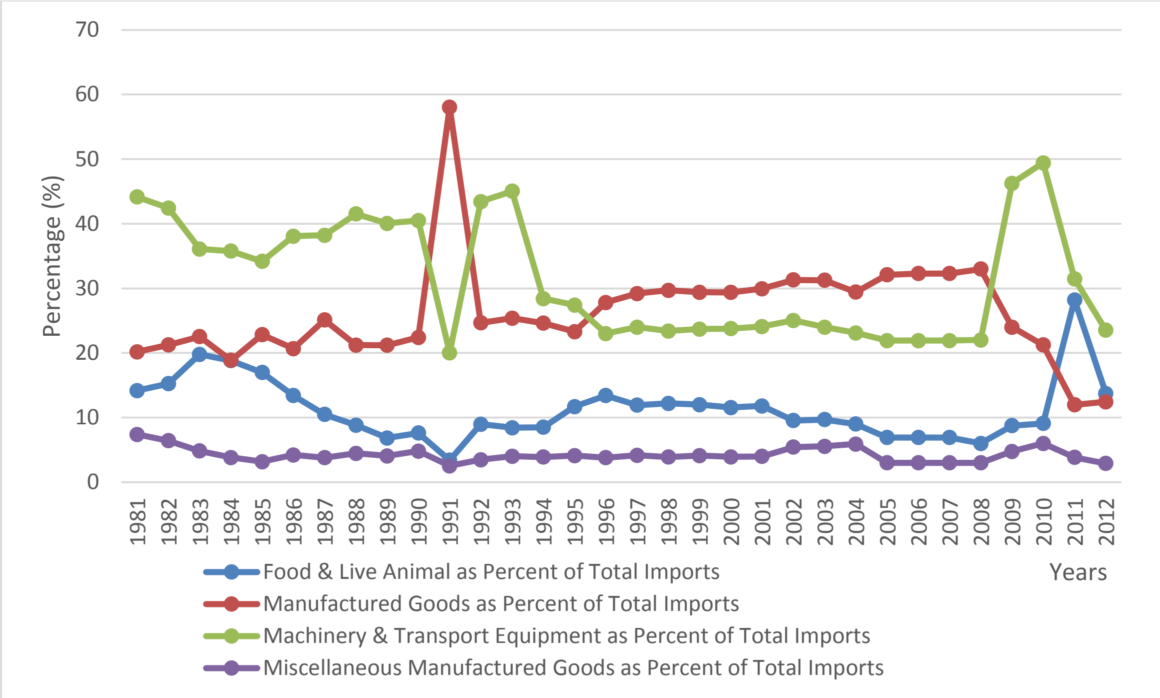

Figure 4a: Major Groups of Import Goods as a percent of Total Imports in Nigeria (1981-2012)

Source: Central Bank of Nigeria, 2020e

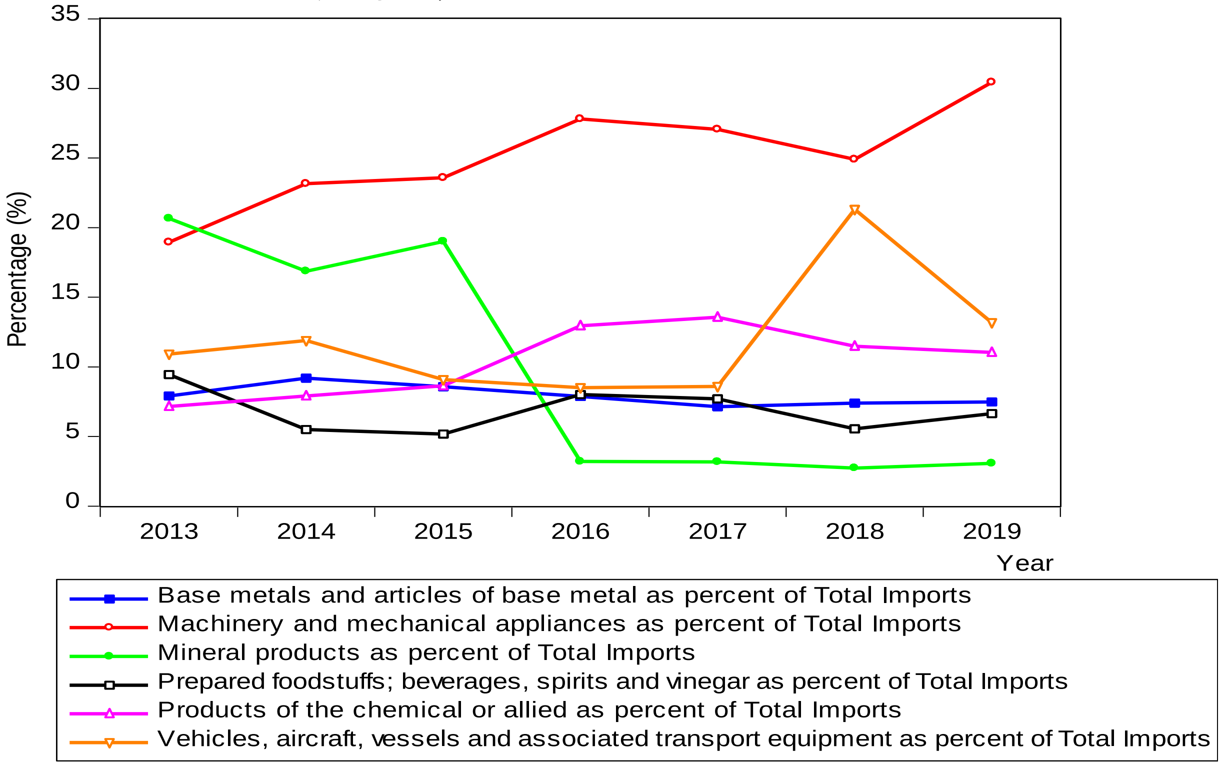

Figure 4b: Major Groups of Import Goods as a percent of Total Imports in Nigeria (2013-2019)

Source: Central Bank of Nigeria, 2020e

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From Figure 4a, manufactured goods as a percent of total imports, and machinery and transport equipment as a percent of total imports are relatively higher and dominate Nigeria's total imports. Other categories are food and live animal and miscellaneous manufactured goods. From 2013 as depicted in Figure 4b, the major imports category are machinery and mechanical appliances such as electrical equipment. Others include: prepared foodstuffs; beverages, spirits and vinegar, mineral products , products of the chemical or allied, base metals and articles of base metal and vehicles, aircraft, vessels and associated transport equipment between 2013 and 2019. Apart from the aforementioned, other categories had very little proportion of total imports. This depicts the nature of consumption in Nigeria that has less probability of accelerating economic growth in the country. Other import groups include beverages and tobacco, crude oil inedible, mineral fuels, animal and vegetable oils and fats, chemicals, and miscellaneous transactions. This explains that Nigerians import basically manufactured products and not commodities that could undergo value addition process, hence, killing the infant domestic firms producing similarly commodities.

This study also presents some stylized facts on the reason why Nigeria is a consuming oil economy. The country is one of the major producing oil economy in Africa and World at large. Specifically, Nigeria is Africa's largest oil producer and 11th largest oil producer in the world. However, the country has no recognized and functional refinery but records high domestic consumption of the refined oil. This puts pressure on the Nigerian foreign exchange to import refined crude oil for the country's consumption and other final goods. Hence, the relative percent of oil imports and non-oil imports as a percent of GDP and oil trade and non-oil trade as a percent of GDP are presented in Figure 5.

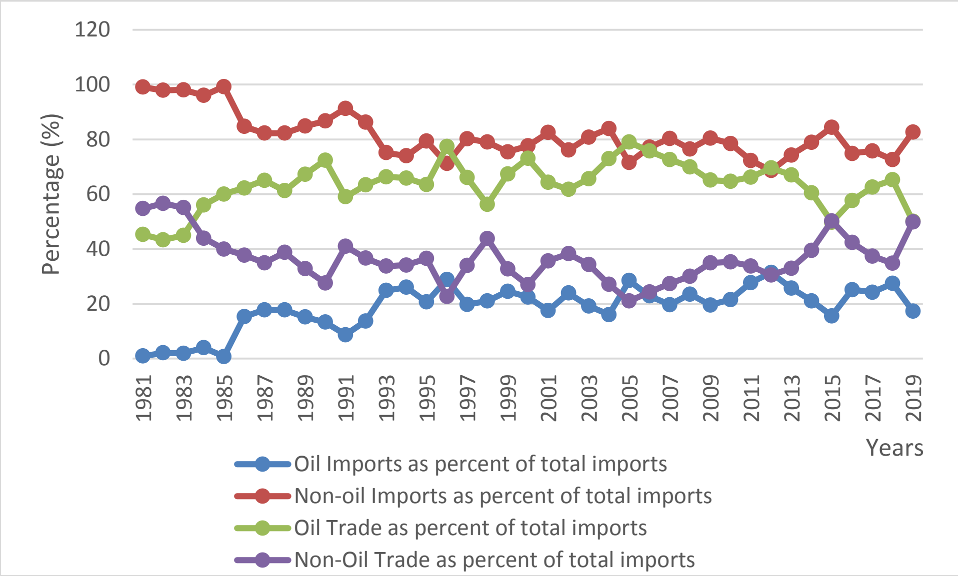

Figure 5: The Relative Share of Oil Imports and non-oil imports as percent of GDP in Nigeria
Source: Central Bank of Nigeria, 2020c

Figure 5 shows that non-oil exports have relatively higher imports unlike oil imports as percent of total imports. However, as an oil-producing country, the imports ordinarily should have been composed far more of non-oil imports. But, the situation differs as oil imports trend upwards while non-oil imports as percent of GDP trend downwards as depicted in Figure 4. The result of oil trade imports as percent of total imports and non-oil trade imports as percent of total imports is more worrisome, especially in recent years. This clearly explains the nature of Nigeria's economy as a consuming oil economy.

Macroeconomic Effect of COVID-19 on Nigerian Consuming Oil Economy

Nigeria is a mono-product economy (Agbaeze & Ukoha, 2018; National Bureau of Statistics, 2019); that is, it depends heavily on crude oil export for economic growth and development. The outbreak of the COVID-19 pandemic has affected negatively the price of crude oil at the international market caused by decline in oil demand given the restrictions in movement and reductions in travel. For example, the price of crude oil dropped from about $66.68 per barrel in January, 2020 to $27.9 per barrel in May, 2020 and less than $40 per barrel in July, 2020 (Central Bank of Nigeria-CBN, 2020a; Ozili, 2020; Inman, 2020). Since there is restricted level of movement among people during the pandemic, it has led to a sustained fall in the demand for aviation fuel and automobile fuel which affected Nigeria's net oil revenue, and eventually affected

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Nigeria's foreign reserve as recorded in the past years 2014 and 2016 economic crisis as a result of decline in oil price (Adeniran & Sidiq, 2018). Thus, the demand and patronage of Nigeria's crude oil has reduced drastically due to the pandemic. The plunge in the price of crude oil has far-reaching effects on the Nigeria's economy. Over the years, Nigeria relied largely on revenue from oil to finance its budget. Specifically, it affects 2020 budget which was initially planned with an oil price of US$57 per barrel. The fall in oil price to US$30 per barrel meant that the budget became obsolete which has led to the review of the budget which was originally N10.594 trillion to N10.276 trillion (Ozili, 2020). It is important to note that oil revenue form the largest part of the money expected to fund the Nigeria's 2020 budget (Budgl, 2020; PWC, 2020).

Oil price/revenue shocks have spill over effects on the economy (Emami, & Adibpour, 2012). This is because, a decline in oil revenue may leads to less government spending on public goods and infrastructure and thus hinders investment and output. In this regard, IMF projected a 3% reduction in global output for 2020 in January (Ceylan, Ozkan & Mulazimogullari, 2020). Since oil revenue form the largest part of revenue, the drop oil revenue has made the Nigerian government to borrow more to finance its budget deficit.
Disruptions in one area of global supply chains affect other areas, and may even result to the diversion of trade and investments to other regions in a bid to soften the risk of production stoppage arising from these disruptions as many importers shut down their factories and closed their borders. Beyond the direct disruptions caused by travel and mobility restrictions, interruptions in normal business operations, and the contraction in demand, breaks in supply chain connectivity may also be caused by measures introduced by governments, either to mitigate the spread of the pandemic or due to fear of supply shortages. Therefore, Nigeria has severely been affected because she is an import-dependent economy and as a result, it has witnessed shortage of crucial supplies like pharmaceutical supplies, spare parts, and finished goods from China (Association of Southeast Asian Nations-ASEAN, 2020). The disruption of global supply chains has also pushed up prices for imported goods and services, intensifying inflationary pressures in Nigeria.

Consequently, another effect of the COVID-19 pandemic is the devaluation of the naira as a result of the country's complete dependence on the exportation of oil, depletion of external reserves in a bid to save devaluing domestic currency (naira), depletion of funds for government business, economic recession and dwindling activities in the capital market. Inflation is often times induced by the depreciation of the domestic currency. Imimole and Enoma (2011) have also explained that inflation is due to the increase in cost required to purchase services and goods in the country. Currently, the prices of commodities, services and goods have continued to increase in Nigeria within this period. Central Bank of Nigeria (2020b) reported that Nigeria's annual inflation rate rose from 12.26 percent in March, 2020 to 12.82 percent in July, 2020. The evidence of inflationary pressures in Nigeria are presented in Figure 6 to Figure 8 depicting trend of headline inflation rate in Nigeria, trends of composite consumer price index in Nigeria for all items and trends of composite consumer price index in Nigeria for food items respectively.

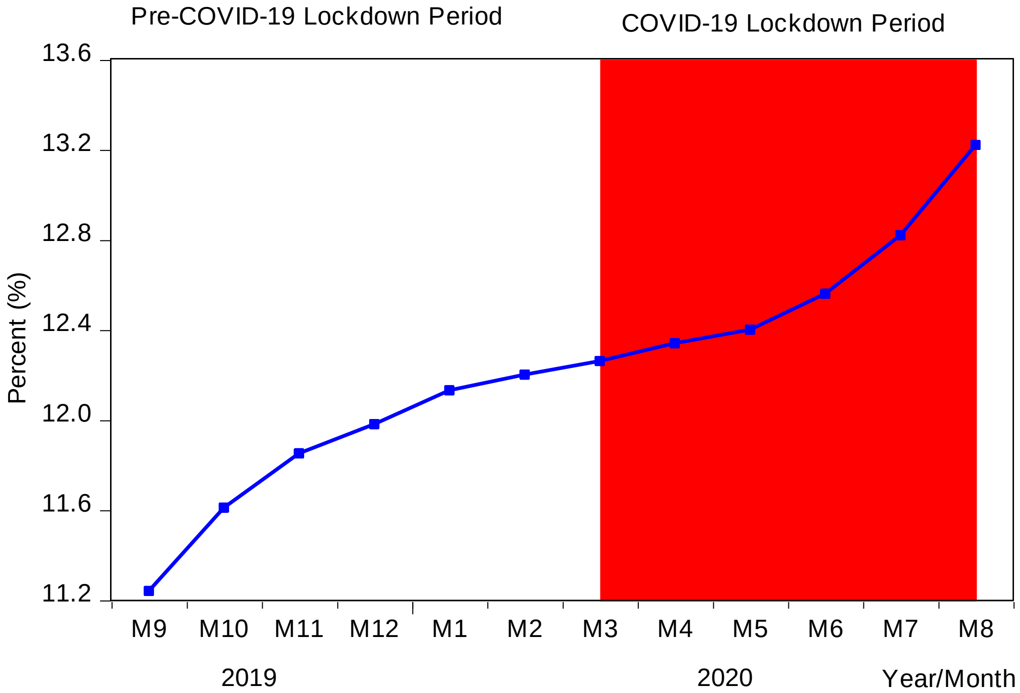

Figure 6: Trend of Headline Inflation Rate in Nigeria
Source: Central Bank of Nigeria, 2020b

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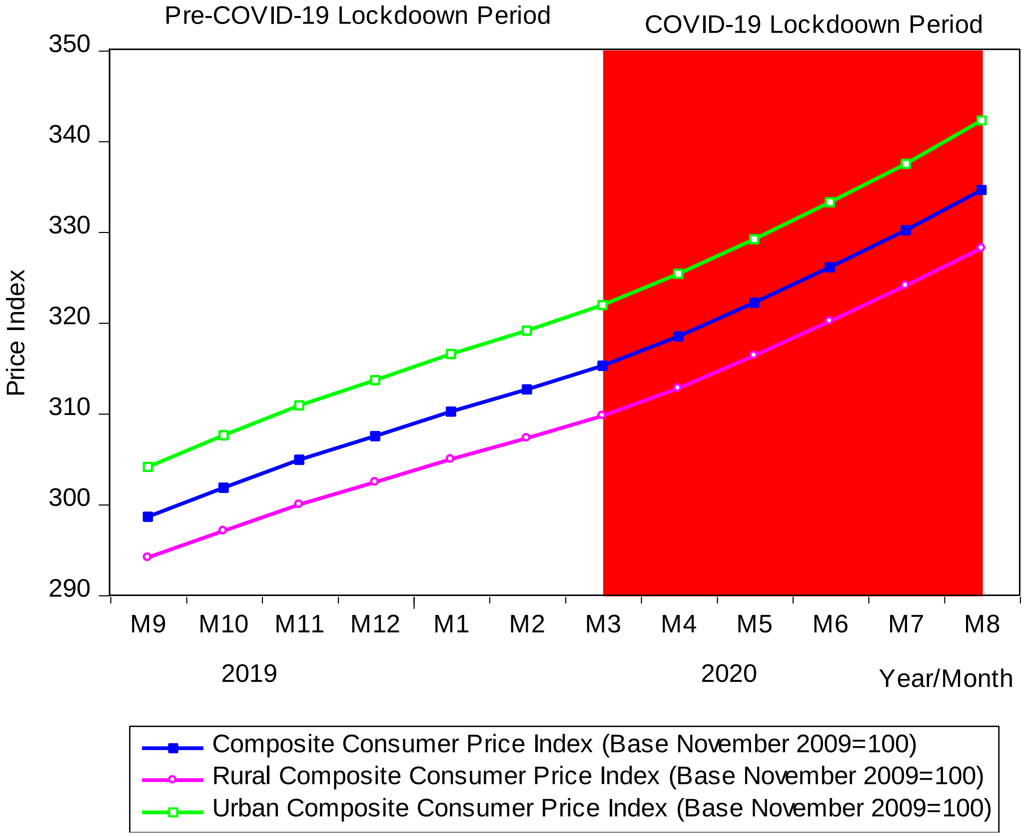

Figure 7: Trends of Composite Consumer Price Index in Nigeria (All Items)
Source: Central Bank of Nigeria, 2020b

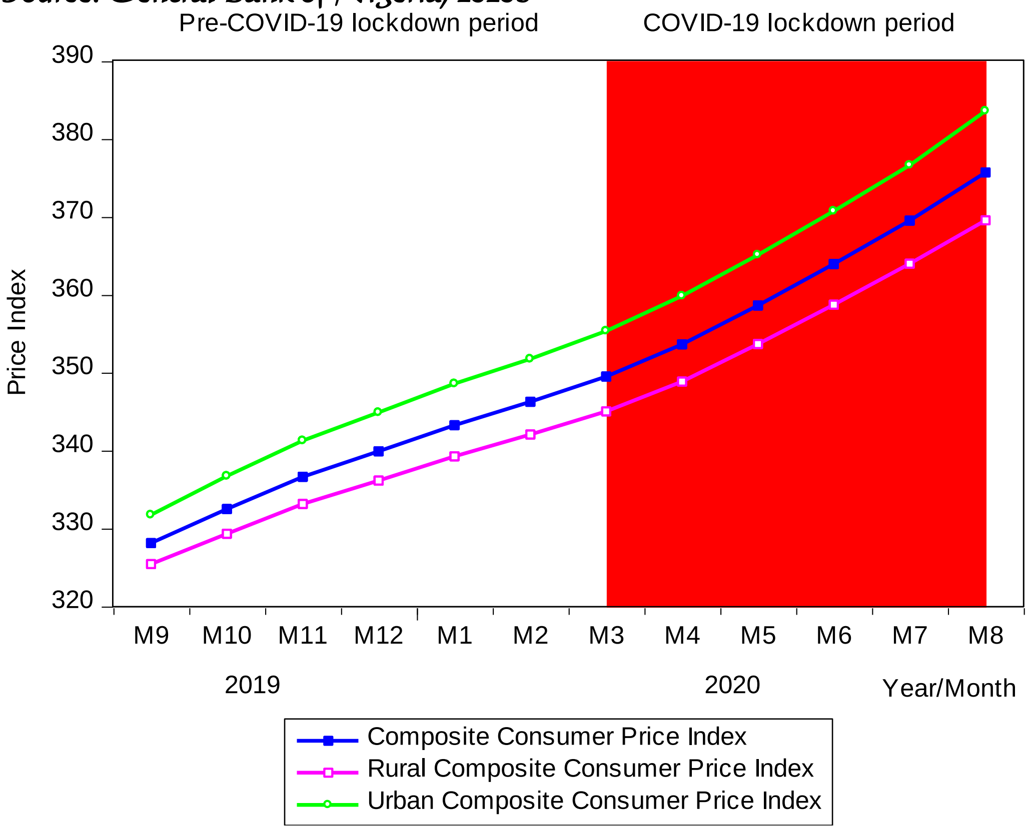

Figure 8: Trends of Composite Consumer Price Index in Nigeria (Food Items)
Source: Central Bank of Nigeria, 2020b

Due to the supply shocks, the year-on-year headline inflation rate rose for the 12 consecutive months from 11.24 percent in September, 2019 to 13.22 percent in August, 2020 (CBN, 2020b). The inflation rate went beyond 12 percent in December, 2019 and never returned due to the effect COVID-19 pandemic. The lingering food supply shortages caused by the persisting security challenges also aggravated the challenge in the food producing regions leaving negative supply shocks. Arising from the negative supply shocks also occasioned by COVID-19 pandemic and the seasonal impact of celebrations also fuelled the pace of headline inflation during the period. It is important to note that the hike in prices of goods is reflected in almost all goods consumed. The recovery rate of the economy after the seasonal impact of celebrations was weakened by the damaging effects of COVID-19 pandemic that has left consumers with the only option of operating at the existing inflationary zone. In terms of food items, the increase was driven largely by the prices of tubers, fruits, oils, meat and fats, which reflected the impact of the supply chain disruptions and the seasonality effect associated with the planting season. These supply chain disruptions were occasioned as a result of the COVID-19 pandemic. The core inflation was also derived from supply chain disruptions, increased cost of transportation/logistics, unintended effects of the exchange rate adjustment and panic purchases of essentials goods by households. These were all occasioned due to COVID-19 pandemic as identified earlier. The implication this rising inflationary pressure is that it has put CBN's monetary policy and price stability objective under pressure and making the single digit target for inflation difficult to attain. The persistent increase in the consumer prices (inflation) have underlined the widening aggregate demand gap through increased consumption expenditure which has resultant to negative effect on business and industrial output growth. For domestic consumer prices, the restriction on inter-state movement, hike in transportation fare, and increased shoppers demand occasioned due to COVID-19 pandemic were responsible for the increase in the domestic prices of most agricultural commodities.

For crude oil prices, the evidence of changes in crude oil prices is depicted in Figure 9.

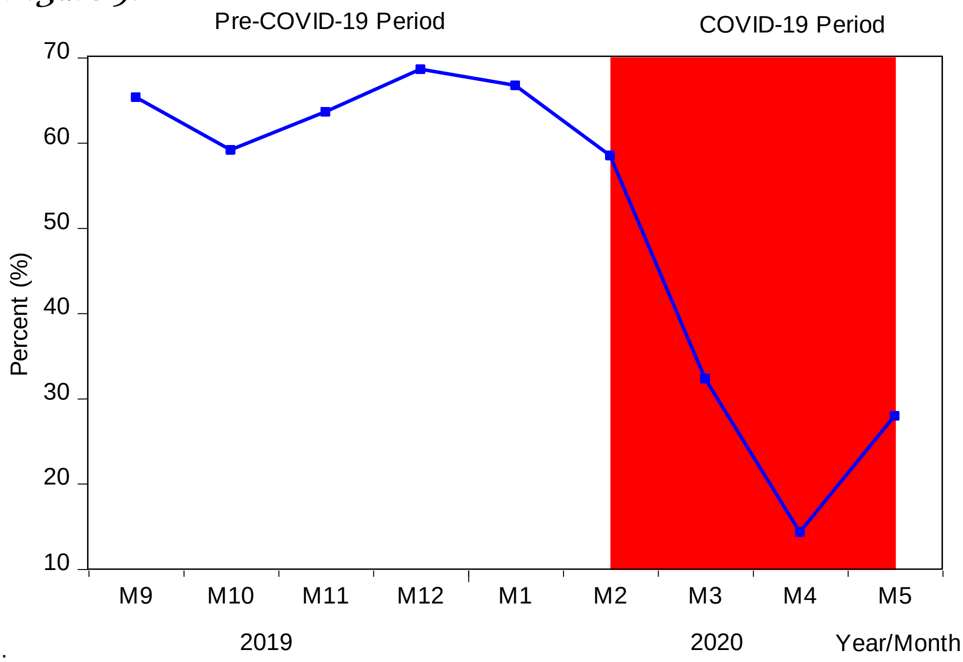

Figure 9: Trend in Crude Oil Prices
Source: Central Bank of Nigeria, 2020c

The prices of crude oil declined drastically during the COVID 19 period leaving harsh effects on the Nigerian oil dependent economy. There was a sudden decline from February 2020 when the disease was declared global pandemic. The decline was attributed to the emergence of more countries embarking on COVID-19 lockdowns and subsequent downtick in economic activities, resulting in decrease in the global demand for crude oil. However, based on projections, price strengthening is expected to bolster investment in the oil and gas sector and sustain its survival under this severe pandemic (CBN, 2020c). More so, the domestic crude oil production and export declined as OPEC countries and its allies commit to reducing output by 9.7 million barrels per day (mbd) from May 1, 2020 (CBN, 2020c). The supply-chain disruptions and restrictions of non-essential trade due to the lockdown measures as well as Nigeria's border closure led to reduced non-oil export earnings. Consequently, this has weaken the Nigerian currency as less commodities are exported are recorded as against more imports given the nature of the economy as import dependent and consuming economy.

The evidence of changes in exchange rate (changes in the value of domestic currency) in Nigeria are presented in Figure 10.

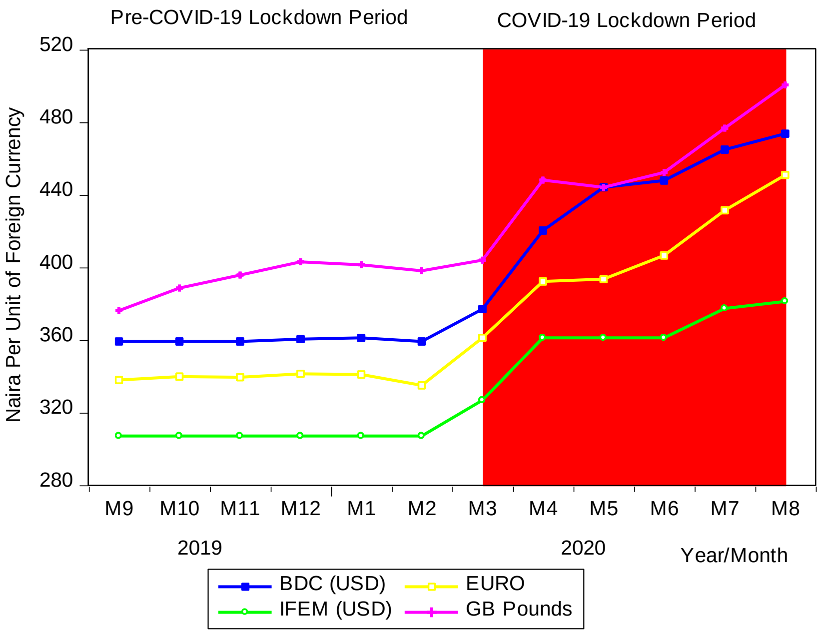

Figure 10: Monthly Average Exchange Rates of the Naira (Naira Per Unit of Foreign Currency)
Source: Central Bank of Nigeria, 2020d

From Figure 10, it shows that Nigerian currency (naira) depreciated during the COVID-19 pandemic. It is evident that as oil prices tank or shrink while global demand drops drastically in the wake of the COVID-19 outbreak, Nigeria's economy is being caught in the cross-hairs. Thus, since oil is the Nigeria's biggest export commodity, the Nigerian government relies heavily on the resource for dollar earnings to fund its national budget. Give the recent shrink or fall in global oil price due to the pandemic, it has affected the value of Nigeria currency leaving high prices of the imported commodities given that the country is import dependent as established earlier. Therefore, the depreciation of the naira and further COVID-19 restrictions lead to escalation of the inflationary pressure as evident in the headline inflation as depicted in Figure 6. The persistent rise in the headline inflation driven by the continued effects of the border closure and COVID-19 pandemic has detrimental effect on less producing economy of Nigeria. More worrisome, the measures introduced to contain the spread of the COVID-19 pandemic, particularly the lockdown in some states have triggered the panic of buying of food and related household essentials leading to shortages and hence further hike or rise in prices.

To further validate the relationship among the macroeconomic variables, the study employed correlation analysis and the results are presented in Table 1 and Table 2.

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Table 1: Correlation Results (From 2019M9-2020M2)-Pre-COVID-19 Lockdown Period

	INF	*RCCPIA*	*RCCPIF*	*UCCPIA*	*UCCPIF*	*COILP*	*CCPIF*	*CCPIA*	*POUNDS*	*EURO*	*USD*
INF	1.000										
RCCPIA	0.976	1.000									
RCCPIF	0.980	1.000	1.000								
UCCPIA	0.978	1.000	1.000	1.000							
UCCPIF	0.983	0.999	1.000	1.000	1.000						
COILP	-0.032	-0.068	-0.062	-0.068	-0.058	1.000					
CCPIF	0.982	1.000	1.000	1.000	1.000	-0.060	1.000				
CCPIA	0.977	1.000	1.000	1.000	0.999	-0.068	1.000	1.000			
POUNDS	0.934	0.851	0.862	0.856	0.869	0.199	0.865	0.854	1.000		
EURO	-0.028	-0.188	-0.173	-0.180	-0.159	0.696	-0.166	-0.184	0.288	1.000	
USD	0.492	0.456	0.460	0.459	0.466	0.692	0.463	0.457	0.607	0.644	1.000

Source: Computations from Excel Output

Note: INF=Inflation, RCCPIA=Rural Composite Consumer Price Index for All Items, RCCPIF=Rural Composite Consumer Price Index Food Items, UCCPIA=Rural Composite Consumer Price Index for all items, UCCPIF=Rural Composite Consumer Price Index Food Items, COILP=Crude Oil Price, CCPIF= Composite Consumer Price Index for Food Items and UCCPIA= Composite Consumer Price Index for All Items, POUNDS= Pound sterling, EURO=European currency, and USD=United States Dollar.

The result from Table 1 shows very low negative relationship between crude oil price and inflation rates/consumer price indices in Nigeria before the COVID-19 lockdown period. However, the relationship became stronger during the COVID-19 lockdown period. This implies that the changes in crude oil price had stronger negative effect on the level of inflation in Nigeria during the COVID-19 lockdown period unlike the pre-COVID-19 lockdown period. To further establish the effects of the downtick in the global crude oil prices on the Nigerian consuming oil economy, it shows that there was a positive relationship between the crude oil prices and value of Nigerian currency expressed in the Naira per unit of the foreign currencies (POUNDS, EURO and USD). The implication is that even as crude oil price rises downtick, other export commodities strengthened the value of Naira per unit of foreign currency. The opposite of this is visible in Table 2 where crude oil price has strong negative relationship with the value of Naira per unit of foreign currency (POUNDS, EURO and USD). This indicates that the downward change in crude oil price has further increase the exchange rate during the Lockdown period. The implication is that the value of Naira has depreciated relative to the foreign currency. Hence, much more units of Naira is expressed for a unit of foreign currency during the COVID-19 lockdown period unlike the pre- COVID-19 lockdown period.

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Table 2: Correlation Results (From 2020M3-2020M8)-COVID 19 Lockdown Period

	INF	RCCPIA	RCCPIF	UCCPIA	UCCPIF	COILP	CCPIF	CCPIA	POUNDS	EURO	USD
INF	1.000										
RCCPIA	0.956	1.000									
RCCPIF	0.958	1.000	1.000								
UCCPIA	0.960	1.000	1.000	1.000							
UCCPIF	0.963	1.000	1.000	1.000	1.000						
COILP	-0.313	-0.183	-0.166	-0.202	-0.191	1.000					
CCPIF	0.961	1.000	1.000	1.000	1.000	-0.179	1.000				
CCPIA	0.958	1.000	1.000	1.000	1.000	-0.193	1.000	1.000			
POUNDS	0.920	0.941	0.940	0.944	0.944	-0.745	0.942	0.943	1.000		
EURO	0.953	0.977	0.976	0.978	0.978	-0.662	0.977	0.977	0.990	1.000	
USD	0.813	0.930	0.926	0.929	0.924	-0.392	0.925	0.929	0.935	0.934	1.000

Source: Computations from Excel Output

Note: INF=Inflation, RCCPIA=Rural Composite Consumer Price Index for All Items, RCCPIF=Rural Composite Consumer Price Index Food Items, UCCPIA=Rural Composite Consumer Price Index for all items, UCCPIF=Rural Composite Consumer Price Index Food Items, COILP=Crude Oil Price, CCPIF= Composite Consumer Price Index for Food Items and UCCPIA= Composite Consumer Price Index for All Items, POUNDS= Pound sterling, EURO=European currency, and USD=United States Dollar.

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Given that the economic activities were disrupted during the COVID-19 lockdown period and even after the lift, the COVID-19 measures of containing it such as the implementation of social distancing made it difficult for the economy to return to the status quo before the advent of the pandemic. Hence, it has also affected the level of economic activities. This in turn affects the level of employment in the country and income measured in terms of GDP. The result of the real GDP is presented in Figure 11.

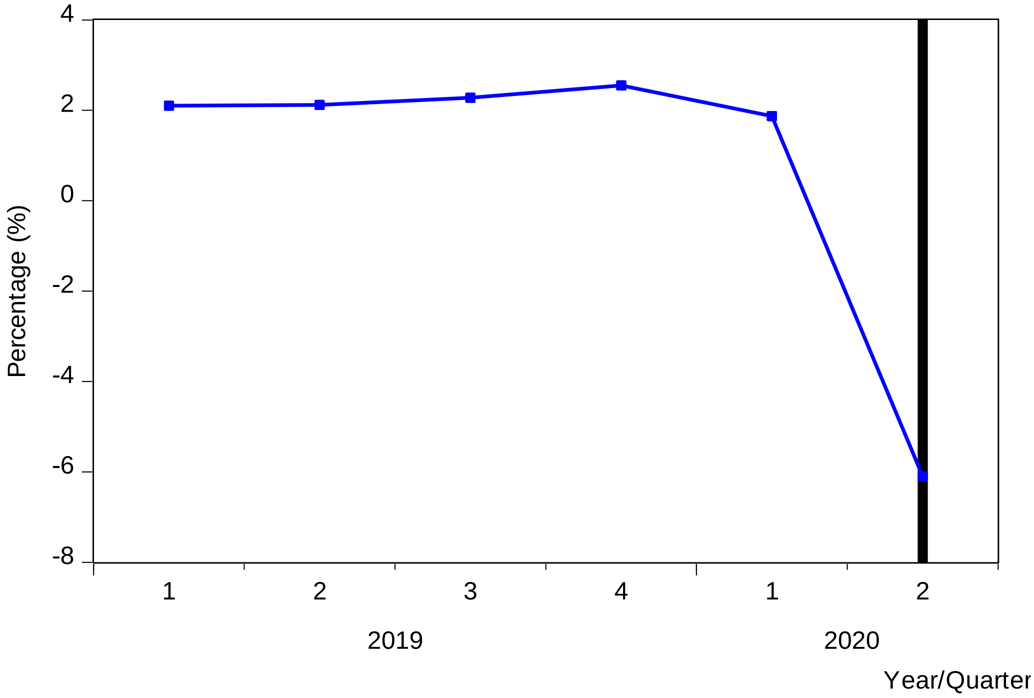

Figure 11: Real GDP Growth Rate in Nigeria
Source: National Bureau of Statistics, 2020

Figure 11 shows that real GDP grew by 2.10% and 2.12% on a year-on-year basis in the first and second quarters of 2019. The growth rate accelerated further in the third and fourth quarters of 2019 by 2.28% and 2.55% respectively. These steady growth rates on quarterly records resulted in an annual growth rate of 2.27% or 2019. This indicated a high performance of the Nigerian economy before the COVID-19 lockdown period. The real GDP growth rate declined by 1.87% in the first quarter of 2020 and further decreased by -6.1% (year-on-year) in real terms in the second quarter of 2020. The decline was largely attributable to a significantly lower level of both domestic and international economic activities during the second quarter due to the nationwide shutdown efforts aimed at containing the COVID-19 pandemic in the country. The domestic efforts range from restrictions of human and vehicular movement implemented in some states nationwide, bans on domestic and international travels, closure of schools, and markets. These affected both local and international trade activities.

To better understand in a clear perspective the structure of the GDP growth in the Nigerian economy, the study has classified the growth rate into oil GDP growth and non-oil GDP growth and the results are depicted in Figure 12.

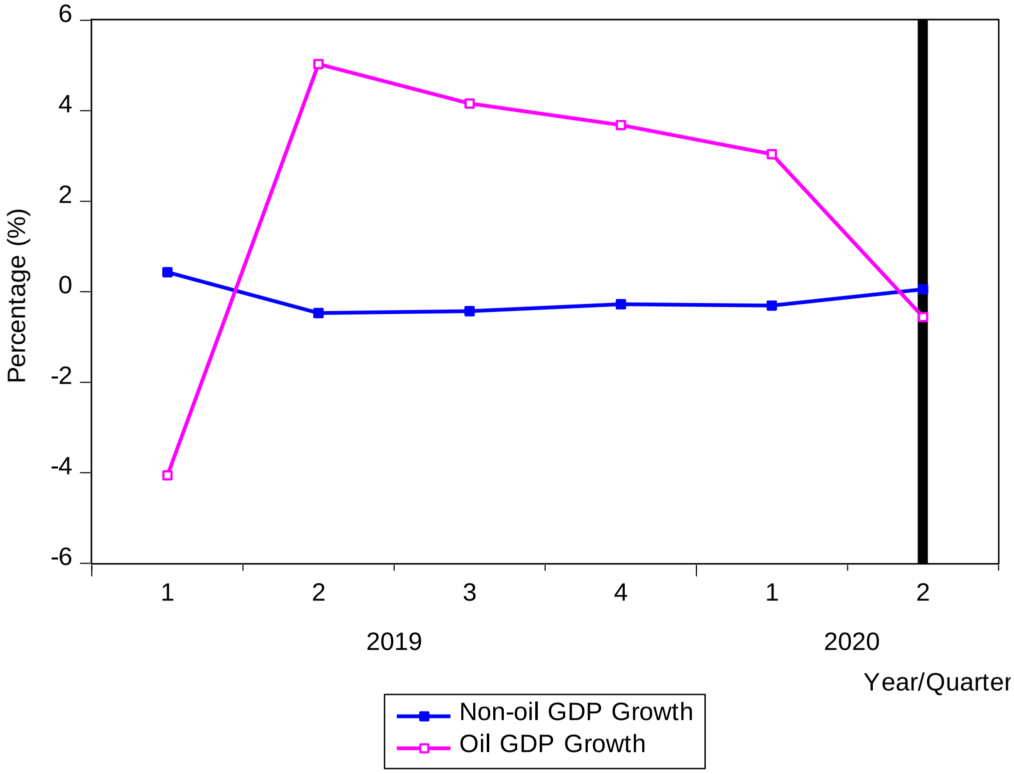

Figure 12: Trends of Oil and Non-Oil GDP Growth Rate in Nigeria
Source: National Bureau of Statistics, 2020

The result from Figure 12 shows that oil GDP growth increased drastically in the second quarter of 2019 and subsequently declined slightly in the succeeding quarters (2019Q3 and 2019Q4). However, the oil GDP declined further in the second quarter of 2020 during the COVID 19 pandemic. More so, the real growth of the oil sector was relatively more stable and increased slightly in the second quarter of 2020. This implies that the non-oil sector is more sustainable even during the COVID-19 pandemic. It further explains the relevance of the sector to the growth of the Nigerian economy during COVID-19 and beyond. The unemployment rate is projected to be about 33.5 percent in the year 2020 due to the pandemic while the Ministry of Labour and Productivity put the total number of job losses in Nigeria during the pandemic to about 39.5 million (Adesoji & Asongu, 2020).

CONCLUSION AND POLICY RECOMMENDATIONS

This paper examined the macroeconomic effect of COVID-19 on the Nigerian consuming oil economy. The COVID-19 pandemic has caused severe economic consequences on Nigerian economy and the world at large. More worrisome, the lockdown has frozen economic activities, causing massive job losses, demand and supply chain disruptions, reduction in crude oil prices, depreciation of the Nigeria's currency, and high inflationary pressures on all consumables. The effect of the depressed demand for crude oil that has precipitated an unprecedented oil price crash has also resulted to negative effects on macroeconomic variables in Nigeria given that Nigeria is predominantly a consuming oil economy. This dependence on oil for revenue and foreign exchange makes it particularly vulnerable in this situation as explained. The COVID 19 has left several other negative effects on macroeconomic variables, viz: depreciated exchange rate, declining gross domestic product and real growth rate and inflation pressures in the country.
Therefore, the study recommends for the implementation of Nigeria "Economic Sustainability Plan" to mitigate the effects of the COVID-19 pandemic on the Nigeria's economy. That is, to implement the three pillars namely; real sector measures, fiscal and monetary measures and stimulate the economy by preventing business collapse and ensuring liquidity; retain or create jobs using labour intensive methods in key areas like agriculture, facility maintenance, housing and direct labour interventions; undertake growth enhancing and job creating infrastructural investments in roads, bridges, solar power and communication technology; promote manufacturing and local production at all levels and advocate the use of made in Nigeria goods and services as a way of creating job opportunities, achieving self-sufficiency in critical sectors of the economy and curbing unnecessary demand for foreign exchange which might put pressure on the exchange rate; and extend protection to the very poor and other vulnerable groups- including women and persons living with disabilities- through pro-poor spending.

Given that the outbreak of the COVID-19 pandemic has affected the Nigerian economy negatively as the price of crude oil declined drastically in the international market occasioned by restrictions in movement and reductions in travel and having spill-over effects on the economy through foreign reserves, exchange rate (devaluation and depreciation of Naira) and inflation pressure on the economy, the study recommends that Nigerian government should support agricultural production (potential winner sector- See Figure 1) with the aim of diversifying her economy to improve export potentials. The diversification of the Nigerian economy will reduce the over dependency of government on oil revenue to finance the budget. It will also help in stabilizing foreign exchange reserves in an event of external shock such as changes in crude oil prices and demand.

The Nigerian government should also engage SMEs through granting of soft loans with extended moratorium on loans or award of grants to the SMEs. Given the importance of these SMEs to the country's economic recovery during the pandemic and even beyond, an effective support scheme as highlighted above should be a top priority. The Nigerian government can also offer relief packages such as loan holiday packages for SMEs as measures against the economic impact caused by the COVID19 global pandemic.

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