

Policies and Reforms for Economic Development in Nigeria and Africa

List of Articles

Page 3:

Review of the Nigerian Economy in 2021 & H1'2022 and Key Policy Recommendations

NESG Research

Page 16:

Fiscal and Monetary Policy Outcomes of the Treasury Single Account Policy in Nigeria

Blessing Ufuoma Olanrewaju and Joshua Adeyemi Afolabi

Page 25:

Fuel Subsidy and Implications for Social Spending in Nigeria: A Research Note

Risikat Oladoyin S. Dauda, Ph.D.

Page 38:

Community Trust, the Concept of Community Sustainability Under the Petroleum Industry Act 2021: A Conceptual Framework

Obinna Chris Dike, Ph.D.

Page 45:

Digitalization and Labor in Africa: a regional snapshot for relevant social interventions

Raymond Onuoha, Ph.D.

Page 55:

Impact of Insecurity on Food Production in Igabi LGA, Kaduna State.

Usman, G. Birat

Page 64:

A Pragmatic Approach to solving Nigeria's Unemployment Problem with emphasis on SMEs

Oluwafemi Ajongolo

Page 71:

Distributed Energy Resources in Nigeria: Analyzing the Amendment to the Constitution of the Federal Republic of Nigeria (Fifth Alteration) Bill, No.33, 2022

Akinbobola Olukayode Olugbemi

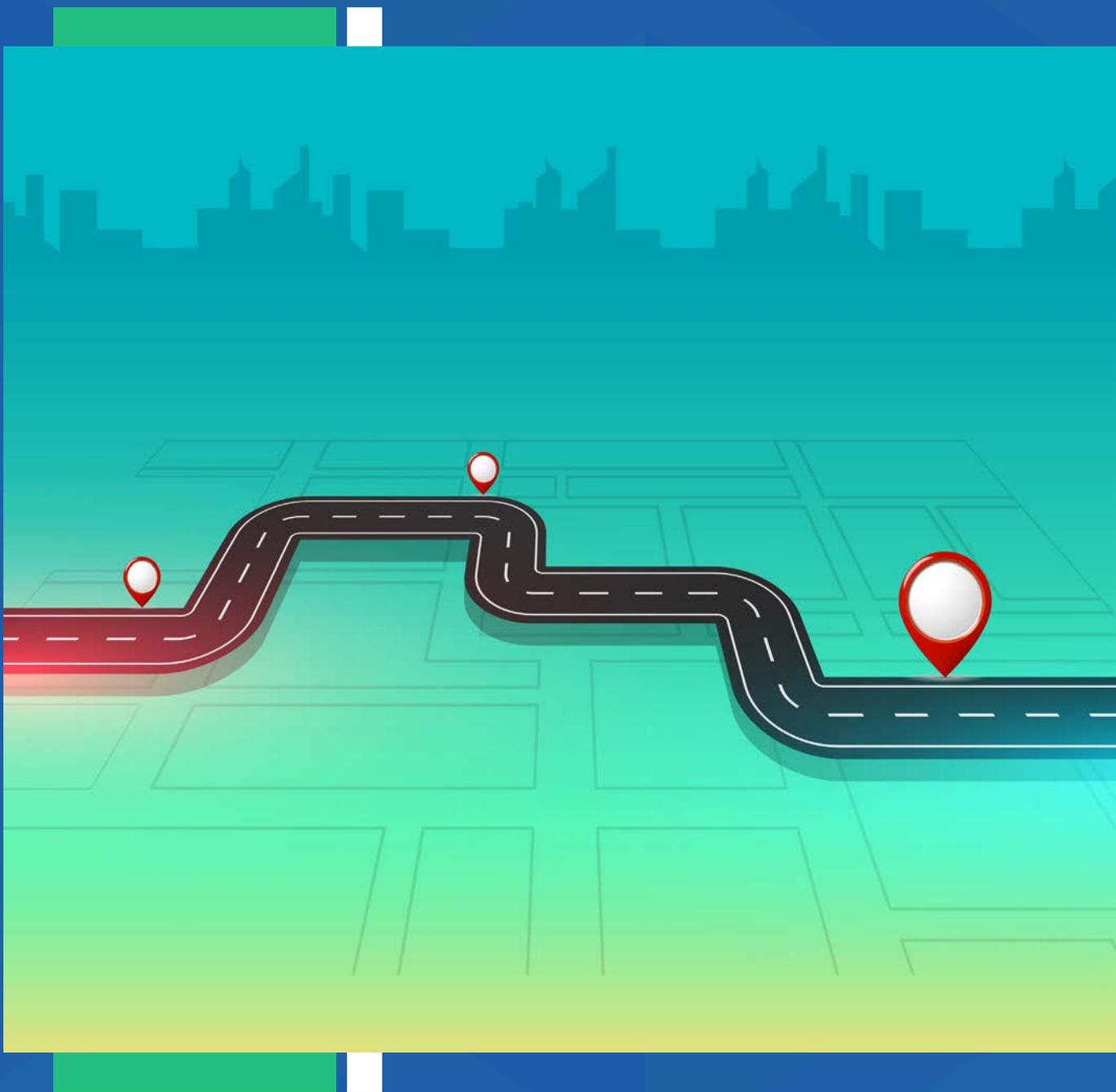
Page 78:

A Primer on A-Platonic Policies for Deepening Nigeria's Agriculture

Gbadebo Odularu, Ph.D.

REVIEW OF THE NIGERIAN ECONOMY IN 2021 & H1'2022 AND KEY POLICY RECOMMENDATIONS

NESG RESEARCH



Abstract

Nigeria is rapidly consolidating its recovery from the pandemic-induced recession, but the pre-COVID-19 narrative of poor inclusiveness and macroeconomic instability persists. Despite a Gross Domestic Product (GDP) growth of 3.4 percent in full-year 2021, data from the National Bureau of Statistics (NBS) showed that average prices of goods and services were high; the trade balance remained in deficit in 2021 (but transited to a surplus in 2022Q1) and foreign investment inflows were constrained in the year and deteriorated further the first quarter of 2022. The World Bank estimated that an additional 8 million Nigerians fell into poverty between 2020 and 2021 due to lower purchasing power. Although Nigeria's potential is enormous, job creation across sectors has been lagging, resulting in an increase in unemployed individuals. While there has been considerable improvement in some areas, such as the mobilisation of non-oil revenue in the last few years, the challenges associated with insecurity, rising prices, unemployment, and lower investments intensify the need for reforms that will lead the country to a sustainable path of substantial economic progress and improved social inclusion. With about one year left in office, the current administration must intensify the pace of reforms, especially given the impact of the twin challenges of poverty and unemployment on insecurity and social cohesion of the nation. In its 2022 Macroeconomic Outlook Report, the NESG prioritized three key reforms: oil and gas liberalisation and subsidy reforms, foreign exchange management reforms, and critical sectoral reforms¹. Moreover, the Nigerian Economic Dialogue organised by the NESG in May 2022 unraveled the urgency to address key structural challenges facing the Nigerian economy².

Introduction - Macroeconomic Stability Real Sector Developments

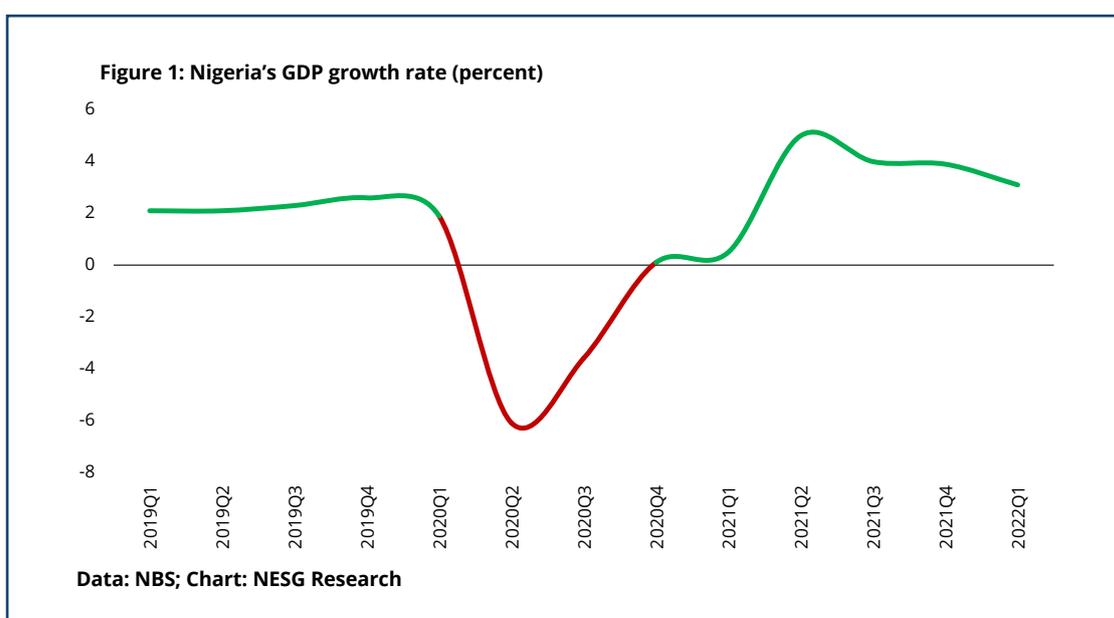
Nigeria posted strong growth in 2021 and the first quarter of 2022 amidst the waning impact of the COVID-19 pandemic. The Nigerian economy grew by 3.4 percent in 2021 compared with an output decline of 1.9 percent in 2020. The current economic growth is stronger than its pre-pandemic level, which stood at 2.3 percent in 2019. The rapid economic recovery could be attributed to significant improvements in non-oil sector performance and the complete re-opening of the economy to productive activities after the COVID-19 lockdown measures. The non-oil sector – which accounted for 92.8 percent of the country's GDP - grew by 4.4 percent in 2021 compared with a 1.3 percent contraction in 2020. This performance was bolstered by impressive growth recorded across some industrial activities (notably, Manufacturing and Construction sectors) and Services sub-sectors (particularly, Transportation & Storage, Financial Services, Trade, and Information & Communications Technology). Conversely, the oil sector posted a negative growth of 8.8 percent in 2021 relative to a contraction of 8.3 percent in 2020. In nominal terms, the size of the economy in 2021 stood at N173.5 trillion (US\$417.1 billion)³. Having recovered from the pandemic-induced recession in the fourth quarter of 2020, Nigeria consolidated its recovery with economic growth of 3.1 percent in the first quarter of 2022. However, the current economic growth is lower when compared with its level in the fourth quarter of 2021 (4 percent). This stellar growth was driven by the improved performance of sectors including Agriculture (3.2 percent),

¹Refer to the 2022 Macroeconomic Outlook Report and Policy Briefs for detailed information on the three reforms, retrievable via: <https://www.nesgroup.org/research>

²Refer to the NESG National Economic Dialogue Report for detailed information, retrievable via: <https://ifnotnowwhen.ng/>

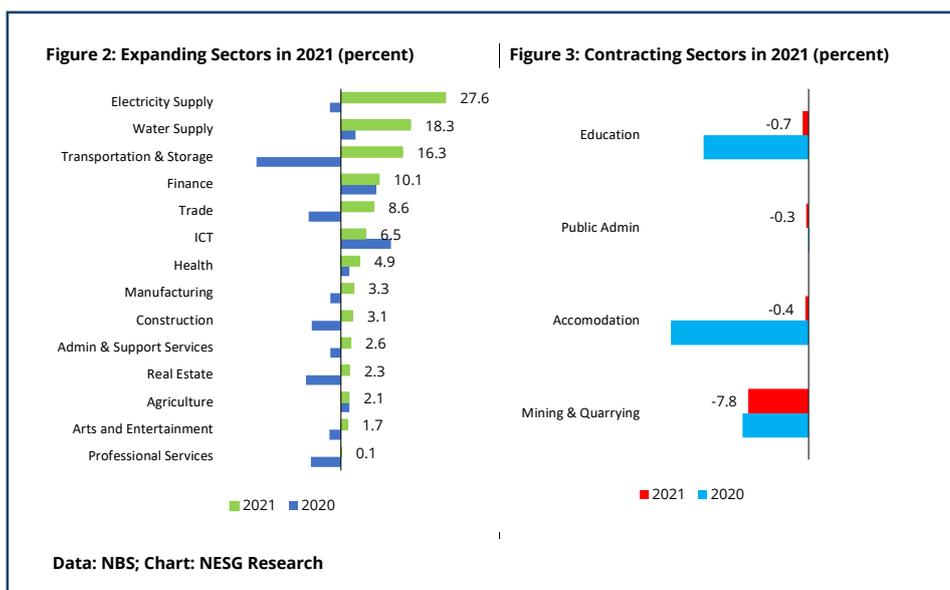
³We utilized the official exchange rate of N416/US\$ for currency conversion.

Manufacturing (5.9 percent), Construction (4.8 percent), ICT (12.1 percent), Trade (6.5 percent) and Finance (23.2 percent) in the first quarter of 2022. The non-oil sector grew faster to 6.1 percent (year-on-year) in 2022Q1 relative to 0.8 percent growth in 2021Q1. Meanwhile, the oil and gas sector, remained in the contraction territory, posting a negative growth of 26 percent in 2022Q1.



The three broad sectors exhibited mixed patterns of growth performance in 2021 and the first quarter of 2022. Although the Agricultural sector growth slowed slightly to 2.1 percent in 2021 from 2.2 percent in 2020, the sector remained the most resilient, having sustained growth for five consecutive quarters since the economic recession of 2020. The impressive performance of the agricultural sector, particularly in the last quarter of 2021, was primarily due to faster growth in sub-sectors, including crop production (3.9 percent) and fishing (1.7 percent) in the quarter. Similarly, the Services sector grew by 5.6 percent in 2021 relative to a negative growth of 2.2 percent in 2020. This is the sector's first year of positive annual growth since 2016. The performance of the Services sector in 2021 was largely due to the expansion recorded by major sub-sectors, including Transportation & Storage (16.3 percent), Finance and Insurance (10.1 percent), Trade (8.6 percent), as well as, Information and Communications Technology (6.5 percent). However, the industrial sector contracted by 0.5 percent in 2021, representing an improvement compared with a negative growth of 5.9 percent in 2020. The industrial sector growth was driven by improved performances in three out of five broad subsectors – manufacturing (3.3 percent in 2021 against -2.8 percent in 2020), construction (3.1 percent against -7.7 percent), electricity supply (27.6 percent against -2.9 percent). Meanwhile, the impressive performance of these sub-sectors was overshadowed by the persistent contraction of the Mining & Quarrying activities (-7.8 percent versus -8.5 percent). Moreover, in broad terms, the Services sector recorded the strongest growth at 7.5

percent in the first quarter of 2022, followed by the Agricultural sector with a growth of 3.2 percent. Meanwhile, the Industrial sector contracted by 6.8 percent in the quarter. It is worthy of note that the Agricultural sector has remained resilient since the COVID-19 pandemic broke out by recording positive growth. In contrast, the other sectors hovered between the expansion and contraction territory.

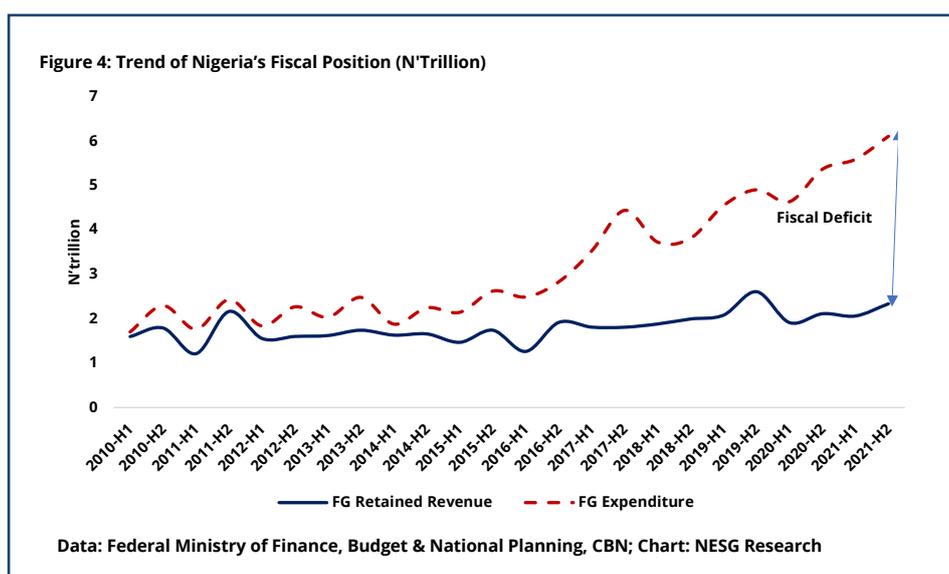


Inflationary pressures tapered gradually from the second quarter of 2021, but many more Nigerians were pushed into poverty in 2021. After reaching a peak at 18.2 percent in March 2021, the headline inflation rate maintained a downward trend as it stood at 15.6 percent in December 2021. However, there is a renewed build-up of inflationary pressures as the headline inflation rose to 17.7 percent in May 2022 from 15.6 percent in January 2022 and averaged 16.4 percent in the first five months of 2022. The key drivers of inflation in Nigeria are structural factors, including insecurity, infrastructural decay, exchange rate depreciation and supply chain disruptions due to poor logistics, and rising energy and transport costs. The Nigerian government's successful implementation of a planned tax on phone calls would also contribute to inflation build-up in 2022. With the inflation rate remaining high and real income eroded, the World Bank's estimates showed that the poverty headcount increased to 90 million people in 2021. It also projected that an additional 7 million Nigerians would fall into poverty in 2022.

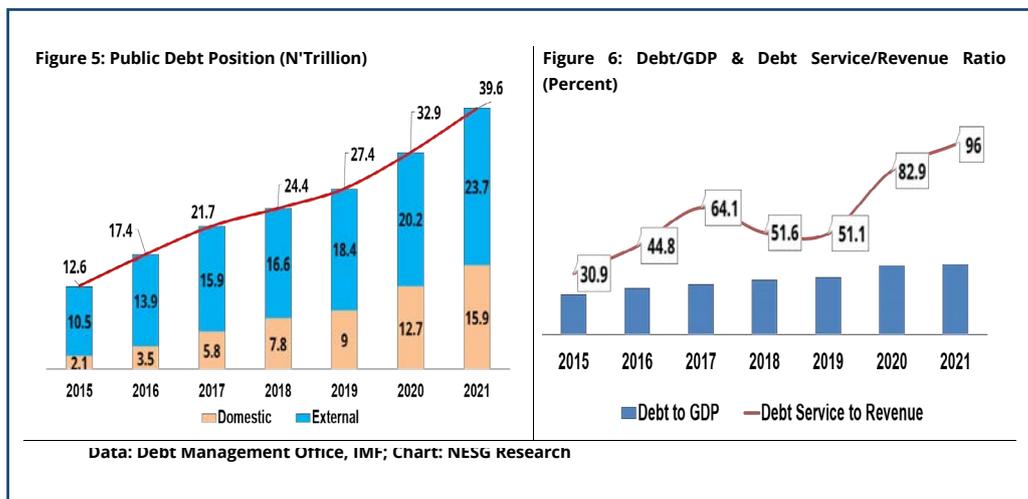
Domestic Policy Environment

Fiscal space remained constrained amidst the rising global energy prices. While government revenue from non-oil related activities is improving, the Nigerian government continues to experience fiscal constraints as the overall revenue persistently falls short of the total expenditure. Between 2015 and 2021, the Federal Government of Nigeria's total

expenditure increased by 163.5 percent, whereas its revenue grew by 33 percent. While global oil prices have maintained an upward trend into the year 2022, Nigeria has not been able to benefit from the oil price rally due to low domestic crude oil production, the exit of International Oil Companies (IOCs), high cost of crude oil extraction and huge fuel subsidy payments. While the enactment of the Petroleum Industry Act (PIA) is laudable, the delay in implementing some of its key priorities - including the removal of fuel subsidies - would further strain public finances and widen the fiscal deficit amidst the difficulty in growing the country's revenue base juxtaposed against the huge public spending in the pre-election year (2022).



Concerns about the rising public debt level and its sustainability have continued to grow. Over time, the widening fiscal deficit has contributed significantly to Nigeria's public debt stock build-up. According to the Debt Management Office, Nigeria's public debt stock as of December 31, 2021, expanded to N39.6 trillion, representing an increase of 20.2 percent and 213.8 percent when compared with public debt levels in 2020 and 2015, respectively. However, the reported public debt stock in 2021 excluded an estimated N17 trillion in Central Bank of Nigeria's (CBN) Ways and Means and other Asset Management Corporation of Nigeria (AMCON) related debts. While the public debt stock is fast expanding, Nigeria's public debt-to-GDP ratio is one of the lowest globally, at 35.7 percent in 2021, according to the International Monetary Fund (IMF). This has motivated aggressive borrowing in more recent years. As at the first quarter of 2022, Nigeria's public debt stock stood at an all-time high of N41.6 trillion. This public debt figure, however, precludes CBN's Ways and Means in the sum of 18.8 trillion in 2022Q1. However, public debt service-to-revenue ratios of 82.9 percent and 96 percent in 2020 and 2021, respectively, suggest that the Nigerian government spends nearly all its revenue on servicing debts while resorting to excessive borrowing to run governance and finance developmental projects.



The monetary policy unit contends with risks to economic recovery and inflationary pressures. Structural bottlenecks and external shocks related to the Russia-Ukraine crisis continue to drive up food prices and exchange rate volatility amidst low domestic crude oil production, low accretion to external reserves, liquidity volatility and rising interest rates in the global market. These factors, coupled with an elevated inflation rate at 16.8 percent in April 2022, motivate negative real returns on investments, particularly government securities. To sustain recovery amidst high inflation, the CBN's monetary policy committee has maintained a static position across the policy parameters since May 2020. However, the meeting held in May 2022 birthed the hike in the Monetary Policy Rate (MPR) by 150 basis points to 13 percent from 11.5 percent. The Committee, however, kept the other monetary policy parameters unchanged: Cash Reserve Ratio at 27.5 percent, Liquidity Ratio at 30 percent and an asymmetric corridor of +100/-700 basis points around the MPR. While this policy action would tame liquidity-induced inflationary pressures, a monetary policy tightening at this time could drag Nigeria's economic recovery process.

The Medium-Term National Development Plan (MTNDP) 2021-2025. This is the new medium-term development plan which succeeded the Economic Recovery and Growth Plan (ERGP) that expired in 2020. The new development plan aims to lift 35 million people out of poverty by 2025 and seeks to mobilise N348.1 trillion to finance development across seven cluster areas that cut across economic growth and development, infrastructure, public administration, human capital development, social development, regional development and Plan implementation. In terms of financing needs, the Plan outlines that the government contributes 14.3 percent (N49.7 trillion), while the private sector is expected to drive investments worth N298.3 trillion (85.7 percent of the total investment requirement) over the plan period. While the Plan is well-detailed and broad in identifying critical elements, drivers and enablers of national development, the issue of effective implementation remains a crucial concern for relevant stakeholders.

External Sector Developments

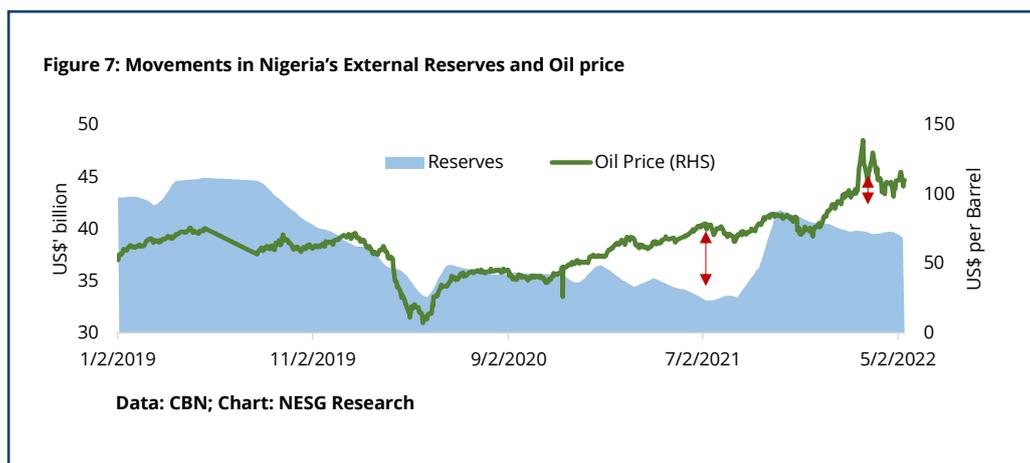
Despite the persistent rise in global crude oil prices, Nigeria's trade balance remained in deficit in 2021, but reverted to a surplus in 2022Q1, amidst the sustained contraction of the oil and gas sector. Despite the record of a trade surplus of N327 billion in the second quarter of 2021, Nigeria's trade balance maintained an overall deficit of N1.9 trillion in 2021. This represents a trade balance deterioration compared with a surplus of N2.2 trillion and a deficit of N178.3 billion reported in 2019 and 2020, respectively. Remarkably, growth in exports outpaced that of imports, resulting in the shift of the trade balance to a surplus of N1.2 trillion in 2022Q1 from a deficit of N1.9 trillion and N0.2 trillion in 2021Q1 and 2021Q4, respectively. Moreover, the favourable trade balance position could be attributed to the persistent increase in oil and non-oil commodities prices on the global market, triggered by the geopolitical tensions between Russia and Ukraine since February 2022⁴. Despite that Nigeria's oil and gas sector contracted further by 26 percent in 2022Q1, the trade balance, at a surplus of US\$1.9 trillion, was significantly driven by the persistent increase in the global oil prices. Nigeria's Bonny Light price, on average, spiked to US\$104 per barrel in 2022Q1 from US\$61.3 per barrel in 2021Q1.

Overall investment inflows into Nigeria plunged by 45 percent in 2021 and further decelerated in 2022Q1. Total foreign investment inflows fell to a 5-year low of US\$6.7 billion in 2021 from US\$9.7 billion in 2020. Despite the waning impact of the global pandemic, foreign investors showed less appetite for Nigeria's financial instruments in 2021. The illiquidity of the foreign exchange market and negative real returns on investment largely fueled negative investors' sentiment. On a disaggregated basis, the decline in total investment inflows was largely driven by a sharp fall in Foreign Portfolio Investments (FPI) to US\$3.4 billion in 2021 from US\$5.1 billion in 2020. Correspondingly, the share of FPI in the overall foreign investment inflows dropped to 51 percent in 2021 from 53 percent in 2020. In 2021, the contribution of Foreign Direct Investment (FDI) to the overall foreign investment inflows fell slightly to 10 percent (US\$698.8 million). In contrast, the share of Other Investments was higher at 39 percent (US\$2.6 billion). In addition, foreign investment inflows into Nigeria fell to US\$1.6 billion in 2022Q1 from US\$1.9 billion and US\$2.2 billion in 2021Q1 and 2021Q4, respectively. This reflects the declining investors' confidence in the Nigerian economy as illiquidity in the foreign exchange market persists, real returns on investment remains negative and structural rigidity continues to constrain domestic crude oil production.

As the economic impact of COVID-19 endured, Nigeria sought direct borrowing to ease pressure on the external reserves and exchange rate. For most of the first three quarters of 2021, the external reserves and exchange rate faced tremendous pressures, predominantly due to strong foreign exchange (FX) demand for imports and low foreign investment inflows. Consequently, Nigeria's external reserves increased to US\$41.8 billion in October 2021 before retreating to close the year 2021 at US\$40.5 billion. In the first quarter of 2022, Nigeria's external reserves averaged US\$39.9 billion, falling by 2.2 percent when compared with the average external reserves of US\$40.8 billion in the fourth quarter of 2021. This suggests that Nigeria is yet to benefit from the current rally in global crude oil prices (see

⁴Refer to the NESG Occasional Paper titled: "Implications of the Russia-Ukraine War: Risks and Opportunities for Nigeria" for detailed information, retrievable via: <https://www.nesgroup.org/research>

Figure 7)⁵. Following the FX pressures in the year, there was an adjustment in the exchange rate on the Investors' & Exporters' (I&E) Window. At the same time, the CBN adopted the I&E exchange rate as its official rate to harmonise the multiple exchange rates. Notwithstanding, the gap between the I&E Window and the parallel market exchange rates has widened, stood at about N170/US\$1 in May 2022.



Critical Challenges confronting Nigeria and Key Measures to address them

The wide array of socio-economic challenges that beset the Nigerian economy has clearly shown that the country cannot rely on the business-as-usual practice. This suggests that there is a need for urgent turnaround in policy choices and economic management for Nigeria to achieve improved socio-economic outcomes. Ahead of the 2023 general election, the Nigerian Economic Summit Group (NESG) organised a National Economic Dialogue (NED) in May 2022, which unraveled the key structural bottlenecks and challenges that the country has faced overtime. This event is meant to ensure that the political elite are rightly guided in terms of policy choices and implementation. To this end, the top five critical socio-economic narratives that have shaped the Nigerian economy overtime include:

- **Weak and Non-inclusive economy**

Nigeria's economic growth path since 2012 has been weak and non-inclusive. The compound annual growth rate is estimated at 1.92 percent between 2012 and 2021, which is below the yearly population growth of 2.6 percent. As of 2021, the strategic sectors, including Agriculture, Manufacturing, Construction, Real Estate, ICT, and Finance, grossly underperformed their vibrant performances in 2012. After netting out inflation and other costs, the real size of the Nigerian economy has remained relatively the same since 2012 - which implies that the country is experiencing economic stagnation. Consequently, the income of an average Nigerian has declined sharply to US\$2,097.1 in 2020 from a peak of US\$3,098.8 in 2014.

⁵Refer to the NESG Occasional Paper titled: "Nigeria's Dwindling Revenue and Reserves in the face of Rising Oil Price" for detailed information, retrievable via: <https://www.nesgroup.org/research>

- **Highly volatile Macroeconomic Environment**

The sharp decline in labour productivity growth from 16.9 percent in 2012 to 1.7 percent in 2021 reflects the extent of macroeconomic imbalance/instability in Nigeria. Nigerians are currently facing tough times as inflationary pressure remains heightened and labour market conditions deteriorate. The unemployment problem is pervasive irrespective of gender, location and educational qualification. Despite improving global oil prices, the economy suffers from worsening external trade position and dwindling foreign investment inflows. This suggests that Nigeria has failed to appropriate the benefits of rising oil prices due to low crude oil production, high production costs, low investment and a fuel subsidy regime.

- **Weak economic competitiveness**

Since 2017, Nigeria has maintained the 133rd position out of 133 countries on the global complexity index. This suggests that Nigeria's productivity base is fundamentally archaic and structurally deficient.

- **Infrastructure and Social sector collapse**

About 100 million Nigerians do not have access to electricity. Nigeria ranked 161st out of 189 countries in 2019 on the global human development index (HDI), with the country's life expectancy averaging 54 years. This is not unexpected considering that Nigeria's healthcare system ranked 178th out of 192 countries in 2018, according to the World Health Organisation (WHO). In addition, about 20 percent of global out-of-school-children are Nigerians.

- **National Insecurity**

In 2021, Nigeria ranked 146th out of 163 countries on the Global Peace Index and was the 8th least peaceful in Africa. Nigeria has not fared well with the different dimensions of human security: economic, food, health, environmental, personal, community and political security.

How do we change the current narrative? What constitutes the game changer?

As part of the outcomes of the NED event, the NESG proposes seven (7) pragmatic policy actions to address the identified socio-economic challenges in Nigeria.

- There is a need to reconsider what socio-economic development means for an average Nigerian. The Nigeria of Our Dream is one in which fundamental human rights are guaranteed, and economic opportunities are equitably distributed.
- There needs to be a reconsideration of the role of the market and the private sector in Nigeria's socio-economic development. A free-market orientation should guide policy interventions and reforms. This will support growth, deepen social inclusion, ensure appropriate pricing, and unlock private capital for national development.
- Critical sectoral reforms are urgently needed to support broad-based economic growth and Nigeria's global competitiveness. Achieving this

requires addressing value chain constraints in critical sectors of the economy and prioritising value-addition across products where Nigeria has a high comparative advantage, particularly agricultural products and crude oil.

- An integrated national and sub-national approach to economic inclusion will aid the realisation of Nigeria's critical developmental goals. As a result, economic cooperation between subnational governments is encouraged. This will aid intra-regional wealth transfer, as well as, the reduction of socio-economic polarisation across the country.
- A functioning and efficient social sector is critical to developing a strong and resilient economy. There is a need for pragmatic social sector reforms, particularly in education and health.
- In a peaceful environment, economic progress leads to robust prosperity. To this end, the NESG advocates for developing a practical and inclusive national security strategy across all dimensions.
- Finally, NESG believes that deep institutional, regulatory, and structural reforms are the most reliable way to ensure long-term development outcomes. Workable policy and institutional reforms are needed to promote stability in the macroeconomic and policy environment.

References

Budget Office (2021). Budget Implementation Report for Second Quarter 2020. Retrieved from: <https://www.budgetoffice.gov.ng/index.php/2020-second-quarter-and-half-year-bir/2021-second-quarter-and-half-year-bir/download>

Central Bank of Nigeria (2021), 2020 Statistical Bulletin. Retrieved from: <https://www.cbn.gov.ng/documents/Statbulletin.asp>

Central Bank of Nigeria (2021). Crude oil prices, crude oil production and exports data. Retrieved from: <https://www.cbn.gov.ng/rates/crudeoil.asp>

Central Bank of Nigeria (2021). Gross external reserves data. Retrieved from: <https://www.cbn.gov.ng/IntOps/Reserve>

Debt Management Office (2021). Nigeria's Public Debt Stock as at September 30, 2021. Retrieved from: <https://www.dmo.gov.ng/debt-profile/total-public-debt>

FMDQ (2021). FX Closing Prices (Official and Investors and Exporters Exchange Rates). Retrieved from: <https://emarkets.fmdqgroup.com/>

National Bureau of Statistics (2020). Labour Force Statistics: Employment by Sector Report for Third Quarter 2017. Retrieved from: <https://nigerianstat.gov.ng/elibrary>

National Bureau of Statistics (2020). Unemployment Report for Fourth Quarter 2020. Retrieved from: <https://nigerianstat.gov.ng/elibrary>

National Bureau of Statistics (2021). CPI and Inflation Reports. Retrieved from: <https://nigerianstat.gov.ng/elibrary>

National Bureau of Statistics (2022). Nigeria Capital Importation Report for First Quarter 2022. Retrieved from: <https://nigerianstat.gov.ng/elibrary>

National Bureau of Statistics (2022). Nigeria Foreign Trade Report for First Quarter 2022. Retrieved from: <https://nigerianstat.gov.ng/elibrary>

National Bureau of Statistics (2021). Nigerian Gross Domestic Product Report for First Quarter 2022. Retrieved from: <https://nigerianstat.gov.ng/elibrary>

NESG Macroeconomic Outlook (2020). Nigeria is a New Decade: Priority for Accelerated Growth, Job Creation and Poverty Reduction.

Nigerian Economic Summit Group (2022). NESG Macroeconomic Outlook for 2022. The Last Mile: Reforms towards Significant Improvement in National Economic Outcomes. Retrieved from <https://www.nesgroup.org/research>

World Bank (2021). Time for Business Unusual. Second Bi-annual Nigeria Development Update. Retrieved from: <https://www.worldbank.org/en/country/nigeria/publication/nigeria-development-update-ndu>



POLICY INNOVATION CENTRE

 www.policyinnovationcentre.org



The Policy Innovation Centre

The Policy Innovation Centre (PIC) in Nigeria is the first national level body of its kind for applying behavioural insights and other innovative policy tools in Africa.

The PIC is an initiative of the Nigeria Economic Summit Group (NESG) that is sponsored by Rockefeller Philanthropy Advisors (RPA), with the support of the Bill and Melinda Gates Foundation (BMGF).

The PIC is a dedicated not-for-profit centre in NESG that helps policymakers and program implementers improve outcomes for Nigerians.

Vision



To improve the design and implementation of government policies and programmes in Nigeria through lessons from behavioural and social science as well as other policy tools.

Mission



Working with public bodies, the private sector, NGOs and the international community, the PIC will support ongoing efforts on critical priorities such as the Sustainable Development Goals (SDGs).

Goal

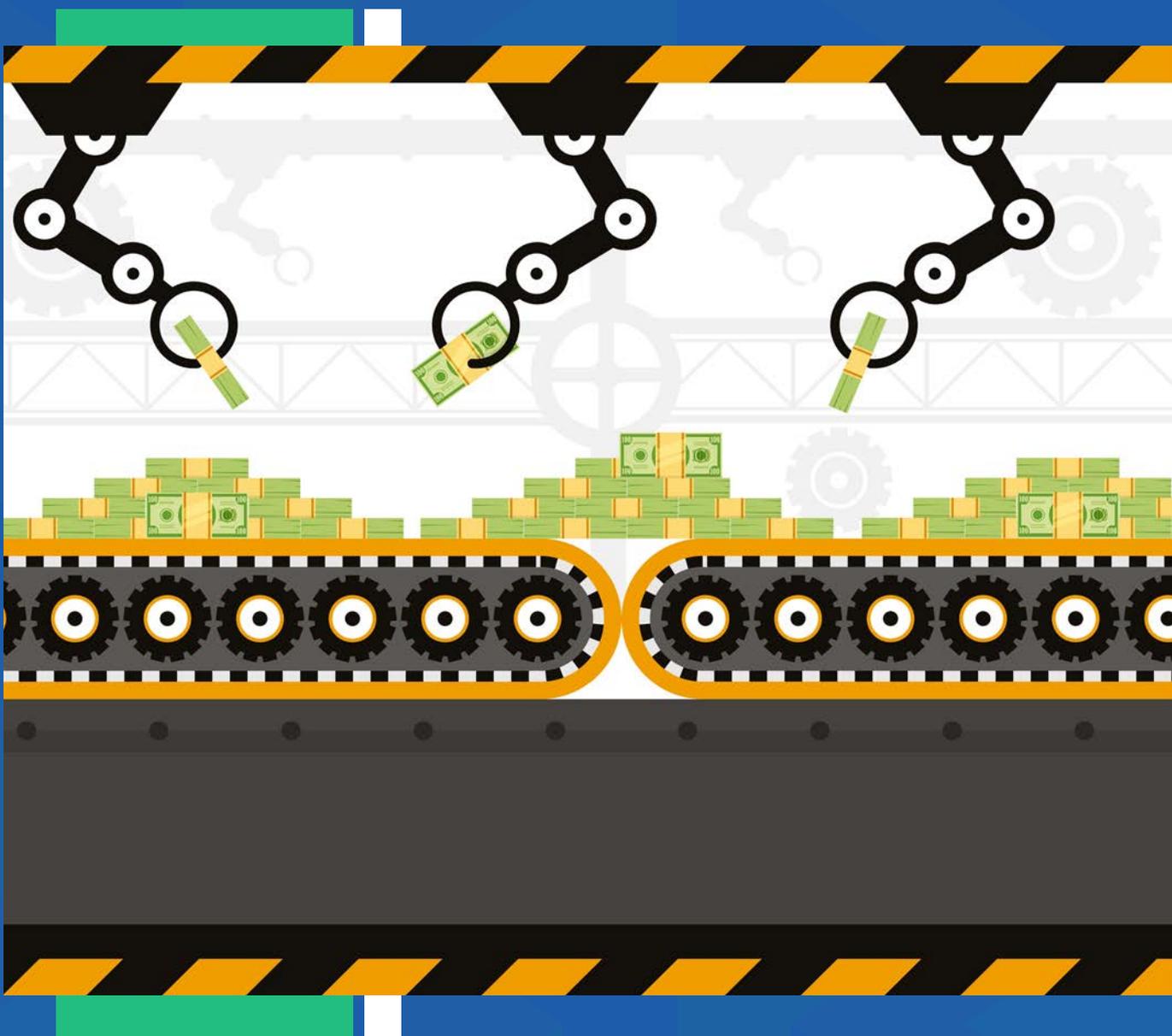


To provide decision-makers, policy and regulatory makers and implementers with the tools and analysis to better understand behaviours to achieve better outcomes in Nigeria.

FISCAL AND MONETARY POLICY OUTCOMES OF THE TREASURY SINGLE ACCOUNT POLICY IN NIGERIA

**Blessing Ufuoma Olanrewaju &
Joshua Adeyemi Afolabi**

Nigerian Institute of Social and Economic
Research (NISER), Ibadan, Nigeria



Abstract

The pervasive corruption and public fund mismanagement led to the introduction and implementation of Nigeria's Treasury Single Account (TSA) policy. This policy, however, has implications for macroeconomic performance. Hence, this study assessed the behaviour of selected monetary and fiscal policy indicators in the pre- and post-TSA implementation eras. Findings revealed that government revenue and expenditure increased post-TSA policy implementation. However, even though the TSA policy narrowed fiscal gaps, it failed to lower Nigeria's public debt. Saving and lending rates soared while government deposits in deposit money banks (DMBs) plummeted post-TSA implementation. The TSA policy was not potent enough to curb corruption in Nigeria. Thus, the Nigerian government needs to deploy more stringent policies to curb corruption and diversify its revenue portfolio to sufficiently finance its burgeoning fiscal responsibilities.

Introduction

Effective fiscal policy administration and management of public funds are critical for fostering development agenda. One of the notable modern policies in this regard is the Treasury Single Account (TSA) policy, adopted by various developed and emerging economies. Nigeria introduced the TSA policy in 2012 but fully implemented it in 2015 (Effiong and Obun, 2020). The policy, which is one of the few policies blending the interplay of fiscal and monetary policies, is primarily aimed at effective control of government revenue and facilitation of better coordination with the monetary authorities. The pervasive corruption and mismanagement of public funds in Nigeria make the TSA policy implementation imperative. Before the implementation, government revenue kept in multiple deposit money banks (DMBs) accounts by government ministries, agencies and departments (MDAs) hamper transparency and effective public fund management. The TSA policy implementation mandates MDAs to make all payments into the Consolidated Revenue Account (CRA) kept with the Central Bank of Nigeria (CBN) in line with the provision of the Nigerian 1999 constitution (Oloba et al., 2017).

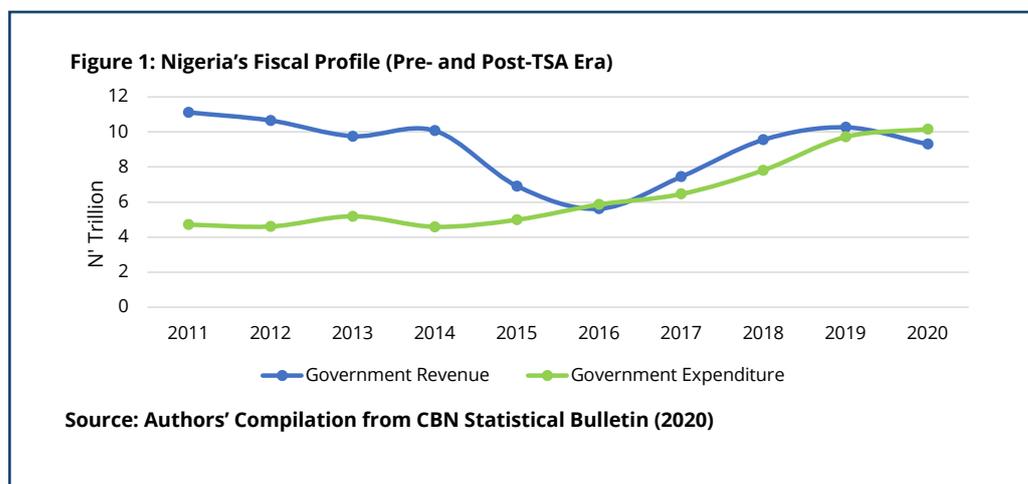
The implementation of TSA policy has implications for development imperatives in the country. It instigates financial resource reallocation as more financial resources move from the purview of DMBs to the CBN. A large chunk of public sector funds, totalling N3.4 trillion in 2015Q2 and constituting about 19.3 percent of total DMBs' deposits, was previously domiciled in DMBs (CBN, 2021). The TSA policy implementation led to a reduction in DMBs' liquidity while more funds were available to the CBN, the new custodian of the government's funds. This further empowered the CBN to manage monetary policy and make funds available to the government to finance its budget. A reduction in liquidity paralyses some traditional activities of DMBs and reduces their capacity to create credits, which could, in turn, lead to an increase in lending rate, a significant deterrent to investment borrowing (Oloko and Yusuf, 2021). This could crowd out private investment and limit employment prospects, which is capable of worsening welfare and stifling economic growth. On the other hand, this situation could increase saving rates to attract savers and augment the remaining financial resources left with DMBs after the withdrawal of government funds. Intuitively, the TSA policy simultaneously serves as a fiscal and monetary policy instrument.

Existing studies focused on the effect of TSA policy on government revenue, bank lending rate and economic growth, among others (Oloba et al., 2017; Ofurum et al., 2018; Effiong and Obun,

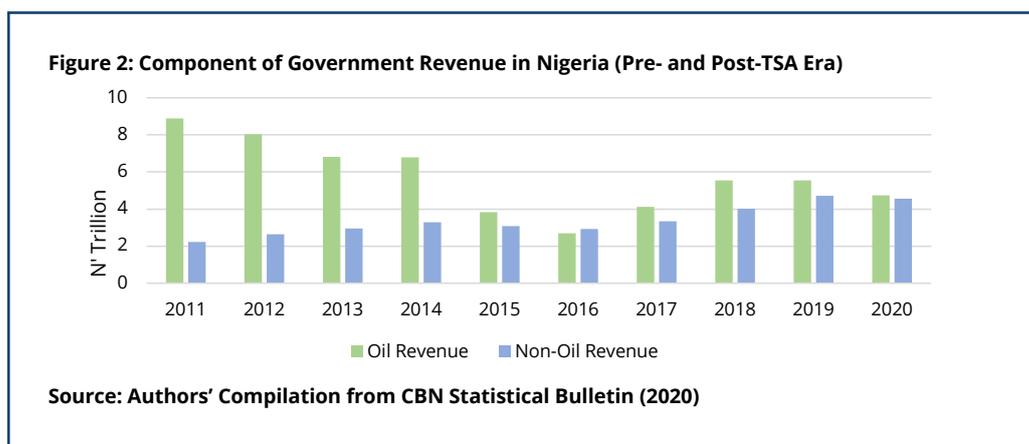
2020; Oloko and Yusuf, 2021), however, studies on its effect on macroeconomic performance are rare, including those conducted for Nigeria. Economic theories have shown that monetary and fiscal policies have diverse effects on growth imperatives and their multiplier effects on certain macroeconomic variables differ. Thus, this study contributes to the literature by assessing the behaviour of selected monetary and fiscal policy indicators in pre- and post-TSA implementation. This analysis is important to evaluate the efficacy of the TSA policy in fulfilling its intended purposes, and its outcome will inform policies geared towards ameliorating the current economic trajectory in Nigeria. It will also provide a basis for implementing future fiscal and monetary policies.

Nigeria's Fiscal and Debt Profile and the Role of TSA

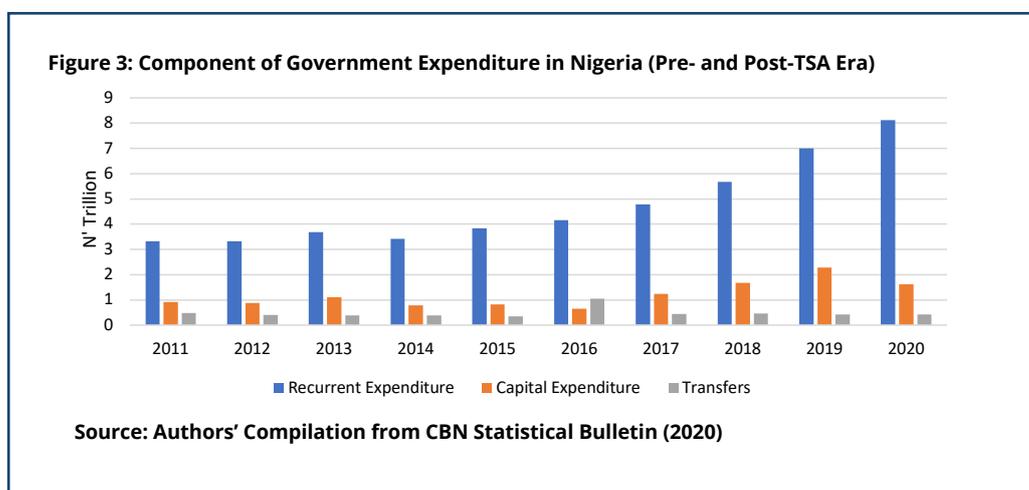
Pre-TSA implementation, government revenue was high but dwindling in line with the oil price movement on the international market, given that Nigeria is an oil-dependent country. During this period, Nigeria experienced episodes of fiscal surplus even though the gap between government revenue and expenditure narrowed over time (see Figure 1). However, Nigeria recorded its first fiscal deficit of the decade one year after the TSA implementation and in 2020 due to the outbreak of COVID-19. In addition, fiscal gaps became narrower after implementing TSA as government expenditure soared while government revenue increased slightly but shrunk in 2020. The fall in government revenue in 2016 and its subsequent increase implies that TSA did not have an immediate impact on government revenue but contributed to revenue growth from 2017 onward. Overall, TSA implementation coincides with the period of reduction in fiscal gaps in Nigeria.



The government revenue profile in Figure 2 shows that proceeds from crude-oil export were the Nigerian government's dominant revenue source, especially before implementing TSA (see Figure 2). However, non-oil revenue toppled oil revenue in 2016, a year after TSA implementation, although oil revenue dominated again afterwards but below its level in the pre-TSA implementation era. It is noteworthy that oil revenue was higher in the pre-TSA implementation era than in its post-implementation period, while non-oil revenue was greater in the post-TSA implementation era than in its pre-implementation era. On the whole, the gap between Nigeria's oil and non-oil revenue narrowed after TSA implementation.

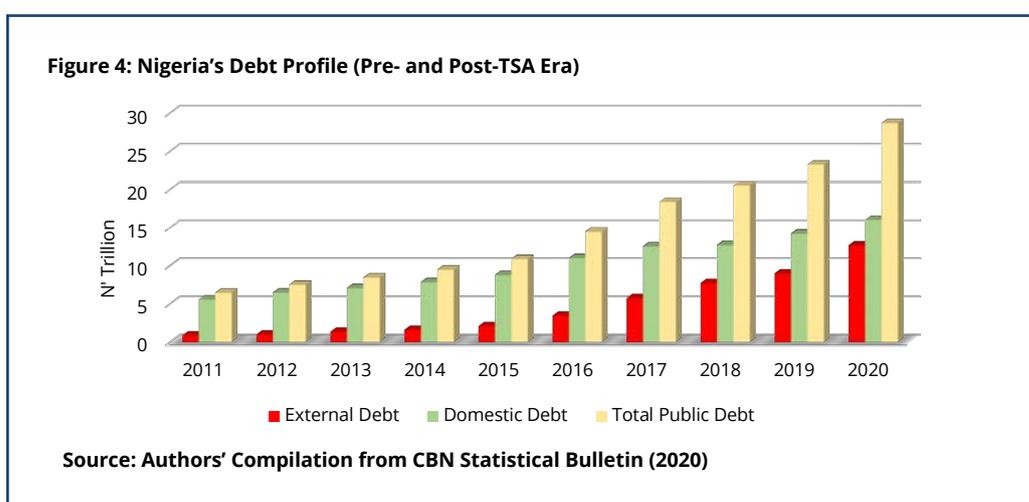


Regarding the composition of government expenditure in Nigeria, recurrent expenditure dominates capital expenditure throughout the period under consideration (see Figure 3). This explains Nigeria's pervasive infrastructural deficits and low economic competitiveness as the share of capital expenditure in total government expenditure is low. While recurrent expenditure grew markedly throughout the review period except in 2014, capital expenditure fluctuated during the period. Nonetheless, both capital and recurrent expenditure maintained an upwards trend in the post-TSA implementation era, except in 2020, when capital expenditure plummeted due to the disruptions caused by COVID-19.



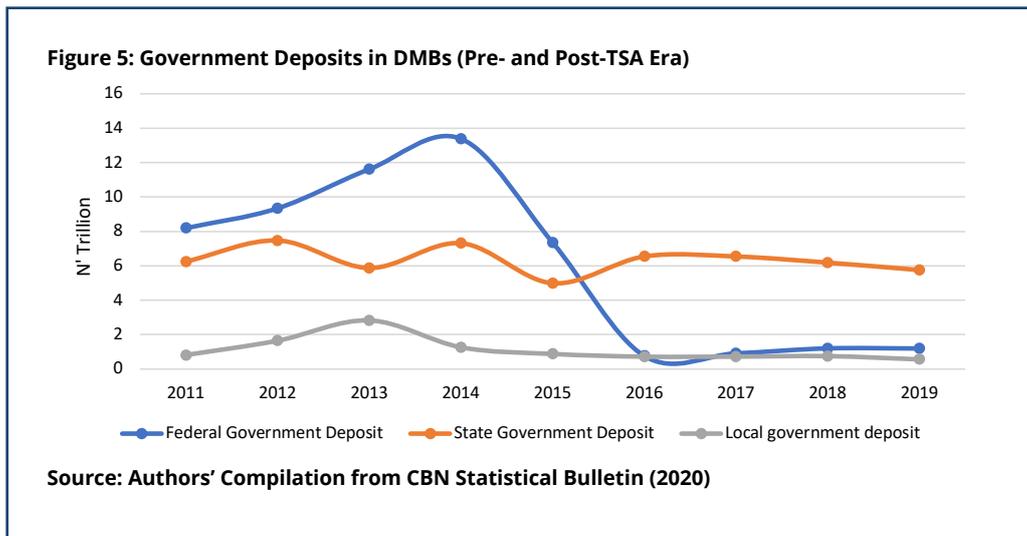
Nigeria borrows from domestic and external creditors to augment its revenue and finance budget deficits (Ogunjimi, 2019). Figure 4 shows that domestic debt dominates Nigeria's debt profile as Nigeria borrows more from domestic creditors than external creditors. This has implications for domestic resource mobilization and investment as it could mop up domestic resources and crowd-out private investment. It is noteworthy that both domestic and external debts rose continuously during the period under consideration, implying that Nigeria's total debt had an upward trend throughout the review period. This suggests that despite the quest to increase government revenue through operating a consolidated revenue

account under the TSA policy, Nigeria’s revenue falls short of the economy’s financial need; hence, the government constantly resort to domestic and external borrowing. More so, the implementation of the TSA policy is expected to reduce government borrowing, translating to the reduction of the costs incurred in servicing debt. However, the growing spate of public debts suggests that the TSA policy has not performed up to expectation with respect to this quest. Overall, even though the TSA policy narrowed fiscal gaps, it failed to lower Nigeria’s public debt.



Profile of Selected Nigeria’s Monetary Variables and the Role of TSA

Before the TSA policy implementation, federal, state and local governments operate multiple deposit accounts with DMBs. The share of deposits among these three tiers of government corresponds to their sizes. However, the TSA policy implementation led to the withdrawal of government deposits from DMBs. Figure 5 shows that governments’ deposits in DMBs grew steadily pre-TSA implementation, with the federal government deposits outstripping both the state and local governments’ deposits. However, federal government deposits reduced drastically after the TSA policy implementation. However, a similar pattern was observed for local government deposits at a less-pronounced level. However, state government deposits witnessed a slight increase post-TSA policy implementation, and the growth stagnated for the first two years, after which it dwindled in 2018 and 2019. This implies that the policy implementation had an instantaneous effect on federal government deposits but not state government deposits. In sum, deposits in DMBs nosedived drastically as a result of TSA implementation, and this has implications for private investment and economic growth.



The pattern of savings and lending rates illustrated in Figure 6 shows that pre-TSA policy implementation, the savings rate was growing steadily. Still, it increased slightly in 2015 (the year of the policy implementation), and the increment was sustained afterwards. This indicates that one of the responses of DMBs to their low liquidity was to raise the saving rate to incentivize savers and attenuate the impact of government deposits withdrawal on DMBs. This becomes necessary to fill the substantial financial void created by the withdrawal of government deposits. On the other hand, the lending rates, particularly the maximum lending rate, which is the cost of borrowing, soared in the post-TSA policy implementation era. The prime lending rate also slightly increased in the post-TSA implementation period. This signals the quest of DMBs to close the exacerbated saving-investment gaps resulting from TSA implementation. Overall, TSA policy implementation engendered an increase in the savings rate and lending rates in Nigeria.

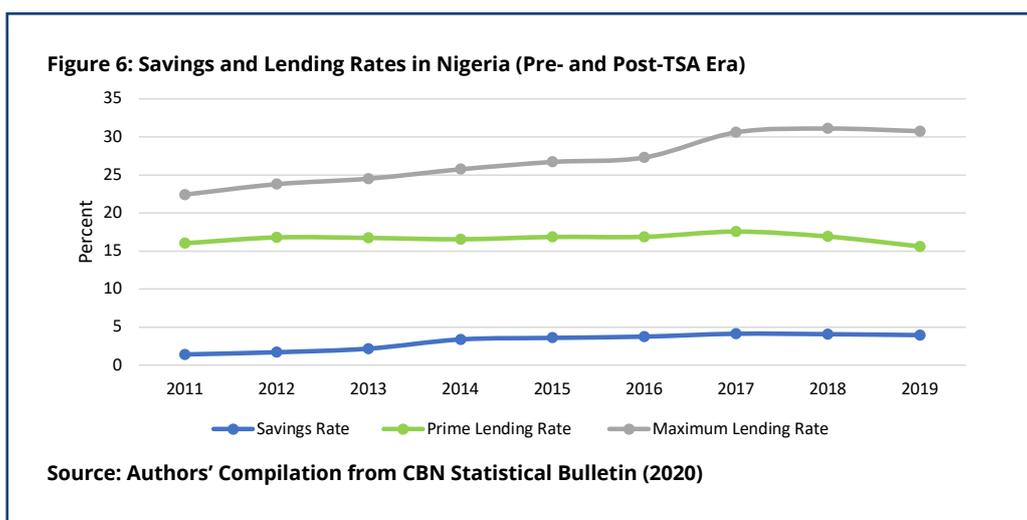
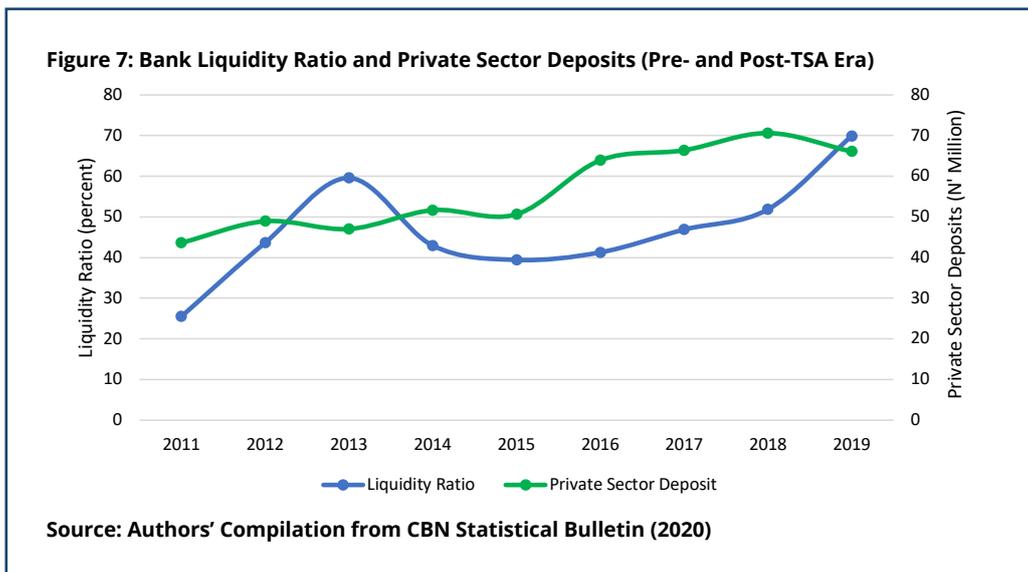


Figure 7 shows that the bank’s liquidity ratio grew steadily pre-TSA policy implementation, except in 2014 when it reduced sharply. It declined further in 2015, the year of TSA implementation, but grew afterwards. The increase in liquidity ratio could be partly attributed to the rise in private sector deposits in DMBs during this period, which may have been orchestrated by the strategies adopted by DMBs (such as an increase in saving rate) to cushion the shock of government deposit withdrawal. It is important to note that the liquidity ratio peaked in 2019, exceeding its initial values in the pre-TSA policy implementation era and indicating that the strategies of the DMBs yielded the expected outcome.



One of the key objectives of the TSA policy was to simultaneously curb corruption and enhance transparency and accountability in public funds management in Nigeria. However, corruption remains pervasive in the post-TSA implementation era in Nigeria. According to Transparency International, an international organization that computes the global corruption perception index (CPI) annually, Nigeria’s score on the CPI was 27 in 2012, ranking 139 out of 176 countries (see Table 1). However, Nigeria’s score rose to 28 one year after the TSA implementation, ranking 136 out of 180 countries. It became worse as Nigeria ranked 148 and 149 out of 180 countries in 2017 and 2020, respectively. Overall, the corruption level in Nigeria is not significantly different in the pre- and post-TSA implementation era, suggesting that the policy has not lived up to the expectation of curbing corruption in Nigeria. This implies that the TSA policy implementation is either being sabotaged or there are other more dominant channels through which corruption is perpetrated in Nigeria.

Table 1: Nigeria's Performance on the Global Corruption Perception Index (Pre- and Post-TSA Era)

Year	Score	Ranking	Number of Countries surveyed
2012	27	139	176
2013	25	144	177
2014	27	136	175
2015	26	136	168
2016	28	136	176
2017	27	148	180
2018	27	144	180
2019	26	146	180
2020	25	149	180

Source: Authors' Compilation from Transparency International (various years)

Conclusion and Policy Recommendation

This study assessed the behaviour of selected monetary and fiscal policy indicators in the pre- and post-TSA implementation era. Findings revealed that the TSA policy implementation has tremendous implications for macroeconomic performance in Nigeria. The conclusion, therefore, is that the TSA lowered fiscal gaps and raised interbank rate. However, it is not potent enough to curb corruption in Nigeria. Based on this, the following recommendations are made to ameliorate the macroeconomic impact of the Nigerian TSA policy:

- To cushion the effects of government's deposits withdrawal on DMBs, measures should be put in place to attract private sector deposits in DMBs. This can be achieved through a further increase in the savings rate by the monetary authorities. This will stimulate investment and engender economic expansion.
- The inability of the TSA policy to attenuate corruption in Nigeria suggests the need to explore other channels through which corruption can be abated. The government should enforce more stringent policies to curb corruption in the economy, as the TSA policy alone is insufficient.
- Through the monetary authorities, the government can reduce the constraints on bank liquidity prompted by the implementation of the TSA policy by adopting counteractive measures such as the reduction of cash reserves ratio.
- Despite the increasing government revenue, the growing public debt signals the inadequacy of the government's revenue portfolio to finance the burgeoning fiscal responsibilities in Nigeria. Thus, it is expedient for the Nigerian government to expand its revenue portfolio through economic and export diversification.

References

CBN (2020). Central Bank of Nigeria Annual Statistical Bulletin, 2020. Available at: <https://www.cbn.gov.ng/documents/statbulletin.asp>

CBN (2021). DMBs Deposit Categories (Naira Million). Available at: <http://statistics.cbn.gov.ng/cbn-onlinestats/DataBrowser.aspx>

Effiong, S.A. and Obun, N.D. (2020). Treasury Single Account and Economic Growth: Asymptomatic Evaluation. *Journal of Critical Reviews*, 7(3): 1396-1406.

Ofurum, C.N., Oyibo, P.C. and Ahuche, Q.E. (2018). Impact of Treasury Single Account on Government Revenue and Economic Growth in Nigeria: A Pre-Post Design. *International Journal of Academic Research in Business and Social Sciences*, 8(5): 279-288.

Ogunjimi, J.A. (2019). Impact of Public Debt on Investment: Evidence from Nigeria. *Development Bank of Nigeria Journal of Economics and Sustainable Growth*, 2(2): 1-28.

Oloba, O.M., Orenuga, O.O. and Nkuma, C.A. (2017). Treasury Single Account (TSA) System, Financial System and Economic Growth in Nigeria. *Journal of Economics and Sustainable Development*, 8(15): 61-84.

Oloko, T.F. and Yusuf, M.A. (2021). Treasury single account (TSA) and banks' lending rates in Nigeria. *International Journal of Monetary Economics and Finance*, 14(6): 551-571.

FUEL SUBSIDY AND IMPLICATIONS FOR SOCIAL SPENDING IN NIGERIA: A RESEARCH NOTE

Risikat Oladoyin S. Dauda, Ph.D.

Professor, Department of Economics, University of Lagos, Nigeria



Abstract

The issue of reforming critical sectors of the Nigerian economy, especially the petroleum industry, has grown in prominence recently. It has triggered debate among policy analysts from different parlance arguing in favour or against reforms. Policy analysts and key stakeholders have re-echoed the need for fuel subsidy reform, given its socio-economic cum political implications. Fuel subsidy can exact a fiscal burden on the government, crowding out investment in social factors like education and health. This paper is a research note exploring the implications of fuel subsidy removal on social spending in Nigeria. Some suggestions are proffered for consideration by the government, which will help offset the accompanying socio-economic pressures of fuel subsidy reforms.

Introduction

COVID-19 has remained the central focus of every government recently. This necessitates the rolling-out of socio-economic policies and strategies to cushion the debilitating impact of COVID-19 on the populace. There seems to be a quick recovery for most economies, contrary to the predictions of many Economists. For instance, Nigeria's gross domestic product (GDP) growth is projected at 1.1 percent for 2021. Still, in the first three quarters of 2021, Nigeria's GDP growth hovers around 3.2 percent (See World Bank's Nigeria Development Update, December 2020 and National Bureau of Statistics Report, 2021). The Nigerian economy grew by 3.98 percent (year-on-year) in real terms in the fourth quarter of 2021. The fourth quarter growth rate in 2021 was higher than the 0.11 percent growth rate recorded in the fourth quarter in 2020 by 3.87 percent points and lower than 4.03 percent recorded in the third quarter of 2021 by 0.05 percentage points (National Bureau of Statistics Report, 2022). Nonetheless, quarter on quarter, real GDP grew at 9.63 percent in the fourth quarter of 2021 compared to the third quarter of 2021, indicating a higher economic activity than the preceding quarter (National Bureau of Statistics Report, 2022). This notwithstanding, pre-pandemic socio-economic phenomena comprising poverty, illiteracy, human misery, unemployment, insecurity and ethnic fractionalization, among others, are still glaring with exacerbating impacts on the Nigerian economy.

The issue of reforming critical sectors of the economy, especially the petroleum industry, has taken a phenomenal stance in Nigeria and other developing economies. It has triggered debates among policy analysts from different parlance arguing in favour or against reforms. Policy analysts and key stakeholders have re-echoed the need for fuel subsidy reform, given its socio-economic cum political implications. Fuel subsidy can exact a fiscal burden on the government, crowding out investment in social factors like education and health. Within this context, this paper explores Nigeria's fuel subsidy and its implications for social spending.

Conceptualizing Fuel Subsidy

The issue of subsidies has gained momentum in the last three decades, especially in developing economies. Subsidies can mean the cash transfer payments that the government provides to the consumers and producers. The government often subsidizes fuel so that the high prices of fuel do not create any burden on the producers or the consumers. According to World Bank (2010), a fuel subsidy is when the government cushions the cost of fuel production by lessening charges paid by customers and increasing income for fuel producers. The essence is to keep fuel prices below the international market to encourage consumption and control

price levels. Energy constitutes a necessity in driving productivity by business and household use. Subsidizing the fuel price can be economically appealing because it cuts down on fuel prices to minimize the impact of international oil price fluctuation.

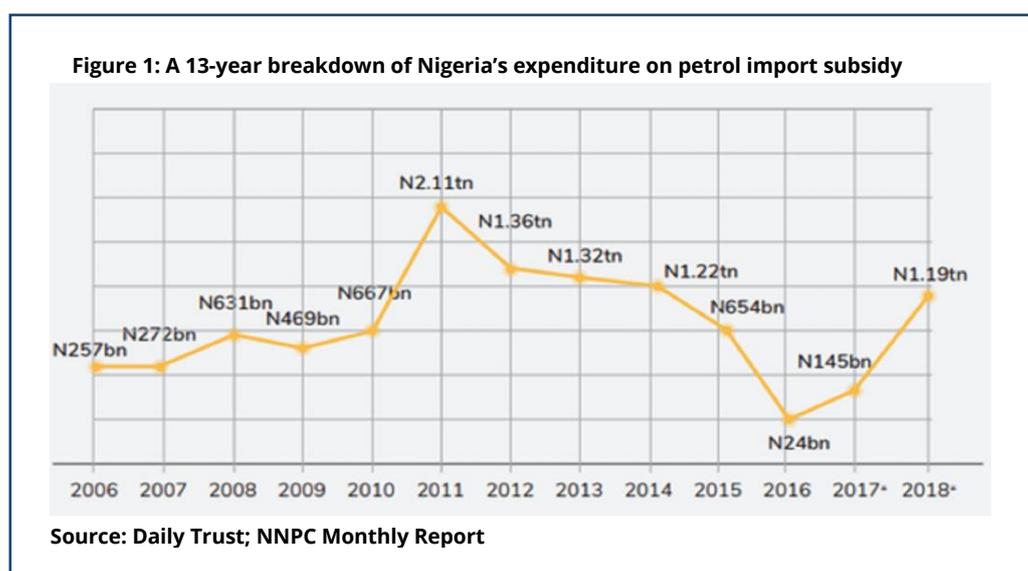
The literature identifies two categories of subsidies. These include producer subsidies and consumer subsidies. The producer subsidies are when the government increases the market price that producers receive, while the consumer subsidies arise when the price paid by consumers is below the market price. Subsidies dynamics allow the government to regulate the market price of goods and services, thereby constraining the operation of the free market. In the view of Amin and Chawdhurey (2016), fuel subsidy measures aid economic activities by keeping prices low, controlling inflation, and minimizing economic shock from the fluctuation of international oil prices. In the same vein, fuel subsidies encourage fuel consumption, intending to expand investment in the real sector. Onyeizugbe and Onwuka (2012) assert that the main essence of fuel subsidies is to alleviate poverty and improve citizen living standards.

On the contrary, McCulloch et al. (2020) put that the cost associated with subsidies outweighs the benefits. The reason is that it tightens the fiscal burden of the state because the fraction of the price that consumers are supposed to pay to enjoy the use of petroleum products is paid by the government. This hinders investment in social capital like education and health. Aside from this, the environment is at risk of excessive fuel consumption triggered by low prices. This argument around fuel subsidies, fluctuation of international oil prices, the fiscal burden of developing nations, poor living standards, and current economic realities triggers debate among policymakers and international monetary organizations on fuel subsidy reforms.

Overview of Fuel Subsidy and Social Spending in Nigeria

Stylized Facts on Nigeria's Fuel Subsidy

Nigeria is ranked 15th oil-producing economy globally. The nation is a top importer of fuel for domestic consumption (See Worldometer, 2021). To augment the domestic fuel prices, the Nigerian government introduced fuel subsidies in the 1970s to respond to the oil price shock in 1973. However, despite numerous attempts at reform, Nigeria has never successfully removed gasoline subsidies, in large part due to robust and widespread opposition to the reforms.

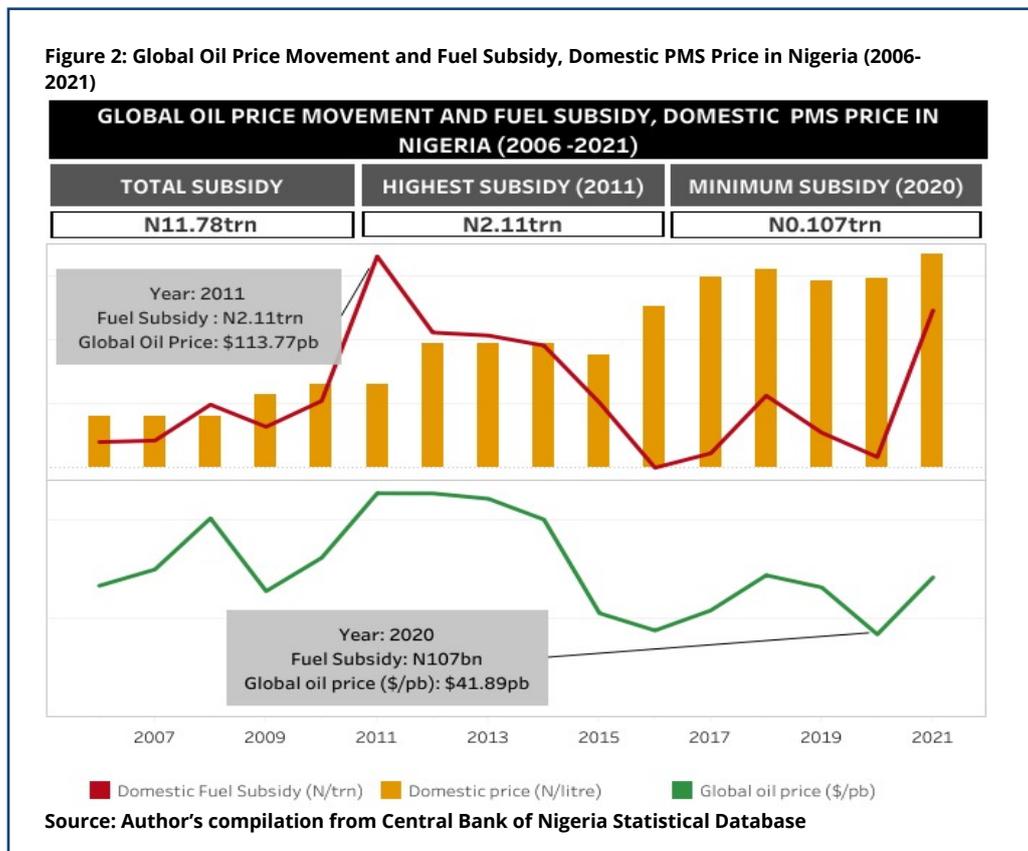


From Figure 1, Nigeria's petrol import subsidy has risen from N257 billion in 2006 to an all-time high of N2.11trillion in 2011. However, between 2012 to 2016, fuel subsidies decline from N1.36 trillion to N24 billion. The 2016 subsidy remains the lowest in the trend. The reason is not far from the fact that the Nigerian economy slid into recession in 2016. Fuel subsidies continued to rise between 2017 and 2018 as the value moved from N145 billion to N1.19 trillion, respectively. A recent estimate shows that N3.0 trillion has been spent on fuel subsidies. The huge amount of spending by the government on fuel subsidies has generated controversies among experts. Some policy experts argued that such spending could be removed and invested in education and health to drive social capital investment. While some others, especially the citizen, believe that reforming fuel subsidies in Nigeria will necessitate a rise in fuel prices which will propel general inflation.

Figure 2 presents the co-movements in global oil price, fuel subsidy costs and domestic PMS price between 2006 and 2021. The figure shows some similar trends and complicated relationships among global oil price, fuel subsidy costs, and domestic PMS price during the study period. Based on this evidence, it is logical to conclude that although fuel subsidy appears to be a fiscal burden, but it reduces the pass-through impact of global oil price increases on domestic fuel prices. On the one hand, and on the other hand, it is noteworthy that higher subsidy cost is not a fall-out of oil price increase alone; it could result from exchange rate depreciation. On the other hand, since Nigeria became a net importer of oil and non-oil goods, there has been a Naira devaluation continually. Resolving domestic production problems and occasional malfunctioning of some plants in the refineries, which has manifested in below-optimal utilization of installed capacities, will reduce the exchange rate's pressure and volatility. Consequently, if the domestic currency is stable and stronger, and there is an increase in global oil price, the net effect of subsidy removal on consumer welfare would be minimal. This, by implication, suggests the need to overhaul the existing ageing refineries characterized by obsolete technology and construct new ones to reduce the dependence on imported fuel products.



Figure 2: Global Oil Price Movement and Fuel Subsidy, Domestic PMS Price in Nigeria (2006-2021)



Recent Trends in Health and Education Spending in Nigeria

Health and education are critical social capital investments. They are needed to drive human capital development that will, in turn, trigger economic productivity. Annabi et al. (2011) and Gong et al. (2012) emphasize the importance of social sectors like education and health in an economy, especially in developing nations. Education and health directly promote economic growth through higher individual income owing to increased labour productivity, marginal productivity, working hours, and duration of production activity. This buttresses the fact that social investment is critical for every nation. More so, this investment is driven by the government, which is why every government budget and allocate funds to the sectors. However, the situation in Nigeria is not different. The government spends annually on health and education. This is to ensure an improvement in health and a reduction in illiteracy levels. Government spending on the health sector is presented in Figure 3.

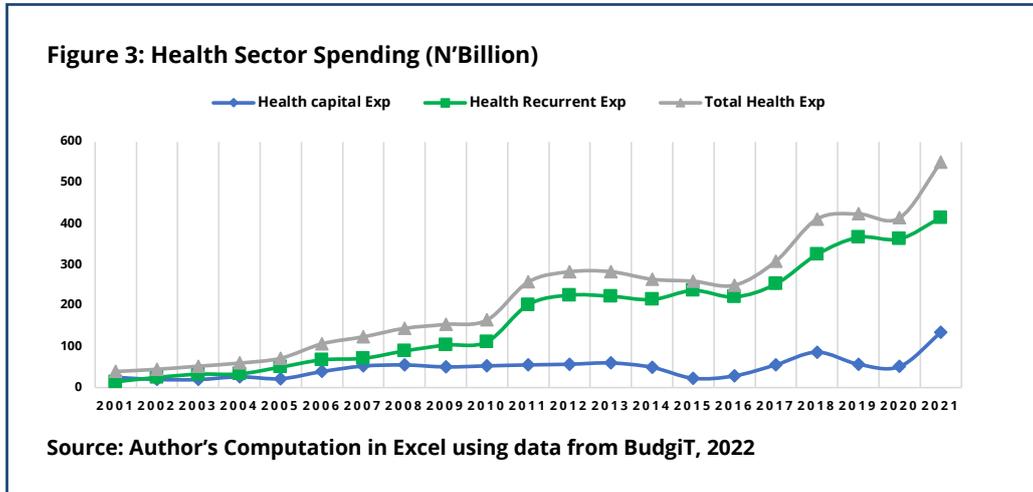
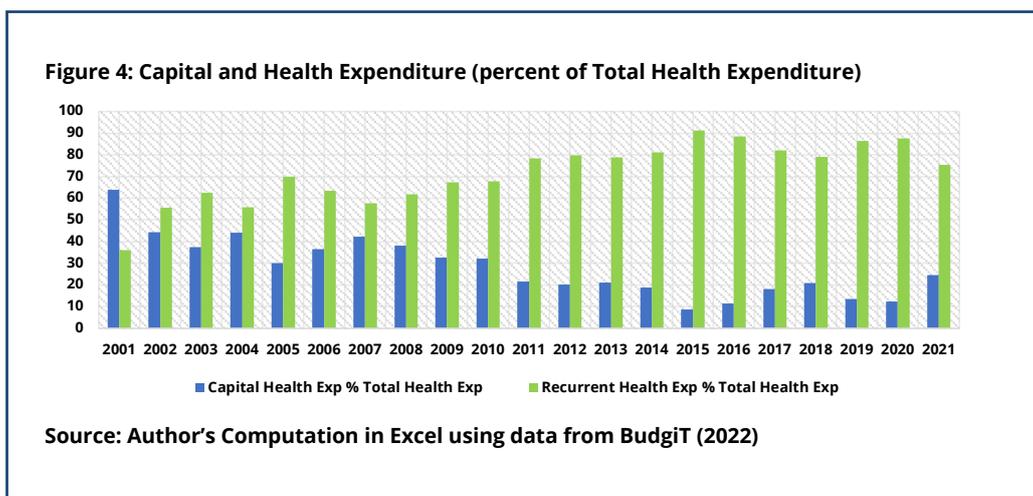


Figure 3 indicates that total health expenditure is rising in Nigeria. The evidence shows that between 2001 to 2021, public health spending moved from N39.27 billion to about N549.83 billion. However, disaggregating the health expenditure into capital and recurrent spending, recurrent expenditure has continued to overwhelm the capital expenditure. This finding implies that government spending is concentrated on maintaining the day-to-day activities of the health sector rather than investing in a capital project to ensure the sector is equipped with the state of the art facilities. Figure 4 shows the percentage of capital and recurrent expenditure as a percentage of the total spending. Figure 4 further shows that government spending on the maintenance of the health sector is greater than the investment in the health sector. This has substantial implications for the health outcomes in Nigeria.



The implication of insignificant investment in the health sector is glaring with deteriorating health outcomes. According to the Budget Health Sector Analysis Report (2021), about 2,300 less than five years old and 145 of childbearing age die every day in Nigeria. However, in most cases, death can be prevented. Further, the report indicates that about 50 percent of maternal death in Nigeria is due to unsafe abortion, preeclampsia and eclampsia, and obstetric haemorrhage. Similarly, the UNICEF report reveals that Nigeria has one of the highest numbers of newborn deaths in Africa, with a neonatal mortality rate of 37 per 1000 live births and approximately 250,000 deaths every year. Similarly, 124 children per 1000 never see their fifth birthday. As a result, this makes the under-5 death rate in Nigeria one of the highest globally. Health outcome in Nigeria is pathetic compared to some developing economies in the world. In Figure 5, the study presents life expectancy ratio data comparing Nigeria and two African countries, Ghana and South Africa.

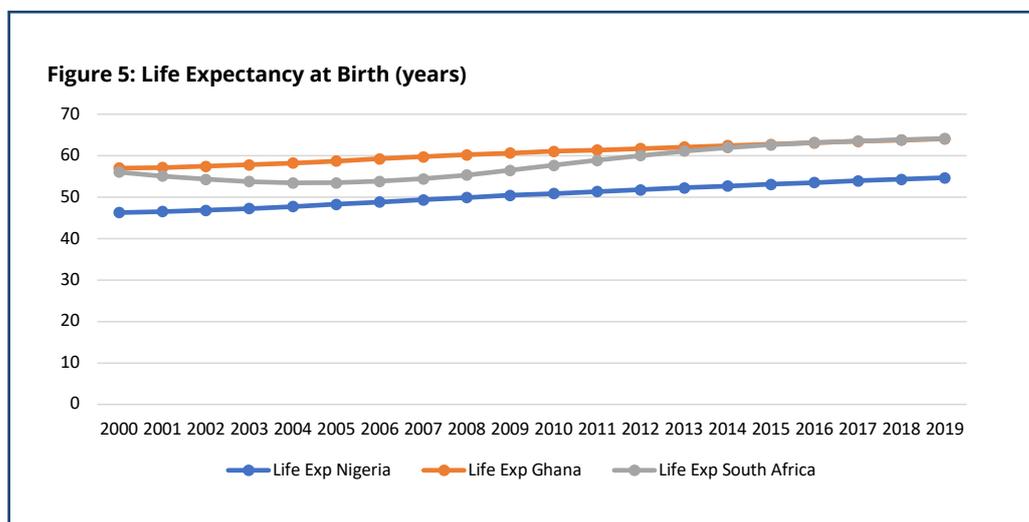
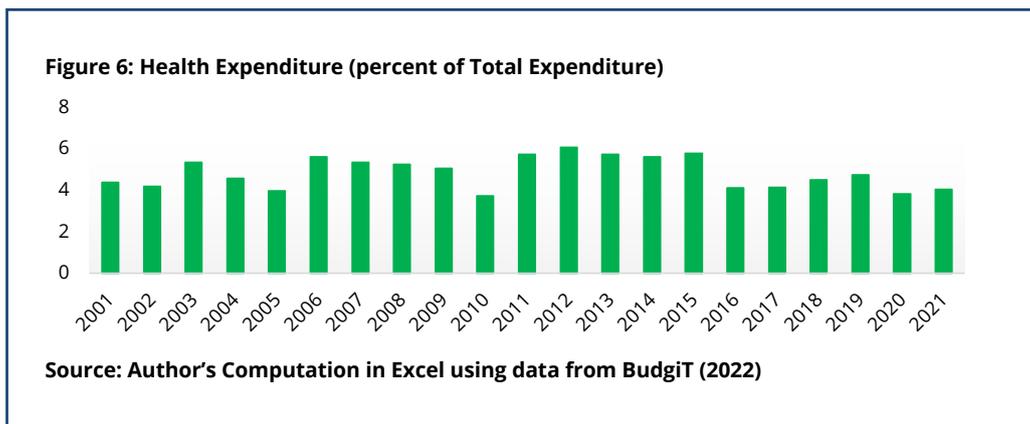
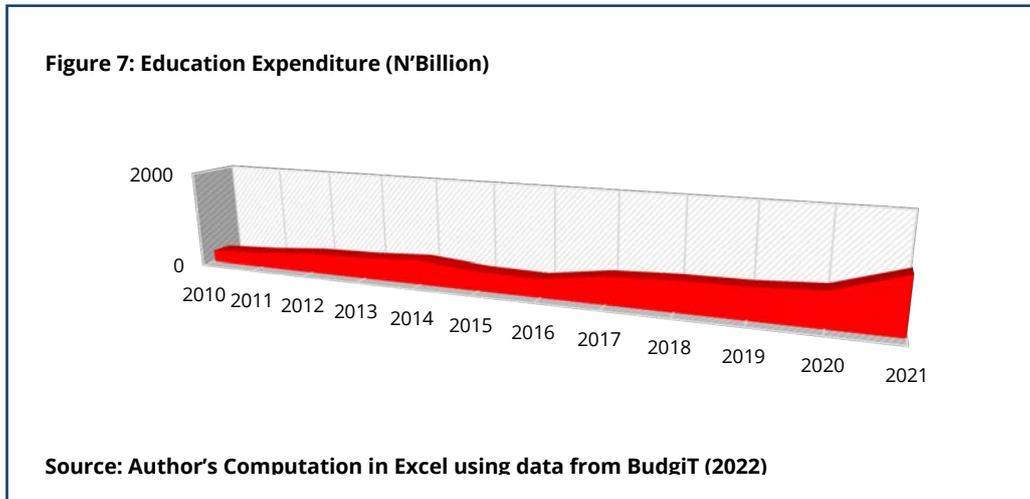


Figure 5 shows that Life expectancy in Nigeria has been improving during the analysis period. Despite the improvement, it is noteworthy that this increase leaves much to be desired compared to Ghana and South Africa. This is worrisome because Nigeria is the wealthiest African nation in terms of GDP size. Further, despite the increase in total health expenditure in Nigeria, budgetary allocation to the sector is still far below the 15 percent budgetary allocation of the 2001 Abuja declaration. In Figure 6, the study presents health expenditure as a percentage of total government spending from 2001 to 2021. Figure 6 shows that Nigeria's healthcare budgetary allocation is miniature and far below the 15 percent 2001 Abuja declaration. This may be the reason for deteriorated health outcomes in Nigeria.



The Education Sector

The education sector has deteriorated over the last two decades due to inadequate funding. However, the essence of education investment and financing in the Nigerian state cannot be overemphasized. With adequate funding, training of teachers, provisioning of infrastructure in all schools (primary, secondary, and tertiary levels), teaching and learning aids can be guaranteed, and incessant closure of public schools due to strike actions can be avoided. In Figure 7, the study shows the public spending on education between 2010 and 2021. Evidence shows that public expenditure has maintained an upward trend from N249.09 billion in 2010 to about N1,096 billion in 2021.



The upward trend in public spending has not changed the narrative of the education sector. According to The Budget Education Sector Analysis, the education system in Nigeria is not functioning at the optimal level. As a result, it has constituted a threat to the country's social and economic development. The out-of-school children and half-baked graduates Nigeria produces transcends into high unemployment rates, which is a ripple effect of the decay in the sector. According to UNICEF, one in every five of the world's out-of-school children lives in Nigeria. This depicts the severity of the education sector crisis in Nigeria. Aside from this, 10.5

million children aged 5-14 years are not in school. Within the age of 6-11 years in Nigeria, only 60 percent regularly attend primary school. Similarly, only 35.6 percent of children aged 36-59 months could access early childhood education. According to a data report from Statista (2022), the literacy rate in Nigeria was about 62 percent of the total population in 2018. This means that about whopping, 38 percent of Nigerians are illiterates. This evidence has a negative implication on the socio-economic development of the nation. However, one of the identified challenges of education in Nigeria is underfunding. For a clear understanding of the situation, the study presents budgetary allocation to the education sector in Figure 8 from 2010 to 2021.

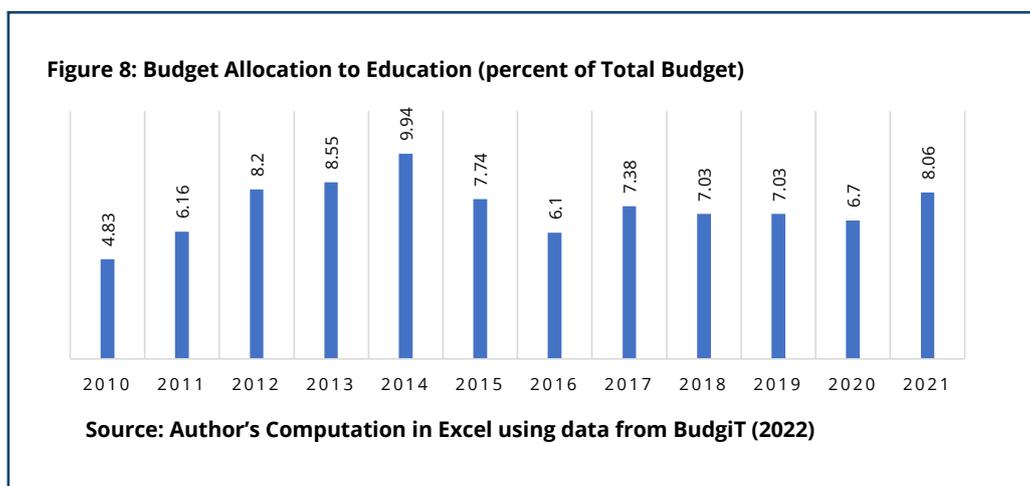


Figure 8 shows that between 2010 and 2021, the education sector received the highest allocation in 2014, with about 9.94 percent. The education sector spending in Nigeria falls below the UNESCO standard of 15 percent to 20 percent. This exposes the underfunding nature of the sector and the deterioration of public schools in Nigeria.

4. Conclusion and Policy Implications

In this paper, attempts have been made to investigate the implications of fuel subsidy removal on social spending in Nigeria. The stylized facts indicate that fuel subsidies in Nigeria tighten the fiscal burden of the government. Figures 1 and 3 show that between 2008 and 2021, government spending on fuel subsidies exceeded total health sector spending in Nigeria. Reforming fuel subsidies in Nigeria can ease the financial burden on the government to invest in the health sector. As capital investment in the health sector increases, health outcomes will improve in Nigeria and arrive at a win-win situation. Similarly, Figures 1 and 7 show that between 2010 and 2021, Nigeria's fuel subsidies exceeded government spending on education. By implication, the social sector (health and education) receives insignificant investment from the government due to fuel subsidies. Fuel subsidy reform in Nigeria can change the narrative of the education and health sectors in Nigeria, especially now that the sectors are more vulnerable to COVID-19. Fuel subsidy reform is expected to discourage fuel consumption, reduce greenhouse gas emissions, and improve environmental quality.

Specifically, what must be done to ensure the implementation of a fuel subsidy reform strategy for a win-win situation in Nigeria? Succinctly, it is noteworthy to state that fuel subsidies reform requires strategic steps and actions to offset the accompanying socio-economic pressures successfully. Within this context, the following strategic measures are suggested:

- There is a need for a comprehensive consultation and public enlightenment campaign. Removal of fuel subsidies is a politically sensitive issue. As a result, there is a need for a constructive public information campaign that involves consulting and educating the populace on the need for subsidy removal and the potential gains to households and the economy. The masses need to know that fuel subsidy benefits the higher income groups the most, and its removal will reduce incentives for smuggling, black market activities, shortages and corruption; spur new investment in the downstream sector; increase government revenue and, by implication, improve social welfare spending; scale-up investments in both hard and soft infrastructures; promote fiscal sustainability and sustainable economic growth which are necessary conditions for poverty alleviation.
- The government must ensure the consumer protection agency is functional and continue to monitor market prices of goods and services. This is because fuel subsidy removal will trigger inflation in the short run, which will trigger a marginal increase in transport costs, thus leading to a rise in the cost of production and food prices. This, by implication, will bring about a decline in disposable income and social welfare. In addition, the agency must put in place an appropriate mechanism to protect consumers against arbitrary price increases and sharp practices of producers who may want to cut corners by reducing product quality.
- Lessons of experience from fuel subsidy reforms from Ghana, Gabon, Mozambique, Iran, India, Brazil, Indonesia, etc. should be studied. Conscientious efforts should be made to investigate why some countries succeed and why others fail.

- There must be a robust social welfare package to cushion possible inflation effects. The universal fuel subsidy is a very costly approach to protect the welfare of low and middle-income households. Accordingly, measures to mitigate the sufferings of the poor and vulnerable groups should be put in place. Infrastructure that benefits low-income households and the vulnerable groups should be provided; Education at all levels and primary health care programmes should be well-funded; Health care delivery services should be expanded in rural areas; Access to food subsidy programmes and cash benefit to the poor and vulnerable groups should be expanded; Investment in rural electrification should be prioritized among others.
- The government must show true honesty and commitment toward reforms and investment in social factors. One significant way of responding to the plight of low and middle-income households is to facilitate their seamless access to basic and social needs that are crucial for their survival and comfort.
- There is the need to resuscitate the existing ageing refineries characterized by obsolete technology and construct new ones to reduce the country's dependence on imported petroleum products.

References

Amin, S., & Chowdhury, T. (2016). The Socio Economic Impacts of Fossil Fuel Subsidy Reform in Developing Countries: The Case of Bangladesh.

Annabi, N., Harvey, S., & Lan, Y. (2011). Public expenditures on education, human capital and growth in Canada: An OLG model analysis. *Journal of Policy Modeling*, 33(6): 852-865.

Gong, L., Li, H., & Wang, D. (2012). Health investment, physical capital accumulation, and economic growth. *China Economic Review*, 23(4): 1104-1119.

McCulloch, N., Moerenhout, T., & Yang, J. (2021). Fuel subsidy reform and the social contract in Nigeria: A micro-economic analysis. *Energy Policy*, 156, 112336.

National Bureau of Statistics (2021). Nigerian Gross Domestic Product Report Q3 2021, Abuja

National Bureau of Statistics (2022). Nigerian Gross Domestic Product Report Q4 2021, Abuja

Onyeizugbe, C. Z., & Onwuka, E. M. (2012). Fuel subsidy removal as an imperative for enhancing business development in Nigeria. *VSRD International Journal of Business & Management Research*, 2(9): 454-461.

Statista (2022). <https://www.statista.com/statistics/1124745/literacy-rate-in-nigeria-by-zone-and-gender/> (Accessed on 20th January 2022).

World Bank (2021) <https://www.worldbank.org/en/country/nigeria/publication/nigeria-development-update-ndu> (Accessed on 20th January 2022).

World Bank, (2010). Subsidies in the Energy Sector: An Overview, Background Paper for The World Bank Group Energy Sector Strategy.

Woldometer, (2021). <https://www.worldometers.info/oil/oil-production-by-country/> accessed on 20th January, 2022.

Acknowledgement

The author is grateful for research assistance from Ekundayo P. Mesagan, Pan Atlantic University, Lagos and Precious Emmanuel of MGIG Global Research, Lagos. The author also thanks the anonymous referees whose comments have enriched the paper.



NOURISHING FAMILIES. ENRICHING LIVES.

As the leading food producer in Nigeria, we have the unique responsibility of providing great-tasting food and nourishment to millions of Nigerian families. We do this by providing more product choices, strengthening the nutritional profile of our brands and contributing to the national nutritional agenda.

Feeding the nation everyday.

Find out more at www.fmnplc.com



COMMUNITY TRUST, THE CONCEPT OF COMMUNITY SUSTAINABILITY UNDER THE PETROLEUM INDUSTRY ACT 2021: A CONCEPTUAL FRAMEWORK

Obinna Chris Dike, Ph.D.

Assistant Professor of Law at the American University of Nigeria, Yola, and
Senior Fellow, NESG Non-Residential Fellowship Programme



Abstract

The 2021 Nigeria's Petroleum Industry Act (PIA) established a new structure for community benefaction in the petroleum industry. The chapter three of the PIA contains one of the structural introductions which created a uniform mechanism for socio-economic investments in host communities as well as espoused the idea of fostering sustainable prosperity in communities. The idea of fostering sustainable prosperity and the imposition of a uniform community benefit management system referred to as the 'Host Community Development Trust' (HCDT) are potentially valuable measures that can transform the host communities if strategically engaged. The Act mandates every holder of an upstream petroleum license to incorporate a Host Community Development Trust for their host community within twelve months. This paper examines the concept of fostering sustainable prosperity in the host communities within the context of upstream petroleum development in Nigeria. It concludes that the idea of fostering sustainable prosperity in host communities is achievable if the paradigm for environmental accountability is more rigorously enforced, the concept of community sustainability is mainstreamed into socio-economic investment decisions, and deliberate steps are taken to leverage other development opportunities to deepen and expand the scope of benefaction within spatial areas.

Introduction

In August 2021, the Nigerian President, Muhammadu Buhari, signed the Nigerian Petroleum Industry Act (PIA) (The National Assembly, 2021). The said presidential assent marked the end of a protracted attempt to re-engineer the petroleum industry by introducing modern, relevant, and forward-looking legislations. The Act abolished the old order and created a new governance framework, institutions, and innovative approaches to managing the complex petroleum industry challenges, laying the foundation for a petroleum industry that will be able to meet the present and future challenges. Chapter three of the Act regulates host community development-related matters and contains some innovations or new approaches to how the industry engages with its host communities. It established the Host Community Development Trust and introduced the concept of sustainable development as the philosophical or conceptual framework to guide the implementation of the objectives stipulated in section 234, particularly regarding petroleum industry-induced social investments in host communities in Nigeria.

Following the enactment of the PIA, HCDTs will be the sole host community development vehicle. It will be responsible for articulating a sustainable development trajectory for the relevant communities, identifying, and implementing suitable community projects. In discharging its responsibilities, the HCDT will adopt the concept, idea, or notion of fostering sustainable prosperity as the guiding framework for community development. In other words, by this provision contained in sections 234 and 235, the notion of 'fostering sustainable prosperity' becomes the ideal host community development paradigm or the governing community development philosophy (The National Assembly, 2021). Thus, every HCDT must ensure that the conception of development, selection of projects, actual development activities, and implementation must be made to foster sustainable prosperity.

What then is the meaning of 'fostering sustainable prosperity?' In other words, what does it mean to foster sustainable prosperity in petroleum host communities in Nigeria? The PIA did not define the phrase. However, it suffices to state that an understanding of and the

contextualization of sustainable development will be critical to the activities of the HCDDT. Thus, this paper examines the concept of fostering sustainable prosperity, sustainable development, or community sustainability within the context of the mandate of the HCDDTs.

Community Sustainability in Upstream Petroleum Development

Before the commencement of this Act, there was no overarching industry-wide policy expectation in this area, particularly relating to the nature, scope, extent, or level of engagement between the host communities and project proponents. According to Dike (2010), the self-interest of the individual proponent and the exigency of the local environment determined or guided the relationship between oil and gas companies and their host communities. In the absence of a coherent and consistent normative framework for community development, oil and gas companies determined the projects to be executed and the methodology for their execution. This approach created widespread mistrust, allegations of breaches, resentment, rampant conflicts, destructions, militancy, and environmental degradation (Dike, 2010).

Although the National Petroleum Investment Management Services (NAPIMS) gave approvals to annual community development plans, oil and gas companies determined the direction in terms of the scope, nature of engagement, and methodology for engaging with the host communities, having regard to the unique circumstances of the operating environment and expediency (SPDCN, 2022). In other words, every proponent was free to design and implement their Corporate Social Responsibility (CSR) objectives based on the individual proponent's policy, perspective, and methodology (SPDCN, 2021). This voluntary approach witnessed the use of non-binding community agreements, otherwise known as the Memorandum of Understanding (MoU) (Egbon, Idemudia, & Amaeshi, 2018). The agreements contained promises of projects or amenities that each proponent would deliver to their host community as a voluntary gesture of goodwill.

The MoU approach was largely unsuccessful for many reasons. The reasons include the lack of or limited community input in the decision-making process regarding project selections, allegations of non-compliance or implementation of expected projects, and conflicts (Dike, 2010). As a result, in 2006, Shell and Chevron transitioned from the use of MoU to the Global Memorandum of Understanding (GMOU) to facilitate better outcomes, improve their relations with their host communities, and engender peace (SPDCN, 2021). Also, the GMOUs were non-binding agreements. The GMOUs had a better governance structure, increased community participation in the decision-making process, and had relevant support systems for project selection, execution, monitoring, and evaluation. Despite the modest achievements of the GMOU process, the CSR-based relationship process was unable to achieve the stakeholders' expectations. As a result, the proponents could not secure the much-needed social license to operate, leading to regular conflicts and disruptive actions by communities that continue to undermine upstream and midstream petroleum operations in Nigeria (Dike, 2010).

Conversely, the communities seemed largely unsatisfied with the process. Many communities had complaints regarding alleged poor or non-implementation of agreements and the inadequate community participation in decision-making essential for their development (Amabipi, 2016). More so, the now abolished process did not appreciate the significance of community engagement (a situation not designated under the PIA) as essential and the minimum requirement for a meaningful and productive community-industry relationship in the extractive industry.

Because of the gaps inherent in the CSR-based approaches, the regime established under Chapter Three of the PIA has been received with reasonable optimism that the Nigerian petroleum industry may be on the path to community sustainability and a conflict-free operating environment. If the stakeholder's expectation that the PIA framework will establish a more stable relationship between leaseholders and host communities is achieved, the right atmosphere would have been created for community sustainability.

Host communities must quickly realize the need and be adequately supported to seize the opportunity presented by the new framework for their social and economic transition to a more sustainable future. That is to say, communities should be supported to leverage the HCDDT process to prepare themselves for sustainable livelihood now that the world is moving away from fossil fuels toward cleaner energy sources. As a result, the Nigerian Upstream Regulatory Commission must ensure that issues such as the responsibility for community engagement, the procedure for structured engagement, expeditious and context-relevant dispute resolution mechanism are provided for in its regulations.

Framing the Concept of Sustainable Prosperity

Oil and gas resources are inherently finite. They are depleted through the process of resource extraction. Because of this, the concept of sustainable development cannot be validly discussed concerning petroleum. The sustainability here relates to the need to make the process of natural resource development less harmful to the ecosystem and other support systems upon which the livelihood of local communities depends. Thus, while finite petroleum resources cannot be mined sustainably, externalities or the social, economic, and environmental harm associated with its development need to be stringently regulated and managed.

In other words, there is an urgent need to ensure that the process of petroleum extraction is prudently executed so that the externalities associated with its development do not impose an onerous social, economic or environmental burden on the current and future generations beyond that which is necessary. This implies that any host community sustainability programme that relies solely or principally on the execution of projects in the communities or the promotion of scholarships would be limited, inchoate, and incapable of fostering the affected communities' long-term future. So, fostering sustainable prosperity in line with the intentions of the PIA would require the prevention or management of all avoidable externalities of petroleum operation while ensuring that community benefaction programmes are planned and implemented to achieve community sustainability (Barry, 1997).

Meaning of Community Sustainability

Asheim (1994) defines 'sustainability' as the "requirement of our generation to manage the resource base such that the average quality of life that we ensure ourselves can potentially be shared by all future generations." Similarly, Bosselmann (2008) opined that 'sustainability' refers to "an idea that relates to the continuity of human societies and nature," while 'development' may be described as the progressive social and economic advancement in human activities that affects nature and the environment. These definitions equally contemplate a notion of distributive justice, trust, accountability, and prudence in the administration of nature's best resource base, by the present generation for their benefit and that of future generations (Asheim, 1994).

Construing the PIA's notion of fostering sustainable prosperity, it suggests that stakeholders should leverage both the petroleum industry accountability mechanisms and the community benefaction and management systems to facilitate or create stable social and economic foundations upon which the legitimate aspirations of future generations of these communities may be anchored. Therefore, there cannot be any valid claim to sustainability if the biophysical environment, being nature's best resource base, is sacrificed through avoidable and unmitigated environmental degradation. The idea of fostering sustainable prosperity draws from the principle of sustainable development as articulated in the famous Brundtland Commission of 1987. The Brundtland Commission defined sustainable development as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Asheim, 1994).

From the preceding discussion, the concept of fostering sustainable prosperity requires that the petroleum industry stakeholders carefully and intentionally manage the process of resource extraction. First, the best oilfield practice should be consistently upheld throughout the various stages of their operations. Thus, the culture of imprudence or negligence epitomized by frequent incidences of oil pollution or gas flares has to end under the PIA. Community benefit schemes need to be implemented to create a net social, economic, and environmental edge and place the benefiting communities in a favourable or superior position at the end of a project's life cycle.

In other words, the PIA's idea of fostering sustainable prosperity demands every stakeholder to ensure that, individually and collectively, petroleum resource development is conducted with minimal adverse impacts on the natural environment and the stock of nature relied upon by the communities for sustenance and wellbeing. In particular, communities need to embrace this process and be prepared to explore and pursue constructive engagement with the other stakeholders to resolve disputes or disagreements. The goal is to ensure that petroleum extraction activities do not unnecessarily interfere with the right of the communities to leverage the bio-physical environment for social and economic sustenance at decommissioning or the end of a project's life cycle.

Furthermore, public or private sector social investment programmes should be structured to address current needs and facilitate a sustainable pathway for future generations. Conversely, having submitted to this new regime by establishing HCDT as required by law, oil and gas companies must enjoy the right to operate responsibly as envisaged by the Act. A combination of these measures will be essential to realising the laudable policy objective of promoting sustainable development in host communities (Dernbach, 1998). In addition, the HCDTs established by upstream oil and gas companies under section 235 of the PIA will play significant roles in fostering sustainable prosperity in the host communities.

Fostering Sustainable Prosperity: Way Forward

The PIA makes the HCDTs responsible for implementing the host community sustainability policy established in Chapter Three of the Act. HCDTs have been chosen as the community benefit management vehicle for fostering sustainable prosperity in host communities. Section 235 of the PIA stipulates that every settlor (upstream oil and gas companies) shall incorporate HCDT to benefit the host communities for which the settlor is responsible. Every settlor must pay annually an amount equal to 3 percent of its annual operating expenses of the preceding

financial year to the HCDD established by it. Each HCDD will apply 75 percent of the income received for infrastructure and other social and economic development projects, 20 percent will be invested for the benefit of future generations, while the remaining 5 percent will be utilized towards salaries and other administrative expenses.

Thus, to foster sustainable prosperity in host communities, industry regulators, settlers, and the host community must ensure process-level sustainability by eliminating, reducing, or mitigating the adverse impacts of resource development. Similarly, the administrators of the HCDDs have to be carefully recruited and trained to equip them to act as catalysts for sustainable community development as envisaged by the PIA.

Recommendations

To achieve the goal of fostering sustainable prosperity in host communities, the following needs to be prioritized:

- The government must enforce environmental regulations. The rigorous enforcement of the relevant environmental laws and regulations will be an essential component of fostering community sustainability. This is because erecting social and economic development projects alone cannot foster sustainable prosperity without aggressively reducing the unsustainable level of environmental pollution in some of these communities;
- The companies need to operate in a more environmentally responsible manner. This will reduce the level of avoidable damage done to the environment through human errors, operational accidents, and delayed responses to pollution incidences;
- Stakeholders should organize community development summits for information sharing, strategic engagement, and interactions on community-related issues relevant to the implementation of the PIA. Communities would require structured engagement concerning the demands of sustainable development and their responsibilities under the new framework;
- Clarification of the role of state governments in community sustainability. The PIA did not articulate any role for the state governments and how they could contribute to the policy of community sustainability; and
- Clarification of the stakeholder responsible for (post-PIA) community engagement. The Act did not allocate responsibility for community engagement. Should oil and gas companies continue to engage directly with their host communities, or will that role now devolve to the HCDDs? This needs to be clarified.

Conclusion

In summary, to foster sustainable prosperity in host communities through petroleum industry-induced socio-economic investment, the following must occur:

- (i) Resource extraction activities must, as much as possible, avoid, reduce or minimize the degradation of the vital support systems upon which the social, economic, and environmental wellbeing depend. As a result, resource development should occur without damaging or destroying the ecosystem.
- (ii) The benefaction process must be designed and implemented to cater to both the present and the future needs of the beneficiaries.

References

Amabipi, A. K. (2016). *Understanding Host Community Distrust and Violence Against Oil Companies in Nigeria*. Minneapolis: Walden University.

Asheim, G. (1994). *Sustainability: Ethical Foundations and Economic Properties*. Washington: The World Bank. Retrieved from http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1994/05/01/000009265_3970716141011/Rendered/PDF/multi0page.pdf

Barry, B. (1997). 'Sustainability and Intergenerational Justice. Retrieved February 22, 2022, from <http://jan.ucc.nau.edu/~dss4/BARRY1.PDF>

Bosselmann, K. (2008). *The Principle of Sustainability: Transforming Law and Governance*. Aldershot: Ashgate Publishing Limited.

Dernbach, J. (1998). 'Sustainable Development as a Framework for National Governance',. Chester, Pennsylvania, United States. Retrieved April 23, 2022, from: <https://scholarlycommons.law.case.edu/cgi/viewcontent.cgi?referer=search.yahoo.com/&httpsredir=1&article=2248&context=caselrev#:~:text=Sustainable%20development%20affirms%20the%20importance,the%20sake%20of%20future%20generations>

Dike, O. (2010). *Host Community/Oil Company Agreements and Security of Investments in Oil and Gas Industry: A Case Study of Nigeria*. Saarbrücken: LAP Lambert Academic Publishing.

Egbon, O., Idemudia, U., & Amaeshi, K. (2018). Shell Nigeria's Global Memorandum of Understanding and Corporate-Community Accountability Relations. *Emerald Insight*, 51-74.

SPDCN. (2021). *Global Memorandum of Understanding (GMOU)*. Nigeria. Retrieved from Shell Nigeria: <https://www.shell.com.ng/sustainability/communities/gmou.html>

SPDCN. (2022). *Communities*. Retrieved from Shell Plc: <https://www.shell.com.ng/sustainability/communities.html>

The National Assembly. (2021, August 20). *Petroleum Industry Act*. Abuja, Nigeria.

DIGITALIZATION AND LABOR IN AFRICA: A REGIONAL SNAPSHOT FOR RELEVANT SOCIAL INTERVENTIONS

Raymond Onuoha, Ph.D.

Senior Fellow, NESG Non-Residential Fellowship Programme



Abstract

The digitalization of labor is increasingly becoming a potential pathway to bridging socio-economic development deficits, particularly unemployment gaps in Africa. This pathway is even more imperative for the region, considering its relatively young population with a high unemployment rate. This report appraised the impact of increasing digitalization on labor across economic sectors in Africa, highlighting the current issues and challenges faced by workers in the region and the state of policy evolution in relation to labor and the digital economy with respect to Africa. The report elucidates structural inequalities in relation to digital skills and labor supply, which shifts bargaining power inequitably in favor of digital companies in their ability to drive down workers' wages and the plausibility for collective bargaining. This precarious working condition for digital labor is exacerbated by workers' algorithmic management, which further constrains their agency for bargaining and autonomy. Another important challenge within the gig space in the region is the high dependence on technology devices (such as computers and mobile phones) and internet access. In this respect, the affordability of those and erratic power supply systems are limiting participation barriers for the labor force in Africa within the global digital economy. Sadly, in addressing these challenges across the region, there are yet clear legal mandates or regulatory policies by countries explicitly dealing with the emerging labor issues related to the increasing digitalization on the continent. In the context of the above regulatory and policy lacuna, African gig workers demonstrate resilience over the emerging constraints in the digital economy concerning working conditions and rights. They rely on often subtler and less aggressive mechanisms than traditional worker union approaches. The report concludes with recommendations and intervention areas for stimulating digital labor in Africa to accelerate its contribution to the inclusive socio-economic development of the region.

Introduction – Context and Rationale

Emerging digital innovations are expected to impact Africa's socio-economic development significantly. Key sectors among impact areas include agriculture, financial services, small and medium scale enterprises (SMEs), and the gig economy (Melia, 2020). The agricultural sector, for instance, employs a significant portion of Africa's nearly 1.4 billion population and is vital for the industrialization of the region's economy. Across the region, digital innovations such as ML (machine learning)-based applications are currently being harnessed for improved yield prediction and early disease detection in countries like Nigeria, Zambia, Malawi, Tanzania, and Kenya (Ly, 2021). The growing interest in ML-based agriculture is driving increased investments in AI (artificial intelligence) startups that create commercial products and services for farmers and agribusinesses on the continent. Some of these agric-AI-based agric startups include MySmartFarm, Aerobotics, and DroneClouds. However, although the potential for these startups is high, their overall impact on the sector is still quite limited. Scaling this technology capability within the region has been hampered by sub-optimal data systems and technological skills availability.

In particular reference to the gig economy, the current uptick in the global economy is driving the growth of the online labor sector in Africa. A key attraction for the African gig economy is a relatively younger population. This emerging economic sector provides a potential

for increased job opportunities for young Africans in a digitally connected world. A critical downside is that gig work remains largely unregulated in the region. Without traditional social protections and standardized conditions of work, in an oversupplied labor sector with significant wage suppression (Graham & Anwar, 2018; Jean-Paul & Mudavanhu, 2018). This wage condition is deemed a better alternative to the lower-paying jobs within the region's largely informal economy, with high levels of youth under- and unemployment. Concerning size, the gig economy in Africa is relatively smaller than competing regions in Asia and the more developed economies, with a market valuation of about US\$300 million, accessed by about a million African workers (Tsibolane et al., 2018).

Within the context above, this report aims to highlight the impact of digitalization on the current state of labor for African workers in the global digital economy, identify the critical constraints, and the evolving roles and responses of constituencies within the emerging labor ecosystem in the region.

Report Method

The report's development followed a method of reviewing relevant literature, including academic journals, industry reports, and policy briefs. In-depth interviews with 8 Key Informants (see appendix) and a regional roundtable of 17 participants selected across Africa's labor and policy ecosystem complemented insights from the analysis of the documents. Participants for the roundtable were selected from a representation of labor unions, government, civil society, academia, think tanks, multilateral agencies, and private organizations.

Current issues and challenges faced by African workers in the digital economy

One persistent issue concerning African workers within the global digital economy is the risk of exacerbating existing structural inequalities, especially the prominent gender differences in the region's labor market outcomes. In this respect, women have a lower labor force participation, primarily due to a lower digital literacy level. This divide is significantly related to lower STEM (science, technology, engineering, and mathematics) education. In addition, there is also the prevalence of gender stereotyping in work allocation with consequent income differences in favor of males (Onkokame et al., 2018; WEF, 2020).

Another issue of note within Africa's digital labor space is very much related to the technical capacity of workers to gainfully engage within the global digital economy (Moore, 2017). With digital skills becoming a critical production factor in the digital economy (Brynjolfsson et al., 2014), there is the likelihood of work segregation towards higher-skilled jobs. This skill requirement is currently scarce within the region; exacerbated by the increased emigration of skilled workers abroad) as automation trends rise in secondary high-wage economic sectors such as manufacturing and service industries (Rapanyane & Sethole, 2020). This situation becomes even direr considering the existing social structure in Africa. In this context, population growth is not matching job growth leading to labor oversupply and consequent transience in emerging job segments within the digital economy in the region (Gaus, 2015). This precarious labor market situation consequently shifts bargaining power inequitably in favor of digital companies. This shift is in relation to their ability to drive down worker wages and the plausibility for collective bargaining. This economic dynamic pivoted on cheap labor creates a vicious cycle that negatively impacts the incentive for larger-scale automation. The

result is a consequent decline in the potential levels of industrialization within the region's economic sectors.

Within the context above, extensive automation seems quite far-fetched within the short to medium term in Africa, especially in traditional sectors such as agriculture, with a consequent minor displacement of workers currently domiciled within the region's informal economy. In contrast, the opposite might be likely for high-wage sectors such as manufacturing and service industries. This scenario paints a dire picture for Africa's growing middle class aspiring for formal jobs. The situation may lead to a reshoring of production away from the region to produce at lower costs closer to their domestic markets.

Concerning the emerging gig economy in the region, there are the issues such as the already highlighted precarious working conditions for digital labor. This challenge is exacerbated by algorithmic management of works – which further constrains their agency for bargaining and autonomy (Anwar & Graham, 2020). According to an interviewee, “When large percentages of your workforce are informal, it is incredibly difficult to organize labor...” The suppressed wage work competed by workers on gig platforms is sometimes never even paid once the platforms decide that their work was unsatisfactory or completed on time (Anwar & Graham, 2021). This wage mechanism is in contravention of ILO (International Labor Organisation) standards (ILO, 2005).

Another critical challenge within the gig space is the high dependence on technology devices (such as computers and mobile phones) and internet access. Affordability of those and erratic power supply systems are limiting barriers for the labor force in Africa within the global digital economy (Jean-Paul & Mudavanhu, 2018). The region has the lowest internet penetration rate at less than 30 percent on average (Mothobi, 2021). Within this infrastructure divide is the constraint of sub-optimal payment systems that limits the easy payment for gig work completed by African workers on global digital platforms, compounded by the fact that only a small portion of Africa's population is included in formal banking systems while innovative mobile payment systems such as M-Pesa (Kenya) and M-Birr (Ethiopia) are largely country-unique and do not allow for international transfers (Mtsweni et al., 2016).

Policy evolution with regards to labor in the digital economy across Africa

Currently, across Africa, there are yet clear legal mandates or regulatory policies by countries explicitly dealing with the emerging labor issues related to the increasing digitalization in the region (Access Partnership, n.d.). This situation is channeled on very little evidence-based policy analysis that seeks to address the aforementioned evolving issues (Brown & Adolwa, 2017; Tsibolane et al., 2018). More specifically, with the fledgling gig sector (with all its challenges highlighted) bridging critical employment deficits in the region, the incentive for a more nuanced industry regulation is further constrained. This condition is imperative, especially in the short term, even if this intervention might have a net positive impact in the long run (Gaus, 2015). This gap is noteworthy considering the current policy regime across the region where the legacy regulatory frameworks in particular relation to labor issues such as social protection and labor rights of workers only cover a small portion of workers, especially those in the formal sector (Bhorat et al., 2017). This institutional void further constrains the agency of African workers in bargaining for improved working conditions within the global

digital economy (Anwar & Graham, 2020). Furthermore, from a digital payments perspective, transaction costs for financial transfers in Africa are relatively steep (twice as high on average: Jean-Paul & Mudavanhu, 2018). This position is in comparison to global thresholds, making most African monetary authorities place significant barriers to the cross-border free flow of money.

Constituencies' evolving roles and responses

Nevertheless, within the context of the above regulatory and policy lacuna, African gig workers are demonstrating resilience over the emerging constraints in the digital economy in relation to working conditions and rights, relying on often subtler and less aggressive mechanisms than traditional workers' unions. One critical impediment they are addressing via these mechanisms is lowering their relatively higher barrier to entry for gig work on digital platforms. This labor constraint is imperative, especially for starters who have no legacy platform review scores, to enable them to win additional jobs. They circumvent this entry barrier by doing free work, buying fake feedback and reviews from clients who post non-existent gigs on the platforms or even buying pre-approved accounts with worker locations set for choice geographies such as the United States of the European Union (Anwar. & Graham, 2020). In addition, within this respect, workers could also set up multiple gig accounts using the identities of friends and relatives to rake up more 'connects' per month – favorable for successful job bidding. Another related survival mechanism employed by workers in Africa, this time in dealing with technology infrastructure deficits either by using free public internet hotspots, taking out loans to purchase second-hand laptops, or even sharing laptops within their social networks.

While all the above responses have been mainly channeled at the individual worker level, the influence of worker associations or trade unions within the emerging issues in the digital economy in relation to labor has been weak in Africa (Anwar & Graham, 2021). As evident, most of the workers in the emerging gig sector are not members of the extant trade unions in African countries, though there are pockets of action to get this important mechanism to start scaling within the region. These include the evolution of worker unions such as app-based worker associations, as currently most prominent in the transport sector in Africa. These worker associations rely on social networks such as WhatsApp and Facebook to coordinate their activities (MCF, 2019).

Conclusion

While digital work has significant potential for bridging unemployment deficits in Africa, achieving sustainable socio-economic development via this pathway can only be realized with a complementary evolution of policies and their practical implementation, especially concerning working conditions and labor rights, ubiquitous digital infrastructure development, as well improving worker skills and competencies as applicable within the global digital economy. According to an interviewee,

'The hype around Digitalization and its adoption-driven by Western-led institutions like the UN, World Bank and IMF, donor governments and philanthropic organisations, as well as the global tech giants- is truncating more pertinent local engagement of socio-economic issues on the continent around health, education, jobs, social equality etc.'

Recommendations and Intervention Areas

- To bridge the scarcity of empirical evidence base for optimal policy evolution with respect to labor issues and the digital economy, there needs to be more Africa-specific research to understand the macro and micro development imperatives of emerging economic sectors such as gig work in the region. This contextual underpinning will help understand contingent economic models for pragmatic policy evolution that is relevant to specific country contexts, covering these specific areas:
- Understanding gig worker profiles (including demography) across digital labor platforms
- Platform governance mechanisms for enforcing digital labor rights to ameliorate the exploitation of African workers in the global digital economy.
- Assess the impact of digital labor policies on entrepreneurship, informality (mis) allocation of skills and resources across economic sectors.
- Policy interventions to extend social protection to the informal sector and the gig economy.
- Risk impact assessment of algorithmic management of workers in relation to:
 - The destruction, transformation and creation of jobs
 - Workers' human rights and privacy rights
 - Working conditions with respect to access to tasks, career progression, employment stability, income security, psychological impacts, remuneration and working time flexibility
 - Collective association and trade union rights
- Digitalization of the world of work within the broader context of the political economy, the organization of production, and the structure of labor markets.
- Developing technical capacity for optimal labor policy evolution in the region as it relates to the digital economy. This process should encompass key policy ecosystem stakeholders including policymakers and worker union leadership.
- In order to accelerate the upskilling of workers in the region for more economic participation in the global digital economy, there is the requirement for long-term investments in the region's educational systems, transforming them to empower workers with the requisite professional and in-demand digital skills. This process can be facilitated both within the traditional educational institutions as well as new educational channels like open learning platforms.
- For more effective labor rights and working conditions advocacy, labor unions (both traditional and emerging forms), relevant civil societies, and think tanks within the region need to be supported in scaling their capacity for more significant engagements and interventions concerning labor-relevant challenges in the digital economy.

In channeling these recommendation areas for intervention projects, stakeholder entities and private organizations should carefully consider the long-term feasibility and impact, the contextual institutional complexities and alignments, and the optimal funding levels required for their end-to-end implementation within the region. Interviewees made some pertinent suggestions in these regards as below:

- Interventions should be locally generated and locally-driven with the right experts as they have the expertise and experience in what works and what doesn't in-context. This focus can help bridge the current misalignments between the volume and nature of private interventions and the socio-economic reality on the ground.
- Align intervention programmes with the local governments' policy priorities, which have an underpinning institutional framework. This process will guarantee project sustainability and leverage the critical support required for the successful outcomes of project initiatives.

References

Access Partnership Report. (n.d.). Artificial Intelligence for Africa: An Opportunity for Growth, Development, and Democratisation. Retrieved from: https://www.up.ac.za/media/shared/7/ZP_Files/ai-for-africa.zp165664.pdf

Alfreds, D. (2018). 'Hi, I'm Pepper' - first humanoid robot in SA gently introduces herself. Available at: <https://www.news24.com/news24/SouthAfrica/News/hi-im-pepper-first-humanoid-robot-in-sa-gently-introduces-herself-20180604>

Anwar, M. A., & Graham, M. (2020). Hidden transcripts of the gig economy: labor agency and the new art of resistance among African gig workers. *Environment and Planning A: Economy and Space*, 52(7): 1269-1291.

Anwar, M. A., & Graham, M. (2021). Between a rock and a hard place: Freedom, flexibility, precarity and vulnerability in the gig economy in Africa. *Competition & Change*, 25(2): 237-258.

Bhorat, H., Kanbur, R., & Stanwix, B. (2017). Minimum wages in Sub-Saharan Africa: a primer. *The World Bank Research Observer*, 32(1): 21-74.

Brown, A. & Adolwa, P. (2017). Foresight Africa Viewpoint: Digital Jobs and Smart Urbanization. Available at: <https://www.brookings.edu/blog/africa-in-focus/2017/01/24/foresight-africa-viewpoint-digital-jobs-and-smart-urbanization/>

Brynjolfsson, E., McAfee, A., & Spence, M. (2014). New world order: labor, capital, and ideas in the power law economy. *Foreign Affairs*, 93(4): 44-53.

Gaus, A. (2015). Automation and the Future of Work in Sub-Saharan Africa. Konrad Adenauer Stiftung. Available at: <https://www.gppi.net/media/Automation-and-the-Future-of-Work-in-Sub-Saharan-Africa.pdf>

Graham, M., & Anwar, M. A. (2018). Two models for a fairer sharing economy. Davidson, N. Finck, M. and Infranca, J.(eds) (2018), *The Cambridge Handbook of the Law of the Sharing Economy*, Cambridge University Press, Cambridge, 328-340. Available at: <https://doi.org/10.1017/9781108255882.025>

International Labor Organization (ILO). (2005). Human Trafficking and Forced Labor Exploitation: Guidance for Legislation and Law Enforcement. Geneva: ILO. Available at: https://www.ilo.org/global/topics/forced-labor/publications/WCMS_081999/lang--en/index.htm

Jean-Paul, van B., & Mudavanhu, S. (2018). Digital Labor in Africa: A Status Report. Available at: <https://diodeweb.files.wordpress.com/2018/01/digital-labor-in-africa-diode-paper.pdf>

Ly, R. (2021). Machine Learning Challenges and Opportunities in the African Agricultural Sector--A General Perspective. arXiv preprint arXiv:2107.05101.

MasterCard Foundation (MCF) Report. (2019). Digital Commerce and Youth Employment in Africa. Retrieved from: https://mastercardfdn.org/wp-content/uploads/2019/03/BFA_Digital-Commerce-White-Paper_FINAL_Feb-2019-aoda.pdf

Melia, E. (2020). African jobs in the digital era: Export options with a focus on online labor (No.3/2020). Discussion Paper.

Moore, R. (2017). Artificial intelligence: Is South Africa ready? Available at: <https://www.linkedin.com/pulse/artificial-intelligence-south-africa-ready-rory-moore/>

Mothobi, O. (2021). Digital Labor in Africa: Opportunities and Challenges. Available at: <https://www.africaportal.org/documents/20971/Digital-labor-in-Africa-Jan-2021.pdf>

Mtsweni, J., Ngassam, E. K., & Burge, L. (2016, May). A profile-aware microtasking approach for improving task assignment in crowdsourcing services. In 2016 IST-Africa Week Conference (pp. 1-10). IEEE.

Onkokame, M., Schoentgen, A. and Gillwald, A. (2018). What is the state of microwork in Africa?

A view from seven countries. Policy Paper, 5, pp.55-76. Available at: https://researchictafrica.net/wp/wp-content/uploads/2018/09/After-Access_The-state-of-microwork-in-Africa.pdf

Rapanyane, M. B., & Sethole, F. R. (2020). The rise of artificial intelligence and robots in the 4th Industrial Revolution: implications for future South African job creation. *Contemporary Social Science*, 15(4): 489-501.

Tsibolane, P., Jean-Paul, Van B., & Mudavanhu, S. (2018). Digital Gig Work in Africa: An Exploratory Survey. Available at: https://www.researchgate.net/publication/327596883_Digital_Gig_Work_in_Africa_An_Exploratory_Survey

WEF Global Gender Gap Report. (2020). Available at: http://www3.weforum.org/docs/WEF_GGGR_2020.pdf

Appendix - Key Informant details

Name	Organization	Contact
Khamati Mugalla	East African Trade Union Federation	ckmugalla@gmail.com
Robert Karanja	Omidyar Africa	rkaranja@omidyar.com
Richard Kozul-Wright	UNCTAD	richard.kozul-wright@unctad.org
Dr Onoho'Omhen Ebhohimhen	Nigeria Labor Congress (NLC)	onomengo@gmail.com
Ayoade Ibrahim	International Alliances App-based Transport Workers IAATW	maiwega@gmail.com
Cynthia Antwi-Dodoo	RealFin Consulting Africa	cynthia.antwi@realfinglobal.com
Daniel Batty	Endcode	daniel.batty@endcode.org
Ridwan Oloyede	Tech Hive Advisory Africa	ro@techhiveadvisory.org.ng

At Nestlé, we are determined to help young people develop their skills so they can find jobs or create their own businesses.

In 2021 alone, we reached over 11,000 young people through our Get Skilled, Get Hired, Get Support and Get More Opportunities programs under the Nestlé Needs Youth initiative.



IMPACT OF INSECURITY ON FOOD PRODUCTION IN IGABI LGA, KADUNA STATE.

Usman, G. Birat

Department of Economics, Kaduna State University, Kaduna



Abstract

The study assessed the impact of insecurity on food production in Igabi Local Government Area (LGA) of Kaduna State, Nigeria. Agriculture contributes 42 percent of Nigeria's GDP and engages over 65 percent of Nigeria's workforce. The sector is constrained by challenges recently characterized by insecurity, leading to low output and inefficient production tools and infrastructure. A total number of 399 farmers were selected from 145,744 farmers' households using the Yamane equation. Two-stage sampling technique was used to determine the LGA where the research was conducted. Purposive sampling was used to determine the LGA out of the 23 LGAs in the state, and a simple random sampling technique was used to determine the farmers in the research area. The farmers were administered a well-structured questionnaire to collect their data on demographic characteristics and agricultural-related activities that answered questions on the impact of insecurity on food production in the study area. Data collected were analyzed using simple descriptive statistics and a chi-square analysis (at $p < 0.05$). Findings from this study reveal that insecurity resulting from kidnapping, banditry, and cattle rustling constitute 96.4 percent of the insecurity affecting the study area, which leads to food shortage, and the high price of food commodities between 63.5 percent and 34.1 percent, respectively. Also, 66.3 percent of the farmers are in extreme poverty, 28.7 percent are moderately poor, with only 5.0 percent are considered not poor. Therefore, findings from this study showed that there is a strong link between insecurity and food production in the State. Furthermore, more stakeholders from the State and LGAs should be engaged with the relevant security agencies to curtail this menace. Also, modern farming equipment should be encouraged to avoid farming only in the bushes, where kidnappers threaten Nigerians' well-being.

Introduction – Context and Rationale

Agriculture commits 42 percent of Nigeria's GDP and employs over 65 percent of Nigeria's workforce. The sector is stifled by humongous threats characterized by low output; ineffectual and antiquated production tools and infrastructure. Generally, 66 percent of Nigeria's total landmass of 92.377 million hectares is suitable for agricultural production, but unfortunately, about half is not cultivated. The technological deficiency in standardization; and quality control have dwarfed natural farm produce, making Nigeria not competitive in local and international markets (Yar'Adua, 2009). In Kaduna state, agriculture is the single largest employer of labour forces (79.6 according to KDGHS, 2015) and committed 36.69 percent of the state GDP in 2015. Its contribution by sub-sector to the GDP is; Crops (33.69 percent), Livestock (2.65 percent), Fisheries (0.24 percent) and Forestry (0.11 percent). Kaduna produces 22 percent of Nigeria's maize and 10 percent of groundnuts (peanuts), and the state trades agricultural produce to a neighbouring state.

Nigeria is putting preference in place to seek alternatives to diversify into non-oil sources of growth and away from high dependency on oil and gas. The agricultural sector is considered one of the significant sources of growth and a necessary alternative for diversification. The impediments of malnutrition can be addressed via the agricultural sector; for example, nutrient-rich varieties of staple food crops can assist in reducing malnutrition by making available micronutrients to the populace. From relevant literature, many studies have been

conducted on insecurity and food production in different parts of the country with no clear consensus based on the empirical findings. Therefore, this work seeks to contribute to the debate by presenting new evidence on the nature of this complex relationship as contributed by researchers like; Ojogho (2011), Babatunde, Omotesho, and Sholotan (2007), Ana, Bill, and Sekher (2013). The research aims at assessing the impact of insecurity on food production in Kaduna state.

Methodology

The study was conducted in Igabi LGA, Kaduna state. The LGA is one of 774 LGAs in Nigeria and one of the four that constitute Kaduna metropolitan city. It was created in 1989 out of Zaria local government, with headquarters in Turunku. The LGA has three district areas namely, Igabi, Rigachikun, and Rigasa (Igabi, 2020a). The LGA is dominated by farmers who produce crops on a commercial level, with yams, maize, guinea corn, beans, and sugar cane being the major crops. Igabi LGA is located at latitude 10° 47' 0"N and longitude 7° 46' 0"E (Igabi, 2020b). Annual rainfall is between 250 mm – 1000 mm and usually begins in early May and ends in October, with the dry season from October to April (Ishola & Olukotun, 2019). The LGA is bordered to the North by Giwa and Zaria LGA, to the East by Soba LGA, to the South by Chikun and Kaduna North LGA, and to the West by Birnin Gwari LGA. Igabi LGA is located in the central senatorial district, with 12 wards and a population of 430,753 people, of which 145,744 are mainly farmers (NPC, 2006 and KDBS, 2017). See appendix 1 for the general description of the area.

Method of Data Collection

Data were collected from primary sources by administering a well-structured questionnaire among the farmers to fill.

The Population of the Study

The study employed 145,744 farming families from Igabi LGA, Kaduna (KDBS, 2017). The choice of this target population was made because the LGA where they came from is centrally located in the state, connecting all the major LGAs that are affected by insecurity in the Kaduna state, which now has a limited number of farmers engaging in farming activities due to insecurity.

Sample Size and Sampling Techniques

Two-stage sampling technique was adopted for this study. First, purposive sampling was used to select only Igabi LGA out of the 23 in the state due to the activity of bandits, kidnapers, and Cattle rustlers. Secondly, a simple random sampling technique was used to select some 399 farmers from the LGA (Yamane, 1967). After respondents' information was received, only 322 questionnaires were retrieved. Yamane (1967) provides a simplified formula to calculate the sample size in this research, and a 95 percent confidence level and $p = 0.05$ are assumed for the sample size.

$$n = \frac{N}{1 + N(e)^2}$$

Where n = sample size of the population.

N = Population size.

e = Level of precision.

$$n = \frac{145744}{1 + 145744(0.05)^2} = 399 \text{ Farmers.}$$

Techniques of Data Analysis

Statistical techniques were used in analyzing the data generated from the farmers to achieve the research objectives. Simple descriptive statistics and Chi-Square analysis were employed to determine the relationship between insecurity and food production in Igabi LGA.

Chi-Square

This analysis was used to test the research hypothesis by evaluating the expected and observed outcomes between insecurity and food production in Igabi LGA (Turhan, 2020).

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where χ^2 = Chi-Squared.

O_i = Observed Value (actual result obtained from the research, which shows the relationship between insecurity and food production in Igabi LGA).

E_i = Expected Value (the anticipated outcome of the research. Whether there is a relationship or not between the insecurity and food production in Igabi LGA)

The above formula was used to determine the factors associated with food production and insecurity in the research.

Result and Discussions

Socio-Demographic Profile of the Respondents

Socio-demographic characteristics of the respondents, such as their age, marital status, primary occupation, and level of education, were recorded using descriptive statistics, as shown in Table 1. At the time of conducting this research, 24.6 percent of the respondents were within the age range of 26 to 35 years, 51.4 percent between 36 and 45 years, 19.3 percent between 46 and 55 years, and 4.4 percent between 56 and 65 years. While marital status, 73.9 percent of the respondents were married, and 26.1 percent were single. This result shows that the majority of the respondents are semi-elderly people capable of farming activities. This finding agrees with that of Liverpool-Tasie, Kuku, and Ajibola (2011), which reported that the productive age of farmers was generally in their middle age. Also, the majority of them are married with dependents; therefore, they need to engage in economic activity. The majority of the respondents, 65.5 percent, were predominantly farmers, while 33.6 percent had other occupations besides farming. The research also recorded that 4.6 percent had primary school education, 46.7 percent had secondary education, 14.7 percent had adult education, 20.9

Table 1: Socio-Demographic Profile of the Respondents

Parameters	Percentage	χ^2	p-value
<u>Age</u>			
26 – 35	24.6	263.3	< 0.001
36 – 45	51.4		
46 – 55	19.3		
56 – 65	4.4		
<u>Marital status</u>			
Single	26.1	70.6	< 0.001
Married	73.9		
<u>Farming as the main occupation?</u>			
Yes	65.5	139.5	< 0.001
No	33.6		
<u>Level of education</u>			
Primary	4.6	157.4	< 0.001
Secondary	46.7		
Adult education	14.7		
Arabic/Bible	20.9		
Tertiary	13.1		

Source: Researcher's Field Work 2021

Impact of Insecurity on Food Production

The research indicated that insecurity affects food production by 96.4 percent, with food shortage and high food prices accounting for 63.5 percent and 34.1 percent, respectively (see Table 2). Kidnapping constitutes 79.1 percent of why the farmers could not access their farms, banditry 8.7 percent, cattle rustling 7.2 percent, communal clashes 1.9 percent, and other reasons 3.0 percent. These contribute 53.6 percent of non-visit to farms between 2-3 years (see Table 3). It also showed that of the 310 individuals who indicated a lack of access to their farms, insecurity accounts for 83.2 percent of the reasons why farms are no longer visited. In contrast, 12.6 percent favoured a lack of capital, while only 2.3 percent were due to a lack of interest in farming. Most of the non-visit to farms took place within 0-3 years, accounting for 92.9 percent of cases of farm abandonment. This result indicates a surge in incidences of insecurity in the research area. Also, Kidnapping (79.3 percent; 211/266) accounts for the significant forms of insecurity, then banditry (8.6 percent; 23/266) and cattle rustling (7.1 percent; 19/266). Communal clash (1.9 percent; 5/266) was considered a minor form of insecurity recorded, as shown in Table 4. Also, 66.3 percent of the respondent are extremely poor, 28.7 percent are moderately poor, and 5.0 are not poor, as shown in Table 5.

Table 2: The Percentage Effect of Insecurity in the Igabi LGA

Does insecurity affect food production?	How insecurity affects food production			Total
	Food shortage	Food wastage	High food prices	
Yes	156	4	80	240 (96.4)
No	2	0	7	9 (3.6)
Total	158 (63.5)	4 (1.6)	87 (34.1)	249

($\chi^2 (2) = 7.556$; $p = 0.023$)

Source: Researcher's Field Work 2021

Table 3: The Percentage Number of Years Farmers Could Not Access their Farms in Igabi LGA as a Result of Insecurity

Last visit (years)	Nature of insecurity					Total (percent)
	Kidnapping	Banditry	Cattle rustling	Communal clash	Others	
0-1	77	17	10	3	2	109(41.4)
2-3	122	6	8	1	6	141(53.6)
4-5	10	1	1	1	0	13 (5.0)
Total	208 (79.1)	23 (8.7)	19 (7.2)	5 (1.9)	8 (3.0)	263

($p < 0.001$)

Source: Researcher's Field Work 2021

Table 4: The Percentage Nature of Insecurity in Igabi LGA

Reason	Nature of insecurity					Total (percent)
	Kidnapping	Banditry	Cattle rustling	Communal clash	Others	
Insecurity	208	21	8	2	7	142 (45.2)
Lack of interest	0	0	2.3	0	0	148 (47.7)
Lack of capital	2	2	1	3	0	15 (4.8)
Others	1	0	10	0	1	5 (1.6)
Total	211 (79.3)	23 (8.6)	19 (7.1)	5 (1.9)	8 (3.0)	266

($\chi^2 (12) = 132.367$; $p < 0.001$)

Source: Researcher's Field Work 2021

Table 5: The Percentage Condition of the Farmers in Igabi LGA after Lack of Access to their Farms

Last visit (years)	Situation of farmers			Total (percent)
	Extremely poor (percent)	Moderately poor (percent)	Not poor (percent)	
0-1	73	58	6	137
2-3	121	22	4	147
4-5	5	6	3	14
>6	2	1	2	5
Total	201 (66.3)	87 (28.7)	15 (5.0)	303

($\chi^2 (8) = 57.858$; $p < 0.001$)

Source: Researcher's Field Work 2021

Conclusion

Over the past decade, insecurity has been the central topic of discussion in the country as it disrupts many economic activities, including farming. Controversies exist in the literature on the connection between insecurity and agriculture. This research looks at the root cause of insecurity and its impact on food production in Igabi LGA, Kaduna State, which is the major LGA that links other LGAs affected by insecurity. The study adopted descriptive statistics and chi-square analysis to analyze the data generated from the study area. Findings from this research concluded that insecurity from kidnapping, banditry, cattle rustling and communal clashes accounted for 97 percent of the total responses, while 3 percent of responses are in favour of undisclosed reasons affecting the study area, thus leading to food shortage, food wastage, and high prices of food commodities between 63.5 percent, 1.6 percent, and 34.1 percent, respectively. Therefore, this affects food production in the state. Also, 66.3 percent of the farmers are in extreme poverty, 28.7 percent are moderately poor, and 5.0 percent are not poor, thus indicating a strong link between insecurity and poverty among the selected food producing households in the State.

Recommendations

Based on the findings from this research, the following recommendations were made:

1. There should be a collaboration between the state ministry of internal security and home affairs with the State Ministry for Local Government and Chieftaincy Affairs to have a comprehensive register in all the 23 LGAs to take note of the permanent residents and visitors for easy identification of criminals.
2. Local vigilantes should be reinforced and supported by government security agencies for routine patrol across the LGAs.
3. Artificial intelligence should be encouraged by adopting modern farming techniques in a confined place.
4. Innovation of modern technology should be employed to support farmers with the aid of extension officers.

References

Babatunde, Omotesho and Sholotan (2007). Socio-economic characteristics and food security status of farming households in Kwara State, North central Nigeria. CADP: Commercial Agricultural Development Project 2014.

Downie, R. (2017): Growing the agriculture sector in Nigeria: A Report of the CSIS Global Food Security Project. Retrieved from: <https://csisprod.s3.amazonaws.com/>

Egege, J. & Cooke, J. (2016): Tracing the roots of Nigeria's agricultural decline. Center for Strategic and International Studies (CSIS). Retrieved from: <https://csisprod.s3.amazonaws.com/>

FMARD (2011). Agricultural transformation agenda: We will grow Nigeria's agricultural sector Retrieved from: <http://unaab.edu.ng/wpcontent/uploads/>

Igabi (2020a). Available online at <https://zemda.org.ng/wp/local-governments/Igabi/>, [Accessed 13/03/2020].

Ishola, B. F and Olukotun, O. A. (2019). Adoption of Improved Management Technologies among Poultry Farmers in Igabi Local Government Area, Kaduna State, Nigeria. International Journal of Research and Scientific Innovation (IJRSI), 6(7): 176-181.

KDBS: Kaduna State Bureau of Statistics 2015.

KDBS: Kaduna State Bureau of Statistics 2017, Farming family's type.

KDGHS: Kaduna State General Household Survey 2015.

Liverpool-Tasie, L. S., Kuku, O. and Ajibola, A. (2011). A Review of Literature on Agricultural Productivity, Social Capital and Food Security in Nigeria. NSSP working paper No. 21. IFPRI. Abuja.

National Bureau of Statistics (2010) Gross Domestic Product for Nigeria (Expenditure & Income) NBS, Plot 762, Independence Avenue, Central Business District, Abuja.

NPC (2006): National Population Commission, Federal Office of Statistics. Census 2006.

Ojogho, O. (2011). Determinants of food insecurity among arable farmers in Edo State, Nigeria.

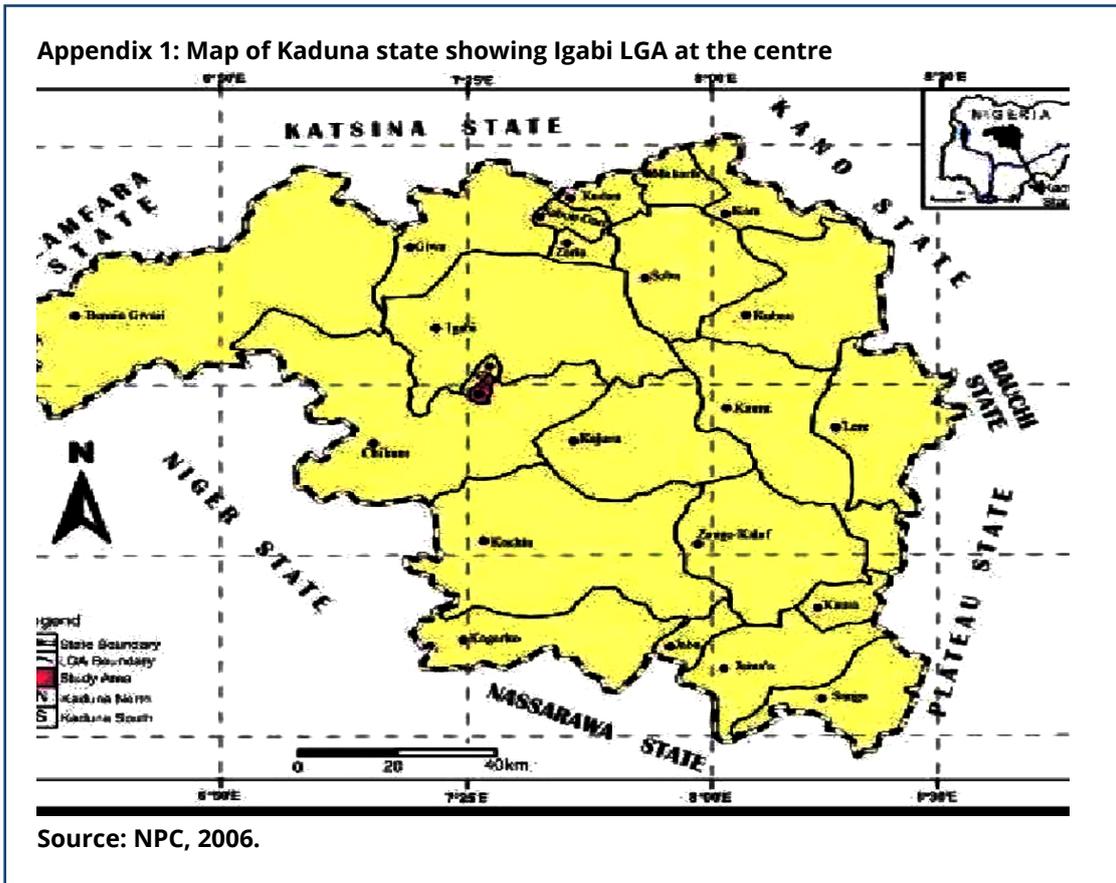
Overview of President Yar'adua's Seven Point Agenda: Issues and Policy Challenge, February, 2009.

Popoola, N. (2018, December 3). Nigeria cut food imports, saved \$21bn in 34 months – Emefiele. The Punch. Retrieved from: <https://punchng.com/>

Turhan, S.N. (2020). Karl Pearson's chi-square tests. Educational Research Review, 15(9): 575-580.

Yamane, Taro (1967). Statistics: An Introductory Analysis, 2nd Ed., New York: Harper and Row.

Appendix 1: Map of Kaduna state showing Igabi LGA at the centre

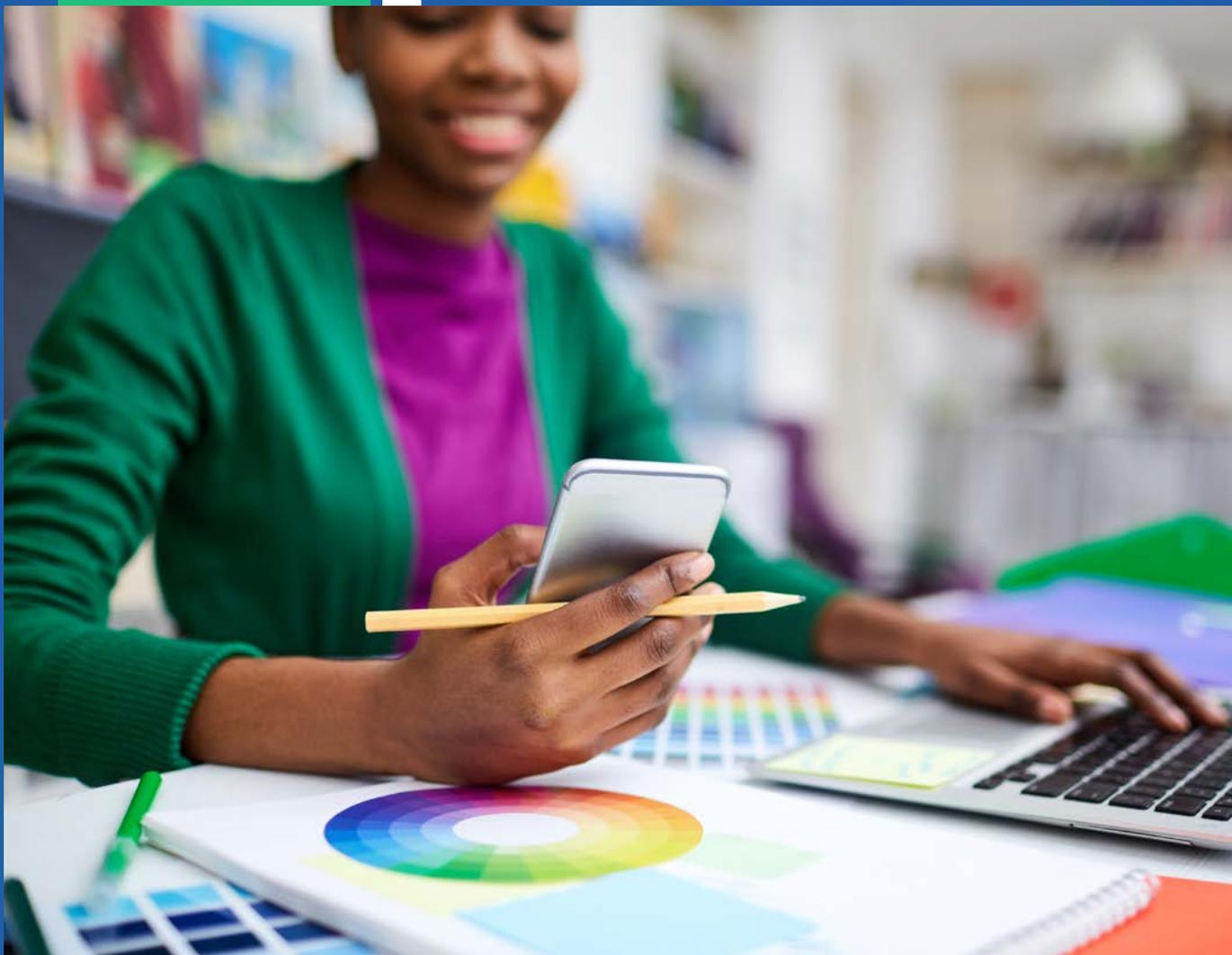


Source: NPC, 2006.

A PRAGMATIC APPROACH TO SOLVING NIGERIA'S UNEMPLOYMENT PROBLEM WITH EMPHASIS ON SMEs

Oluwafemi Ajongolo

Obafemi Awolowo University, Osun State, Nigeria



Abstract

The unemployment problem has continually hampered the development of the Nigerian nation and is fast becoming into an unending issue. It has fuelled unrest, increased crime rates, led to a lower standard of living amongst the populace, fast-tracked brain drain, reduced potential government revenue from taxes, and increased the distrust between the government and the Nigerian people, especially its teeming youth population. Against this backdrop, successive government administrations have attempted to solve the malaise but to no avail. This paper aims to show the flaw in the government's approach, pinpoint the actual causes of unemployment, and provide solutions to help attenuate factors responsible for unemployment in Nigeria.

Introduction

The fact that unemployment is a prevalent problem in Nigeria is neither one that demands particular enquiry before it is noticed, nor is a team of soothsayers required to show how devastating such a problem is to Nigeria. Interestingly, unemployment plays the dual role of being both a symptom and a causative factor of Nigeria's economic woes. In highlighting how precarious the Nigerian unemployment problem is, it is important to stress that Nigeria currently ranks second on the global unemployment list of countries with the highest unemployment rates (Olurounbi, 2021). The current unemployment rate is 33.3 percent (NBS, 2022).

In recognition of the woes precipitated by unemployment in the society, the current administration has been – or at least appears to be – making efforts to curb the growth and, at the same time, reduce the rate of unemployment in the country. Despite that, statistical trends continually show that whatever the government is, or says it is doing, is having no desirable effect on the problem of unemployment. In fact, the problem has persisted; it is continually increasing. This undesirable status quo then begs the question, why? That is why the continued growth in the unemployment rate when the government seems to be making efforts against it. The importance of giving a proper answer to this question is such that it helps create a solid foundation upon which viable solutions can be built.

Current Approach and Flaws

An overview of the government's approach to solving the problem of unemployment shows that the government is heavily reliant on direct involvement in creating jobs for the masses; that is, the government tries to reduce unemployment mainly by creating more openings in its ministries and parastatals and absorbing more people into the civil service. Unfortunately, this approach is only plausible on the surface. An in-depth analysis of the approach in tandem with Nigeria's economic realities and civil service structure lays claims to almost any argument that can be brought forth to support it. This assertion is premised on the following:

- **Economic Realities:** Nigeria's economy has constantly fallen in and out of recessions in the past five years (Tijani, 2020). Aside from this, the country's public debt profile is on a consistent rise, while inflation rate averaged 16 percent in the first four months of 2022 (NBS, 2022). With such problems already being encountered, the government would be placing itself under an extra back-breaking burden by directly creating jobs.

- **Recurrent Expenditure:** It is asserted that the Nigerian government is the largest employer of labour at all levels (Shimuawa, 2020). Unsurprisingly, 50.6 percent of total budget expenditure and 88.5 percent of revenue in the last decade have been allocated to recurrent expenditure, respectively (Nairametrics, 2021). Additionally, unceasing complaints are made about the poor working conditions and inadequate emoluments of civil servants (Magbadelo, 2016). Thus, the Nigerian government should prioritise better working conditions rather than directly creating jobs, which will only promote an apathetic civil service if insisted upon, without adjusting to the present status quo.
- **Demography:** Here, a juxtaposition of Nigeria's population growth alongside the government's job creation rate will elucidate the need for a switch of approach on the government's side regarding job creation. Currently, Nigeria's population is slightly over 200 million and is expected to cross the 400 million threshold by 2050 (Varella, 2021). On the other hand, the current administration creates just about 20,000 jobs annually (Elumoye, 2021), which is far short of the Five million annually over a decade recommended by IMF (Udegbonam, 2021). This narrative implies that the problem of unemployment is continuously worsening.
- **Civil Service:** Undoubtedly, Nigeria's civil service is riddled with plenty of problems that make any attempt at expansion a problematic venture. While it is realistically impossible to have perfect civil service, two significant factors in the civil service make the government approach an otiose effort at tackling unemployment.
 - (a) **Duplication of functions:** The Nigerian civil service ostensibly possesses the undesirable element of duplicating functions, with many civil servants occupying positions in which they are redundant with no clear-cut duty or responsibility (Eme & Andrew, 2013). This, alongside its perceived inefficiency, makes its expansion to create job opportunities a step in the wrong direction.
 - (b) **Ghost Workers:** The issue of ghost workers and the Nigerian civil service at all levels of government can be likened to Siamese twins that have proven inseparable despite numerous attempts at separating them. Expectedly, the continual presence of ghost workers within the civil service costs the government a huge amount of money. For instance, between September 2013 and May 2015, the Federal government lost N220 billion to 103,000 ghost workers (Omilusi, 2019). In the face of this persistent problem, expanding the civil service would only make it more susceptible to the penetration of more ghost workers, resulting in a loss at both ends.

The Problem

Ultimately, it should be realised that in trying to solve the unemployment problem in Nigeria, the government has failed to tackle the major problem. Hence, the next question would be: What exactly is the problem? Truth must be told that pinpointing the root cause of almost any situation in Nigeria could be cumbersome, especially because of the vicissitudes of challenges plaguing the country. Regardless, the unemployment problem in Nigeria can be traced to

one major factor encompassing many others: EASE OF DOING BUSINESS. Where business activities are constantly stifled due to particular factors which this treatise shall subsequently examine, it becomes challenging for SMEs to thrive. When SMEs do not thrive, job creation becomes difficult. To put this into perspective, formal SMEs contribute about 40 percent of GDP in emerging economies, while SMEs account for over 50 percent of global employment (World Bank, 2020).

Strictly speaking, ease of doing business refers to a World Bank Index that considers specific parameters – essentially regulatory and procedural – in ranking how easy it is to conduct business activities in a territory. However, this report goes beyond examining bottlenecks cum regulatory policies and also considers other vital realities that either enhance or discourage business activities, to give a clearer picture of the Nigerian situation. Although indexes on the ease of doing business have been showing a recent, continual, and maybe impressive climb for Nigeria (Salaudeen, 2019), quotidian realities faced by business owners shows that the index might be unreliable, especially as it fails to consider certain influential factors that could worsen the business environment. One such factor is infrastructural deficit.

Infrastructural Deficit: The spate of the infrastructural deficit in Nigeria is such that infrastructure is either not enough for the populace or is in a bad or unusable state. Under conditions like these, business expenditure essentially becomes unbearable (Ukanwah, 2018), stymying the growth potential of SMEs, as they would have to either find personal alternatives in the absence of such infrastructure or incur losses based on the absence or poor state of infrastructure. In solving unemployment and promoting SME growth, two primary forms of infrastructure are pretty important: electricity and a good transport network.

- (a) **Electricity:** The Nigerian electricity woe can be briefly described in three phases; epileptic power supply, insufficient generation capacity, and perpetual wastage of generated power. As it stands, Nigeria generates over 12,000Mw of electricity but transmits far less (Enebe et al., 2017). In contrast, South Africa – one of Africa's most industrialised economies, generates over 250,000Mw of electricity (Anderson & Norbrook, 2017), despite having a population of almost only a quarter of Nigeria's (Worldometer, 2022). More disheartening is that despite Nigeria's insufficient power generation, it still wastes over 40,000Mw of electricity annually (Jeremiah, 2019). The epileptic power situation contributes to unemployment (Anyawu & Duru, 2020), adversely impacting businesses and discouraging entrepreneurs (Alakija, 2020).
- (b) **Transportation:** Asides from being a basic form of infrastructure that should be in place, a country with the agricultural potential of Nigeria should invest in standard transportation facilities like better roads and railways to facilitate quicker distribution of agricultural produce within the country, reduce the cost of wastage that comes with perishables getting spoilt in transit, and positively affect the unemployment rate, and general economic development (Agbigbe, 2016). This current status quo discourages entrepreneurs, especially in the agricultural sector.

Policy Recommendation

1. **Public-Private Partnership (PPP):** in light of the overwhelming amount of work that needs to be carried out for Nigeria to catch up on its infrastructural deficit, it is proposed that the government adopts a Public-Private Partnership. The effectiveness of this approach can be easily seen in its adoption by Lagos State. It would come in handy in providing funding for cost-intensive capital projects, especially in the transportation sector (Babatunde, 2020).
2. **Cluster Hubs for SMEs:** in recognition of the time that may be needed to cut back Nigeria's infrastructural deficit, a proposed short-term solution would be Clustered SME hubs. This means a shared working environment built by the government to provide needed facilities like workspace and electricity to SME owners. Apart from reducing business costs, this would help the government monitor and enforce the product quality of such SMEs and, where necessary, create a platform for the branding, and exportation of products with international demand. Other advantages to this idea would be; a more efficient tax monitoring process for SMEs and the encouragement of diverse start-ups with an opportunity for connections among such entrepreneurs. For instance, a logistic firm operating in such a hub could partner with several businesses requiring logistic services, creating a self-sustaining economic network. These Cluster Hubs can be established on a local government basis. That is one for each local government. It is noteworthy that this is different from the shared workspaces, which are gaining traction in Nigeria, as it offers government leverage in terms of access to infrastructure and export. Besides, many shared workspaces in Nigeria today only cater for the tech sector – a feature which largely ignores the reality of most Nigerian SMEs operating outside of that sector.
3. **Transmission Prioritisation:** To remedy Nigeria's power supply nightmare, fixing its transmission capacity should be prioritised. This is because, even if Nigeria's power generation increases, failure to deal with the transmission problem would only lead to an increase in wasted energy. With electricity problems fixed, Nigeria would save huge costs (World Bank, 2020). Also, business costs would reduce noticeably, incentivising would-be entrepreneurs and start-up founders to create businesses that would create jobs while also reducing the occurrence of companies relocating due to unstable power supply.
4. **Made-in-Nigeria Policy:** Nigeria's trade balance could be favourably adjusted if the importation of certain unnecessary materials is reduced. Indigenous businesses should be encouraged by tax breaks, grants, and increasing duties on products, for which demand can be locally satisfied. The potential effectiveness of a 'Made in Nigeria' Policy can be gleaned from China's adoption of the same policy in 2015, a step which is transforming China into an economic powerhouse (Lee, 2021). Perhaps the government can lead the way by ensuring all government parastatals use Made-in-Nigeria vehicles.

Conclusion

In the face of lingering unemployment woes in Nigeria, immediate remedial steps have to be taken to arrest the negative trends. One of such measures is that the government needs to shift its focus from the direct creation of jobs to creating a sustainable economic climate that encourages local businesses and foreign investments. By doing this, four things are achieved:

- Unemployment rates would experience a decline.
- The fiscal burden on the government would be reduced.
- Nigeria would be set on the path to becoming a predominantly producing economy.
- National economic prosperity would be set in motion.

References

Agbigbe A. W. (2016) The Impact of Transportation Infrastructure on Nigeria's Economic Development. Walden University Scholar works.

Alakija F. (2020). A speech delivered during the first graduation ceremony of the Skills Acquisition Centre, Yaba College of Technology.

Anderson M. and Norbrook N. (2017) Regional Power House. Africa Report, May 2017. Pp. 74.

Anyawu O. S. and Duru I. U (2020) Youth Unemployment in Nigeria: Implications for Development. P. 11 from Researchgate.

Babatunde, I.A. (2020) The Policy Institutional Approach to Transport Failure in Nigeria. Open Access Library Journal, 7: e5996. Retrieved from: <https://doi.org/10.4236/oalib.110599>

Elumoye D. (2021) Buhari Unveils Job Creation Initiative, to Employ 20,000 Graduates Annually. This Day. Retrieved from: <https://www.thisdaylive.com/index.php/>

Eme O. I and Ven. Andrew O. (2013) Civil Service and Cost of Governance in Nigeria. International Journal of Accounting Research, 1(2): 22-48.

Enebe et al. (2017) Electric Power Generation in Nigeria: Status, Challenges and Solution. Journal of Applied Sciences & Environmental Sustainability, 3(8): 166-174.

Jeremiah K. (2019) Nigeria wastes 42,160MW as transmission, distribution challenges linger. The Guardian 15 Feb 2021. Retrieved from: <https://guardian.ng/business-services/>

Lee Z. (2021) Made in China 2025 Aims to Reduce Poverty. The Borgen Project from <https://borgenproject.org/made-in-china-2025/>

Magbadelo J. O. (2016) Reforming Nigeria's Federal Civil Service: Problems and Prospects. India Quarterly 72(1): 75-92.

Nairametrics (2021) Nigeria Spends N29 trillion On Recurrent (non-debt) Expenditure in Last 10 Years. Retrieved from: <https://www.google.com/amp/>

Nigerian Bureau of Statistics (2022). Monthly Inflation & Unemployment Reports. Retrieved from: <https://www.nigerianstat.gov.ng/>

Olurounbi R. (2021). Nigeria Unemployment Rate Rises to 33%, Second Highest on Global List. Retrieved from: <https://www.bloomberg.com/news/articles/>

Omilusi M. (2019) The Plague of 'Ghost Workers': Interrogating Payroll Fraud and Executive-Bureaucratic Conspiracy in Nigeria. *Journal of Policy and Development Studies*, 12(1): 81-91.

Salaudeen A. (2019) Nigeria improves in World Bank ease of doing business ranking, but is it easier to do business there? CNN.COM Retrieved from: <https://www.google.com/amp/>

Shimuawa D. (2020). Appraisal of Factors Responsible for "Ghost Workers" Syndrome in Public Service and its Impact on the Performance of the Sector in Nigeria. *International Journal of Scientific Research in Technology, Applied Sciences & Health Studies*, 4(1). Retrieved from: <http://internationalpolicybrief.org/images/2020/JULY/IJSRTASHS/ARTICLE7.pdf>

Tijani M. (2020). It's Official: Nigeria slides into worst recession in 33 years. *The Cable*. Retrieved from: <https://www.thecable.ng/>

Udegbonam O. (2021) Nigeria Needs 5 Million Jobs Annually for 10 Years to Close Gap — IMF. *Premium Times*. Retrieved from: <https://www.premiumtimesng.com/>

Ukanwah (2018). Nigeria and The Menace of Infrastructure Deficit: Leveraging Public-Private Partnership Under a Crunch Financial Reality. Retrieved from: <https://www.researchgate.net/>

Varella S. (2021) Forecasted population in Nigeria 2025-2050 Statista. Retrieved from: <https://www.statista.com/statistics/1122955/forecasted-population-in-nigeria/>

World Bank (2020) Nigeria to Keep the Lights on and Power its Economy. Retrieved from: <https://www.worldbank.org/en/news/>

World Bank (2022) Small and Medium Enterprises (SMEs) Finance. Retrieved from: <https://www.worldbank.org/en/topic/sme/finance>

Worldometer (2022). South Africa Population. Retrieved from: <https://www.worldometers.info/world-population/south-africa-population/>

DISTRIBUTED ENERGY RESOURCES IN NIGERIA: ANALYZING THE AMENDMENT TO THE CONSTITUTION OF THE FEDERAL REPUBLIC OF NIGERIA (FIFTH ALTERATION) BILL, NO.33, 2022

Akinbobola Olukayode Olugbemi

Faculty of Law (Research LLM in Natural Resources, Energy and
Environmental Law), University of Calgary



Abstract

This paper analyses the electric power situation in Nigeria, given the structure after the unbundling of the Nigerian Electricity Supply Industry following the reform and privatization by the passing of the Electric Power Sector Reform Act. As a solution to Nigeria's electricity issues, the paper considers the introduction of distributed energy resources. Still, it recognizes the limitation to this due to the restriction in Items 13 and 14 of the Second Schedule to the Constitution of the Federal Republic of Nigeria 1999 (as amended). Following the amendment of these items by Bill No.33 2022, the paper proposes that state governments begin to consider introducing distributed energy resources to improve their energy supply and economic activities.

Introduction

There is no doubt that there is a significant economic correlation between electricity generation and demand and the economic growth of a nation. Reports are linking the world's biggest economies to their electricity generation figures. Wu states that "China is estimated to become the world's largest economy in terms of gross domestic product (GDP), considering purchasing power parity (PPP), with a total output value of \$43 trillion, while the United States and India are projected to be the second and third-largest economies, with economies of \$26trillion and \$24 trillion respectively, by 2035." (Wu et al., 2019). Ou et al. (2016) also states that "electricity is a driving force of economic development...(and) the shortage of power supply will seriously affect the healthy development of the economy and can cause large economic losses".

Thus, to improve Nigeria's economic prospects, there is a need to improve Nigeria's electricity fortunes. Nigeria has an installed capacity of 12,522MW and less actual generation capacity (ITA, 2021), thereby occasioning inadequate power supply. The effect of an inadequate energy supply in Nigeria is that businesses do not have electricity to power their operations. With the lack of energy comes the need to generate electricity privately, either through power generating sets or other alternative and renewable means. This comes at an additional cost to the entities and increases the operational expense of the entity, making this unsustainable. Thus, there is a fundamental problem with Nigeria's electricity supply, not meeting up with the demand of Nigerians. On the other hand, Nigeria's electricity industry is very centralized, as highlighted later in this paper. At present, the Nigerian Electricity Regulatory Commission ("NERC") is the supervising regulatory agency over electricity activities in Nigeria, with specialized agencies, bodies, and companies responsible for the different layers of the industry. The NESI licenses to carry out activities are obtained from the NERC.

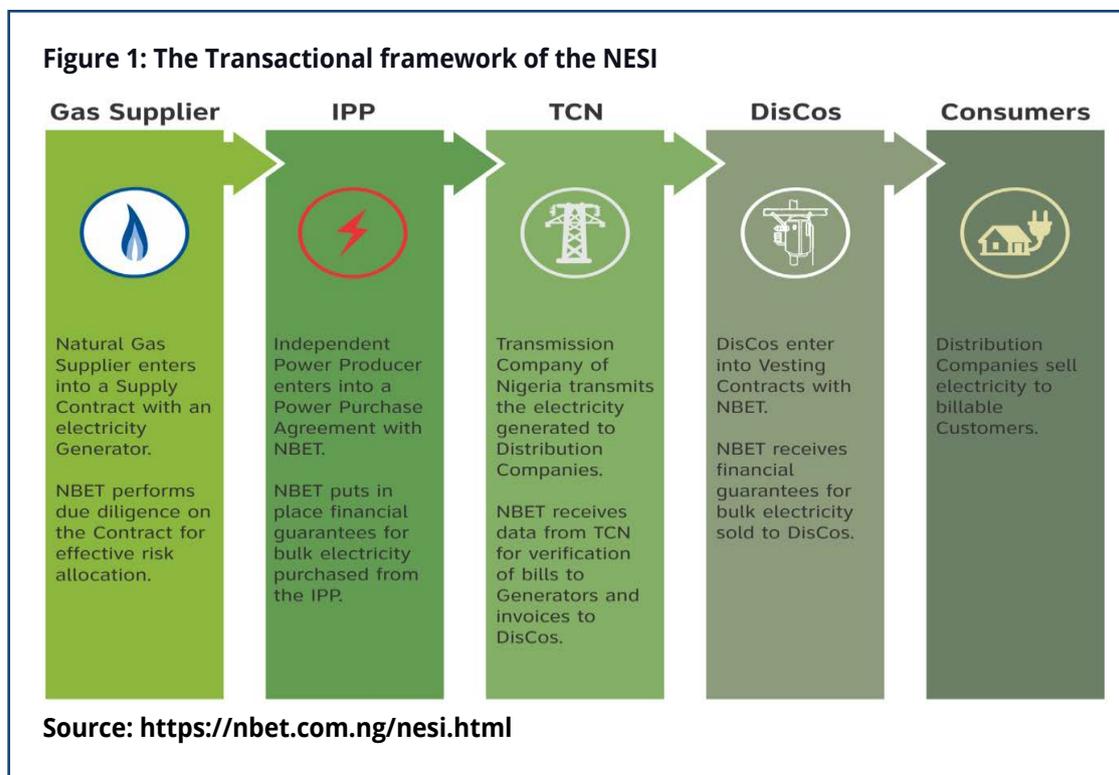
Given this over-centralization, this paper poses the question of whether the centralization of the Nigerian Electricity Supply Industry ("NESI") is effective, given Nigeria's complex needs and whether decentralization, through the use of Distributed Energy Resources ("DER"), should be adopted. If DER were to be adopted, what are the current limitations, and how will the new amendment to Item 13 and 14 of the Second Schedule to the Constitution of the Federal Republic of Nigeria (Fifth Alteration Act) change the status quo? To change Nigeria's electricity situation and answer the questions posed above, this paper posits that Nigeria

must decentralize the NESI and proposes the introduction of DER into Nigeria's electricity mix. This proposal has been given hope by the recent passing, by the National Assembly, of Bill No.33 amending the Constitution of the Federal Republic of Nigeria, 1999 ("CFRN"). In the following sections, this paper will conduct a brief analysis of the current regulatory framework, the proposed framework given the recent amendment and suggest actions state governments should be taking.

Nigeria's current electricity mix and the Constitution of the Federal Republic of Nigeria

The Nigerian Electricity Supply Industry ("NESI") presently consists primarily of three key players, with other supporting players, though equally important in their right. The generation companies generate electricity through the country's electricity generation points. Following the passing of the Electric Power Sector Reform Act ("Power Sector Act"), the government sold energy-generating plants to private entities (NERC, 2022).

The transmission infrastructure was placed under a Management Contract and subsequently terminated. The Transmission Company of Nigeria currently handles transmission services in Nigeria. It is a public company owned by the federal government and has a Transmission License and a System Operator License. The TCN transmits electricity received from generation companies (inclusive of IPPS and NIPP) to the Distribution Companies while supplying the Nigerian Bulk Electricity Trading Company with the data of electricity transmitted. The distribution utility of PHCN was sold to distribution companies operating within the country and distributing electricity to consumers residing within their allocated areas (see Figure 1).



Closely tied to the transaction structure of the NESI, as depicted in the image above, is the regulatory framework applicable to the industry. This structure includes the NERC, a body created under the Power Sector Act, with the mandate to oversee the administration of the Power Sector Act, create an efficient industry, create a market structure, and issue licenses. With the understanding of the transaction structure of the NESI, there comes the need to understand the constitutional provision relating to the NESI and how it impacts the ability of State governments and critical players in developing the NESI.

Constitutional Framework for NESI under the CFRN, as amended

Part II of the Second Schedule of the CFRN lists electricity as one of the matters in the concurrent legislative list. Item 13 of Part II of the Second Schedule provides that "the National Assembly may make laws regarding the generation and transmission of electricity in or to any part of the Federation and from one State to another State, as well as the regulation of any right, authority to use or supply of electrical energy;" while Item 14, line "A" provides for State House of Assembly to make laws relating to electricity and establishment in the state of electric power stations, but subsequently limits the generation, transmission and distribution of electricity for States to "areas not covered by a national grid within that State". As provided under the Power Sector Act, areas not covered by the national grid are to be captured and provided for by the Rural Electrification Agency ("REA"). The REA is a body set up under the Power Sector Act to, among other things, work towards the development of renewable energy sources and research to provide electricity to areas not covered by the national grid.

A critical look at this provision presents the contradictory nature of the Power Sector Act and the Constitution. The REA has the mandate to develop off-grid solutions to close the electricity gap and actively work towards bringing unserved areas into the main grid. Still, the REA remains a federal government agency, responsible to the Minister of Power. Seeing that the unserved areas are typically rural areas within states of the federation, it is more appropriate for this power to be vested in the state governments instead.

This limitation of the state's powers to generate, transmit or distribute electricity constitutes a fundamental problem in the NESI value chain. Apart from the national transmission infrastructure being depleted and requiring critical updates, some contracts have already been awarded and significantly passed the expected completion date, but the projects are below the completion target. (Transmission Company of Nigeria, 2022). This critical decay of the national transmission grid has occasioned more than 200 national grid collapses, occasioning severe blackouts in the country (Emodi & Diemuodeke, 2022) and leading to a reduction in the economic power of the country.

Policy Recommendation

This paper proposes the introduction of Distributed Energy Resources ("DER") through a decentralized energy system. A decentralized energy system generally is one where energy production facilities are closer to the site of energy consumption and allows for more use of resources, particularly renewable energy. (UNESCAP, 2012) DERs are "small-scale electricity supply or demand resources that are interconnected to the electric grid. They are power generation resources and are usually located close to load centres and can be used individually

or in aggregate to provide value to the grid" (Cummins Inc., 2021). They are electricity-producing resources that are connectable to local distribution systems and can be used to supplement the power supply in an area through renewable means. For DERs to work, renewable energy systems must be in place and popularized. More importantly, energy resources closer to the deployment areas must be encouraged. Thus, in a country like Nigeria, attention must be shifted to various resources in the different regions for energy generation, transmission, and distribution. For instance, Northern Nigeria is humid and windy and can generate electricity through solar and onshore wind energy, with a huge capacity to generate and store the energy generated within that state, transmit and distribute the needed resources to homes within the state and excess energy generated transmitted to the national grid. In the Southern part of Nigeria, electricity may continue to be generated through hydrothermal sources while adding offshore wind energy to the energy mix.

Constitution of the Federal Republic of Nigeria (Fifth Alteration) Bill, No.33, 2022

As earlier referenced, the Second Schedule to the CFRN creates a legal dilemma wherein the state's power to generate, transmit and distribute is limited to areas not covered by the national grid. This limitation is of such fundamental nature wherein states effectively cannot take action to provide remedies to the inadequacies of power generation within the control of the federal government. Even though the Power Sector Act created the Rural Electrification Agency ("REA") as a body saddled with the responsibility to use public and private sector participation to ensure equitable electricity access, particularly to rural areas not covered by the national grid, the REA is essentially a federal government agency and is not within the control of the state governments. Thus, state governments practically do not have control over electrification projects in their states.

With the amendment of Items 13 and 14 of the Second Schedule of the CFRN in Bill No.33 2022, by removing "areas covered by the national grid", there may have been the removal of the limitation on state governments' powers to legislate on generation, transmission and distribution within their states. While it is early to rejoice as the Nigerian constitutional amendment process requires this amendment to be passed by two-thirds of the State Houses of Assembly, there is hope that if passed into law, state governments can take better actions. Thus, this brief is to help set the course of action and a policy call for state governments to help direct where attention should be turned, on being given the powers to change the economic fortunes of their states through distributed energy resources.

In addition to the above, distributed energy resources would create economic opportunities within states that did not previously have sufficient economic activities. It is expected that renewable energy companies involved in distributed energy resources within the state would set up entities within each state to generate, transmit, distribute, store and wheel excess energy to the national grid, thereby boosting economic activities within each state.

Conclusion

Nigeria's electricity challenges are not insurmountable; even though current legislations may present it as being difficult, it is possible to change the course of Nigeria's history, given its size. While distributed energy resources can be executed and monitored in addition to other

technologies, there must be increased political pressure to ensure that state parliaments approve this amendment. In contrast, state governments must consider various options to improve their electricity output once this power is vested in their parliaments. In addition, distributed energy resources will not solve all the issues that plague the NESI; it will reduce the pressure on the national grid, decentralize energy generation, and cause each state to work towards energy sufficiency to improve states' economic fortunes.

References

ITA: International Trade Administration (2021). Nigeria—Electricity and Power Systems. Retrieved from: <https://www.trade.gov/country-commercial-guides/nigeria-electricity-and-power-systems>

Emodi, N. V., & Diemuodeke, O. E. (2022). Why Nigeria's electricity grid collapses and how to shore it up. *The Conversation*. Retrieved from: <http://theconversation.com/why-nigerias-electricity-grid-collapses-and-how-to-shore-it-up-179705>

NERC (2022). Electricity Generation. Retrieved from: <https://nerc.gov.ng/index.php/home/nesi/403-generation#>

Ou, P., Huang, R., & Yao, X. (2016). Economic Impacts of Power Shortage. *Sustainability*, 8(7). Retrieved from: <https://doi.org/10.3390/su8070687>

UNESCAP: United Nations Economic and Social Commission for Asia and the Pacific (2012). Low Carbon Green Growth Roadmap for Asia and the Pacific. Retrieved from: https://www.academia.edu/3445440/Low_Carbon_Green_Growth_Roadmap_for_Asia_and_the_Pacific_UN_ESCAP

Transmission Company of Nigeria. (2022). Retrieved from: https://www.tcn.org.ng/portfolio_3.php#

Cummins Inc. (2021). What are distributed energy resources and how do they work? Retrieved from: <https://www.cummins.com/news/2021/11/04/what-are-distributed-energy-resources-and-how-do-they-work>

Wu, C.-F., Wang, C.-M., Chang, T., & Yuan, C.-C. (2019). The nexus of electricity and economic growth in major economies: The United States-India-China triangle. *Energy*, 188, 116006. <https://doi.org/10.1016/j.energy.2019.116006>



YOUR ONE-STOP SPOT FOR FINANCIAL PROGRESS

Get financial solutions for all phases of life from seasoned professionals with diverse expertise. Make the progressive move today.



Stanbic IBTC *IT CAN BE..*

A member of
Standard Bank Group

A PRIMER ON A-PLATONIC POLICIES FOR DEEPENING NIGERIA'S AGRICULTURE

Gbadebo Odularu, Ph.D.

Senior Fellow, NESG Non-Residential Fellowship Programme & Founder,
No Hunger Initiatives, Abuja, Nigeria.



Abstract

Before the ongoing Russia-Ukraine war, which compounds Nigeria's food security problems, climate change and the SARS-CoV-2 pandemic (COVID-19) drove the criticality of agri-food, trade, and public health systems in reshaping Nigeria's sustainable development agenda. One of Nigeria's challenges is how to deepen agriculture more systemically towards realising sustainable development than it has done over the last six decades. In response to this question, this article presents some implementable strategies for deepening agri-food competitiveness within the scope of policy a-platonities.

Introduction and Rationale

Agriculture plays a critical role in food and nutrition security (FNS), poverty allocation, improved livelihoods, and inclusive development. However, mere agricultural reforms are not sufficient conditions for agriculture to contribute to sustainable development. What matters is the deepening of agricultural transformation towards much higher value activities with associated positive inter-sectoral spill-over effects on the entire economy. For example, the Nigerian Economic Summit Group (NESG) 2021 annual report laments the abysmally low level of agritech adoption, such that out of Nigeria's 92 million hectares of land, it barely cultivates 34 million at largely sub-optimal levels. Thus, agricultural deepening is required for Nigeria to feed itself sufficiently⁶.

Furthermore, deepening agricultural competitiveness is essential for sustainable development because agriculture is a significant sector, and development in that sector imposes a high weight on aggregate development, justifying public investment in agriculture. However, like most post-independence African countries, Nigeria has been making frantic efforts to achieve giant strides in its sustainable development agenda over the past six decades, all to no avail. In view of this, it is reasonable to suspect that the quality of Nigeria's agricultural policies may represent one of the significant contributory factors to the feeble agricultural transformation in the country. Thus, one of Nigeria's challenges is how to deepen agriculture more systemically towards realising sustainable development than it has done over the last six decades. Within this context, this article seeks to emphasise the need for a-Platonifying Nigeria's agricultural deepening efforts, strategies, policies, and programmes.

What is Platonicity?

Two levels of Platonic intervention are possible in an agricultural deepening space. First, and according to Spink (2019), a Platonic confirmation could be explained within the context of confirmation error or confirmatory bias. In this vein, platonic confirmation occurs when an individual, business, or government searches for and identifies instances that confirm their beliefs, constructions, or models. For example, in a food fraud prevention case study, Platonicity occurs when we rely heavily on a published data set to be representative of all vulnerabilities.

Second is the manifestation of Platonic fallacy in the study of uncertainty, thereby making policymakers invoke policy successes based on a linearised narrow world of policymaking. This second type of Platonic intervention is observed in food fraud prevention cases when a

⁶NESG, 2020. 'Building Partnerships for Resilience', 26th Nigerian Economic Summit.

food safety scientist applies statistical methods to an incomplete or inappropriate data set. A good example, in this case, is that most complex statistical analyses are usually based on the underlying assumptions of 5 to 7 percent of world trade (Spink & Levente Fejes, 2012).

In addition, Taleb (2008) believes that most people, including policymakers, ignore this incompleteness and uncertainties since policymakers are naturally comfortable with stable agri-food systems rather than an unstructured and chaotic system. This blindness to uncertain or underdeveloped components of a typical agri-food system is referred to as the Platonic fallacy, resulting in an illusion of understanding and overestimating actual knowledge (Taleb, 2008). In other words, agri-food policies should be systemically designed beyond a Platonic understanding where conventional economics is built on equilibrium theory because Schumpeter emphasised that the key features of economies were change and discontinuity, not equilibrium. As Minsky pointed out, stability leads to instability, not rest (Taleb, 2001, Inichen et al., 2010). An agri-food sector's tendency towards Platonicity hinges on the policy processes' propensity to attend to the manifest and the superficial, making the policy outcomes manifest not in what is designed or hoped for but in the agri-food situations (Chia & Holt, 2009). Platonic policies are top-down, formulaic, closed-minded, self-serving, and commoditised, while a-Platonic agri-food policies are bottom-up, open-minded, and empirically driven (Taleb, 2008).

Agricultural Deepening and Policy Platonicity

One of the basic questions in development studies is how to improve the productivity of poor rural populations in Nigeria (Jerven, 2013). Copious economic literature reveals that structural transformation incorporates the process of economic development in general, and agricultural deepening plays a pivotal role in the early stages of this transformation (Oyejide, 2010). In Nigeria, there exists a broad consensus that the performance of an agricultural sector is vital to long-term economic growth and development because of the significant contribution of agriculture to its gross national product, employment opportunities, food security, and poverty reduction.

Agricultural deepening catalyses sustainable development in that agriculture possesses high growth multiplier effects on other sectors of the economy (de Janvry & Sadoulet, 2010). According to Cheong, Jansen, & Peters (2013), using multipliers generated from the social accounting matrix (SAM) and computable general equilibrium models, there exist multipliers in the order of 1.3 – 1.5, meaning that an additional US\$1 of value-added in agriculture generates 30 – 50 cents in non-agriculture. Further, agricultural multipliers are measured to be larger than the reverse multipliers of non-agriculture on agriculture. According to de Janvry and Sadoulet (2010), agriculture and agro-industry are sources of competitive advantage because Nigeria has factor endowments rich in natural resources and semi-skilled labour, giving it a comparative advantage in agriculture, mining, and agro-industry. Further, the Green Revolution programme increased the income of farm households, which fostered the development of non-farm sectors through demand linkages and investment in children's schooling. According to Audibert (2010), since economic growth requires rapid agricultural sector output and income expansion, there is a need to increase the irrigated area and adopt more innovative technologies considerably.

From intersectoral policy consistencies viewpoints, agricultural deepening may influence the health and spread of endemic diseases in the sense that irrigated land or pesticide, and insecticide usage could be a factor in the transmission of water or parasitic diseases and respiratory infections (Audibert, 2010). Audibert (2010) notes that mismanagement of agricultural inputs could induce several health challenges, which could partly be averted by adopting appropriate actions such as manipulating the environment in the case of man-made lakes, improving sanitation conditions, promoting health education and education on good practices as well as encouraging integrated pest management and integrated vector management.

Consequently, the gap between Nigeria's agricultural transformation and the agri-food reform goals the economy thinks it attains becomes dangerously wide. Platonicity makes sustainable agricultural development planners think they understand more than they do. In other words, it makes policymakers think they have attained more significant agricultural development goals than their real socio-economic circumstances. Policy Platonicity occurs when agricultural development experts over-or under-estimate their understanding of the subtle changes that need to be calibrated to its sustainable development programming (Markey-Towel, 2018; Taleb, 2007). For instance, Nigeria's agricultural competitiveness policies suffer from this characteristic Platonicity, especially when compared with the South African Digital Agriculture, which leverages precision agriculture, remote sensing, drone imagery, mobile platforms, vehicle tracking, artificial intelligence, database technology, Bluetooth low energy, weather forecasting, and blockchain technology.

In other words, agri-food policies are Platonic when agricultural development models, programs, and policies are incorrect in some specific applications, and the (i) policy designers do not know beforehand where the policies will be wrong, (ii) nor do they know that the agri-food transformation models are potential interventions that pose random but very devastating side effects on the economy, and (iii) these mistakes result in severe socio-economic catastrophe. By implication, there is a dire need for more data to understand our socioeconomics as we have known them historically and as we build the evidence base that informs strategically tailored and nuanced post-pandemic interventions.

Concluding Remarks and Policy Recommendations

Policy interventions should be based on a holistic view of the Nigerian economy to properly contextualise agricultural deepening-related challenges and the most effective policy solutions. From an a-Platonic policy standpoint, there is an increasing need for the Nigerian Government to optimise inter-sectoral policy space for developing both agricultural and non-agricultural sectors. A large body of research confirms that enrollment and/or schooling boosts growth. Although there is less research on the effect of health capital on growth, several recent macro-level studies support the positive contribution increases in education capacities and health capital has on agricultural deepening and sustainable development.

Implementing a-Platonic strategies towards overcoming these agricultural deepening challenges will go a long way in addressing the widening capacity gaps in realising sustainable

development goals in Nigeria. To foster agri-food systems transformation in Nigeria, there is a need to support State governments in Platonifying their ongoing reform efforts in smart or digital agribusiness programmes, agricultural finance management, intersectoral policy design and management, and public-sector governance. Ensuring the a-platonicity of agri-food transformation tools, guidelines, and best practices will serve as a foundation for scaling up lessons learned, thereby catalysing the integration of accountability in agricultural deepening and scaling up the knowledge exchange and expertise acquisition across the Nigerian States, with the further consideration by the Nigerian Governors Forum (NGF). It is expected that a-Platonic policy lessons would result in improved accounting practices, coordination, and coherence of evidence-based agricultural deepening policy advice, systemic enhancement, and capacity strengthening of relevant departments, agencies, and sub-sectors.

Nigeria's technology adoption and advancement policies are crucial in harnessing the diverse potentials of agricultural deepening while overcoming the current Platonivities in its policies. One step forward is the AfDB-Nigeria Transforming African Agriculture: The Feed Africa Agenda Special Agro-Industrial Processing Zones (SAPZ)⁷. SAPZ should further integrate digitalisation policies and programmes in the context of maximising the commodities value chain while leveraging on the ongoing implementation of the AfCFTA. In this way, Nigeria's agricultural development policies and programmes will become a-Platonic, therefore deepening the agricultural sector's contribution to achieving Nigeria's vision. The information asymmetry that typically characterises Nigeria's agriculture, albeit its Platonivities, necessitates increasing digitalisation towards a smarter and more integrated agri-data architecture framework (NESG, 2020)⁸.

⁷https://www.afdb.org/sites/default/files/2021/12/13/sapz_va-brochure.pdf

⁸NESG, 2020. 'Building Partnerships for Resilience', 26th Nigerian Economic Summit.

References

Audibert, M. (2010). Endemic Diseases and Agricultural Productivity: Challenges and Policy Response in Endemic Diseases and Development. *Journal of African Economies (JAE)*,19(3): iii110-iii165.

Cheong, D., M. Jansen, & R. Peters (2013). *Shared Harvests: Agriculture, Trade and Employment*. International Labour Office (ILO) and United Nations Conference on Trade and Development (UNCTAD), Geneva, Switzerland. Retrieved from: [WEB-Shared Harvests.pdf \(ilo.org\)](#)

Chia, R.C.H. & R. Holt (2009). *Strategy without Design: The Silent Efficacy of Indirect Action*. Cambridge University Press, Cambridge, United Kingdom.

De Janvry A. and E. Sadoulet. 2010. Agriculture for Development in Africa: Business-As-Usual or New Departures? *Journal of African Economies*, 19(2): ii7 – ii39.

Human Capital Development Network (HCDN) (2021). Implementation of the Basic Health Care Provision Fund (BHCPF) in Nigeria. HCDN Advocacy Brief February 2021. Available at: https://options.co.uk/sites/default/files/bhcpf_advocacy_brief.pdf

Inichen, A., J. Taussig & H. de Koning. (2010); 'Absolute Returns Revisited'. Ineichen Research and Management (IR&M): <https://www.ineichen-rm.com/images/stories/pdf/absolute%20returns%20revisited.pdf>

Jerven, M. (2013). The Political Economy of Agricultural Statistics and Input Subsidies: Evidence from India, Nigeria and Malawi. *Journal of Agrarian Change*, 14(1): 129-145.

Markey-Towler, B. (2018). Antifragility, the Black Swan, and Psychology: A Psychological Theory of Adaptability in Evolutionary Socioeconomic Systems. Retrieved from: <http://dx.doi.org/10.2139/ssrn.3130038>

NESG, 2020. Building Partnerships for Resilience, 26th Nigerian Economic Summit.

Oyejide, T. A. 2010. World Trade Order and Agricultural Transformation in Africa. *Journal of African Economies*, 19(2): ii40 – ii59.

Spink, J.W. (2019), *Food Fraud Prevention: Introduction, Implementation, and Management (Food, Microbiology and Food Safety)*. Retrieved from: <https://link.springer.com/book/>

Taleb, N. N. (2007). *The Black Swan: The Impact of the Highly Improbable*. London: Penguin.

Taleb, Nassim Nicholas. 2004. *Foiled by Randomness: The Hidden Role of Chance in Life and the Markets*. New York: Random House. 24.

Taleb, Nassim Nicholas. 2008. *The Fourth Quadrant: A Map of the Limits of Statistics*. Unpublished Manuscript. http://www.edge.org/3rd_culture/taleb08/taleb08_index.html

Taleb, N. N. (2001). *Foiled by Randomness-The Hidden Role of Chance in Life and in the Markets*. New York. Texere.

ABOUT THE NESG

The NESG is an independent, non-partisan, non-sectarian organisation, committed to fostering open and continuous dialogue on Nigeria's economic development. The NESG strives to forge a mutual understanding between leaders of thought so as to explore, discover and support initiatives directed at improving Nigeria's economic policies, institutions, and management.

📍 THE SUMMIT HOUSE

6, Oba Elegushi Street,
Off Oba Adeyinka Oyekan Avenue,
Ikoyi, Lagos.
P.M.B 71347, Victoria Island, Lagos

📍 ABUJA LIAISON OFFICE

4th Floor, Unity Bank Tower,
Beside Reinsurnace building
Plot 785, Herbert Macaulay Way,
Central Business District, Abuja

🌐 www.nesgroup.org

✉ info@nesgroup.org

☎ +234-01-295 2849

🐦 [f](#) [@](#) [in](#) [v](#) officialNESG