

Foreword by:
Professor Umara Zulum, mni, FNSE
Governor, Borno State

How to Lift Nigeria Out Of Poverty

Ikechukwu Obiorah



Dedication

*Dedicated to my parents,
Long Joe, my Father who lived for the
poor and Marcellina my mother, his backbone,
bedrock and cheerleader, aiding & participating
in all his charitable works and selflessly bearing the
brunt of all the sacrifices that had to be made.*

God bless their souls

Amen.

Published by
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HOW TO LIFT NIGERIA OUT OF POVERTY

By

Ikechukwu Obiorah

1st Edition

ISBN: 978-978-963-8031

Foreword

by **Professor Babagana Zulum, mni, FNSE**
Governor, Borno State

In ***HOW TO LIFT NIGERIA OUT OF POVERTY***, the author, Ikechukwu Obiorah, stimulates our consciousness toward the mother of our many problems: acute poverty affecting the mass majority of fellow Nigerians. The author does what is more important than reminding us of the problem which is suggesting potential solutions that rekindle our shared hope for a Nigeria whose wealth should fairly benefit all, rather than a privileged few.

The compelling force of Obiorah's book is, the author's powerful but simple logic, that the only way to lift Nigeria out of poverty is by lifting the poor and vulnerable populations out of poverty, and in a sustainable manner.

The book, appears to me, a journey through Nigeria's economy, enumerating the causes of poverty in our country, put in the context of the sector by sector bottlenecks inhibiting our social well-being and economic progress, and more importantly, suggesting detailed step by step solutions to the challenges.

Let me say here that I may not entirely agree with some of Obiorah's recommendations and I did point that to him, especially on whether the president should continue to have powers of nominating heads of federal anti-corruption establishments for the senate's confirmation, as he creatively suggested, such appointments be made by a diverse composition of largely independent bodies.

While I see a good sense in the author's recommendation, I think the issue require very critical thinking that should extensively consider the pros and cons and importantly, look at the practicality of that suggestion under our political structure.

Should the main concern be how to make systems work such that the President can appoint but unable to curtail the powers of appointees, or should we focus at stopping the president from being able to make such appointments?

Can we rightly withdraw the powers of making sensitive appointment from an elected President who has the mandate of Nigerians and hand over to unelected persons presumed to be independent? How independent are these persons, given the fact that people who occupy positions whether public or private are often tied to hidden or open influences of godfathers in politics, businesses, labour movements etcetera?

Also, what should be the role of the National Assembly? Should they not, as representatives of Nigerians have any hand in the confirmation of appointees to anti-corruption offices? If the National Assembly should have a hand, how right is it to exclude the president whose key executive function is to make nominations for the National Assembly to consider?

Foreword

Despite these and possibly more questions, I concede that Obiorah's book challenges us (critically) to look into the issue of appointments of heads of anti-corruption agencies and how that affects the successes or otherwise of Nigeria's battle with corruption.

Obiorah also touched on another sensitive area: population including making a recommendation that our good President Muhammadu Buhari remains chairman of the National Council on Population Management beyond 2023. Although Obiorah's argument is based on Mr President's command of respect, I am sure the suggestion will require debate, including from Buhari himself.

Amid these, Obiorah once again directs our attention to an important issue.

You should own and read this book. That I identified some areas should even give you more motivation to read the whole of it so you can make your own sense from Obiorah's audacious and out of the box proffer of solutions. Try reading his anti-corruption plan or his educational reforms or youth employment plan, etc.

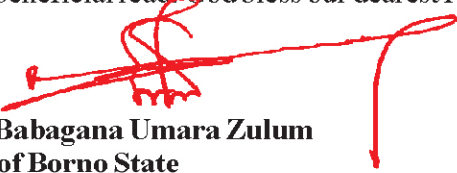
Obiorah's recommendations aim to activate mass participation through the strengthening of various sectors for genuine benefit.

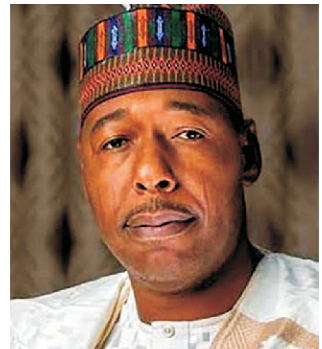
The author's hope and optimism for the future are palpably felt on the lines and paragraphs of his solutions to various impediments he identified.

I recommend this book to policy makers, stakeholders, bureaucrats, politicians, researchers, lecturers, students and many a person interested in Nigeria's economic and social development.

I implore you to read ***HOW TO LIFT NIGERIA OUT OF POVERTY*** for its insights and the potential it holds in alleviating the poverty of Nigerian masses and towards lifting our dear nation out of poverty.

Finally, I applaud Ikechukwu Obiorah for his intellect, for his deep thinking and his evident passion for a better Nigeria. I congratulate him for this book and I wish you a happy and beneficial read. God bless our dearest Federal Republic of Nigeria.


Professor Babagana Umara Zulum
Governor of Borno State
March, 2022.



“It turns out that advancing equal opportunity and economic empowerment is both morally right and good economics, because discrimination, poverty and ignorance restrict growth, while investments in education, infrastructure and scientific and technological research increase it, creating more good jobs and new wealth for all of us”

William J. Clinton

HOW TO LIFT NIGERIA OUT OF POVERTY

TABLE OF CONTENTS

Chapter 1	INTRODUCTION	Pg 1 - 2
Chapter 2	CORRUPTION POSSIBLE ANTIDOTES	Pg 3 - 16
	(a) Overview	
	(b) Independence of anti-corruption agencies	
	(c) Massive information flow	
	(d) Aiding the whistleblowers	
	(e) Accelerated hearing of corruption cases	
	(f) Statutorily extended time to pursue abandoned appeals.	
	(g) Standardized procurement processes	
	(h) Non-remittance of operating surplus by Ministries Departments and Agencies (MDAs)	
	(i) State Pardon of Public Officers Convicted of Corruption.	
Chapter 3	RAPID POPULATION GROWTH AND ANEMIC GDP	Pg 17 - 19
Chapter 4	EDUCATION SECTOR CHALLENGES. ILLITERACY AND POOR EDUCATION WITHOUT SKILLS Possible solutions	Pg 21 - 45
	(a) Overview	
	(b) Way Forward	
	(c) National formative education task force	
	(d) Universal basic education and senior secondary school education	
	(e) Colleges of education, National Teachers Institute	
	(f) Mass literacy, adult and non-formal education	
	(g) Quantum of works, jobs.	
	(h) Strengthening the National University Commission (NUC)	
	(i) New universities	
	(j) Consolidation of existing universities	

- (k) Nigerian Universities Rehabilitation Task Force (NURTF)
- (l) Autonomy of Public Universities
- (m) National Board for Technical Education (NBTE), Polytechnics, Monotechnics, Technical Colleges.
- (n) National Technical Education Rehabilitation Task Force (NTETF)
- (o) Autonomy of Public Polytechnics
- (p) Funding – Federation account, appropriations, TETFUND, endowments and donations
- (q) Rescuing out-of-school children.

Chapter 5

UNEMPLOYMENT, ESPECIALLY YOUTH

UNEMPLOYMENT - POSSIBLE SOLUTIONS

Pg 47 - 55

- (a) Overview
- (b) Way Forward
- (c) Infrastructure Youth Corps program (IYC)
- (d) Infrastructure – context and scope
- (e) Provision of physical structures that aid the economic and social/human development
- (f) Provision of services and non-physical structures that aid the economic life or social/human development.
- (g) Fight against fake drugs
- (h) Provision of physical structures and services that aid security of life and property.
- (i) Resettlement of internally displaced persons
- (j) Food and agricultural production by collectives such as cooperatives and farm settlements
- (k) Solid minerals production by collectives such as cooperatives
- (l) Cottage and small scale manufacturing ; ICT development and start –ups; other small and medium enterprises undertaken in cooperative structure
- (m) Board of Directors of IYC
- (n) Funding
- (o) Retraining of tertiary education graduates

Chapter 6	INSECURITY	Pg 55 - 66
	(a) Overview (b) Sustainable solutions to Nigeria's security problems (c) The nation's most consequential social-cum-criminal problem is corruption (d) Strengthening of security services and structures. Anti-corruption reforms (e) Protection of the geographically vulnerable (f) The Nigeria Police Force (g) Challenges of state police (h) Stronger role and participation by the Governors (i) Local personnel content in policing (j) State sponsored continuing training and education of police officers. (k) Porous borders (l) Oil theft (m) Dialogue	
Chapter 7	LACKLUSTER EXPLOITATION OF THE NANO, MICRO, SMALL AND MEDIUM ENTERPRISES (NMSME) AND INFORMAL SECTOR.	Pg 67 - 76
	Possible Solutions (a) Overview (b) Nano and micro (c) Cooperatives schemes across sectors (d) Small – Medium Enterprises Segment (e) Innovation and Competitiveness (f) Strengthening SMEDAN	
Chapter 8	UNSUCCESSFUL INDUSTRIALIZATION AND DREADFUL EFFECTS OF NON-DIVERSIFICATION	Pg 77 - 84
	Overview	
Chapter 9	NON-DEVELOPMENT OF THE NECESSARY HUMAN CAPITAL STOCK	Pg 85 - 90
	Possible solutions a) Overview b) Vocationalization of Basic Education	

- Chapter 10 HUGЕ INFRASTRUCTURE DEFICIT Pg 91 - 92
Overview

- a. Overview
- b. Human capabilities
- c. Benefits, and Nigeria's requirement of 25,000km rail network
- d. Unbundling Nigeria Railway System
 - i. Nigeria Railway Regulatory Commission
 - ii. Nigeria Rail Network Limited
 - iii. Nigeria Rolling Stock Company Limited
 - iv. Train Operating Companies (TOC)
 - v. Rail Freight Services Companies (RFSC)
 - vi. Nigeria Rail Telecommunications Limited
- e. Composition of Management Boards.
- f. Security

- (a) Overview
- (b) Cabotage, seafaring, new National shipping line,

Maritime University, ship building and domestic shipping lines

- (c) Inland waterways
- (d) Port infrastructure
- (e) Professional Board of Directors

Chapter 13 OIL AND GAS SECTOR Pg 111 - 122

Low Local Capacities, Capabilities and Participation

Possible solutions

- a) Overview
- b) Human capacities and capabilities

Chapter 14 SOLID MINERALS SECTOR Pg 123 - 128

Pitiful state, capacity – challenged and chronic underperformance

Possible solutions

- a) Overview
- b) Integrating artisanal miners and fighting off illegal miners
- c) Revitalization
- d) Geoscience data
- e) Catalyzing through FGN incorporated joint venture partnerships
- f) Solid Minerals Development Fund

Chapter 15 POWER SECTOR Pg 129 - 148

Epileptic Power. Energy Poverty.

Possible Solutions

- (a) Overview
- (b) Human capacity at the helms
- (c) Lack of progress on metering schemes.
Non – cost reflective tariffs
- (d) Liquidity crisis – Weak capital base of DisCos
- (e) Transmission costs, liquidity crisis and commercialization of TCN
- (f) Generation, more privatization. Shortage, especially

- gas. Non-cost reflective inputs.
- (g) Cost reflective inputs and tariffs necessitate targeted subsidy.
- (h) More decentralization
- (i) Small scale hydro and coal power plants
- (j) Eligible Customer Program
- (k) Rural Electrification Agency
- (l) Power and Steel Fund

Chapter 16 STEEL DEVELOPMENT SECTOR Pg 149 - 162

Non – existent.

Possible Solutions

- (a) Imperatives of Steel
- (b) National Iron Ore Mining Company (NIOMCO)
- (c) Ajaokuta Steel Company (ASC)
- (d) Delta Steel Company (DSC)
- (e) Jos, Oshogbo and Katsina Steel Rolling Mills (JSRM, OSRM, KSRM)
- (f) Way forward for Steel Development

Chapter 17 ROADS SECTOR Pg 163 - 167

Unpaved.

Possible Solutions

- a) Overview
- b) Corrupt-free processes
- c) Human capacities and capabilities
- d) Local manufacturing of construction equipment and exploitation of locally available bitumen and other natural resources
- e) Public Private Partnerships (PPP)
- f) Feeder roads

Chapter 18 DIGITAL INFRASTRUCTURE SECTOR Pg 169 - 176

Weak.

Possible Solutions

- a) Overview

- b) Fibre Optics and Towers
- c) Broadband Penetration
- d) Horizontal diversification and manufacturing of complex goods.
- e) Deep Technologies Industrial Park. Complex Goods Manufacturing Fund.

Chapter 19 AGRICULTURAL SECTOR

Pg 177 - 206

Hobbled.

Very difficult export processes.

Possible solutions

- (a) Import dependent
- (b) Foreign currency losses, unemployment and hunger.
- (c) Way forward
- (C1) National Agricultural Task force
- (c2i) Youth Agricultural Programme (YAP)
- (c2ii) Strengthening the existing smallholder farmers
- (c2iia) Registration in the farmers and agribusiness database
- (c2iib) Extension services – Training, advisory, inputs, access to markets
- (c2iic) Post-harvest losses and small scale storage facilities
- (c2iid) Small scale processing
- (c2iie) Small scale feed milling
- (c2iif) Small scale irrigation
- (c2iig) Access to credit and sustainability of financing
- (c2iih) Mechanization
- (c2iil) Naija tractors
- (c3i) Large scale commercial farming and processing, livestock feed production. Nigeria Agriculture catalyst Fund.
- (c3ii) Sustainability of concessions and incentives for large scale commercial farming.
- (c3iii) River Basin Development, large scale irrigation, dams and inland waterways.
- (c4) Exponential increase in agricultural and agro allied exports

- (d) Ways forward on Agro – allied exports
- (l) Strengthening the human capacity at Nigeria Export Promotion Council (NEPC)
- (ii) Awareness campaign, registration, training, Good Agricultural Practices and Traceability.
- (iii) Prospective large scale export – specific farming, value addition, processing and storage facilities
- (iv) Aggressive marketing and road show
- (v) Logistics challenges at the ports and very high shipping costs, multiple taxes and fees, multiple extortions
- (vi) Seaports
- (vii) Airports
- (viii) Export czar

Chapter 20 An Unsustainably High Public Debt, High Cost of Government And Private Sector Domestic Borrowing. Bloated Current Expenditure Pg 207 - 219

Possible Solutions

- a) Overview
- b) Way forward
- c) Proceeds and savings from anti-corruption measures
- d) Smashing the cost of governance by disgorging bloated recurrent expenditure
- e) Rationalizing Ministries, Departments and Agencies (MDAs), and Government Owned Enterprises (GOEs).
- f) Cutting overhead costs across the three arms of government
- g) Targeted subsidy. National Identification Number registration, Bank Verification Number, financial inclusion
- h) Expanding revenue to GDP ratio
- i) Market influenced foreign currency policy
- j) The Asset Management Corporation of Nigeria (AMCON)
- k) International best practices recruitment at

government owned enterprises and major revenue earning agencies

Chapter 21 TIMID INVESTMENT PROMOTION EFFORT Pg 221 - 226

Possible Solutions

- a) Overview
- b) Nigeria's international investment desk
- c) Labour intensive
- d) Promotion of venture capital investments
- e) Information technology enabled services (Business process outsourcing – call centers)
- f) Abuse of expatriate quota policy and sabotage of Nigeria's industrialization strategy

Chapter 22 HEALTH SECTOR Pg 227 - 239,239a,239b

A very sick healthcare system

Possible Solutions

- a) Overview
- b) National Health Insurance Scheme (NHIS)
- c) Way forward: a new healthcare arrangement
 - i) Nigeria health insurance Regulatory Commission
 - ii) Market based health insurance services
 - iii) Social Medical Insurance Corporation of Nigeria (SMICON)
 - iv) Compulsory insurance in all Federal and States Government owned or affiliated hospitals and facilities by 2025
 - v) First Class hospitals
 - vi) Counterfeit medicines and drugs (fake drugs)
 - vii) Fight against fake drugs
 - viii) Strengthening the Primary Healthcare System.

Chapter 23 HOUSING SECTOR Pg 241 - 253

Deficits of housing and social housing policy. Absence of effective market-based and social mortgage finance systems

Possible Solutions

- (a) Overview
- (b) Market – based Mortgage Finance System
- (c) Way forward for the market-based mortgage finance system
 - (i) Deploying the Presidential Bully Pulpit
 - (ii) Setting up methods of credit qualification for the self employed and those in the informal sector
 - (iii) Upscaling the numbers and capacities of primary mortgage lenders
 - (iv) Repositioning Nigeria Mortgage Refinance Company (NMRC)
 - (v) Nigeria mortgage Guarantee Company (NMGC) and mortgage Insurance
 - (vi) Credit Bureau, appraisers, title companies
- d) Social Housing
- e) Social Mortgage Corporation of Nigeria (SOMOCON)
- f) Social housing supply space

Chapter 24 NON – EXISTENCE OF A NATIONAL DIGITAL IDENTIFICATION DATABASE.

Pg 255 - 258

Possible Solutions

- (a) Overview
- (b) Way Forward
 - i) Birth registration
 - ii) Engaging mobile network operators
 - iii) Using social investment benefits and other social services as incentives
 - iv) Infrastructure Youth Corps Program (IYC)
 - v) Population census

Chapter 25 75% OF PRISON POPULATION HELD WITHOUT TRIAL AND CONVICTION

Pg 259 - 260

Possible solutions

- (a) Overview
- (b) Way forward

Chapter 26	MAN – MADE ENVIRONMENTAL DEGRADATION	Pg 261 - 263
	Possible solutions	
	(a) Overview	
	(b) Way forward	
Chapter 27	DRUG ABUSE	Pg 265 - 266
	Possible solutions	
	(a) Overview	
	(b) Way forward	
	(i) Prevention	
	(ii) Treatment	
Chapter 28	NON – EXISTENCE OF A NATIONAL SOCIAL SECURITY AND FINANCIAL RISK PROTECTION SYSTEM, ESPECIALLY FOR THE POOR	Pg 267 - 279
	Possible Solutions	
	(a) Overview	
	(b) Economic perspectives	
	(c) Including and bringing the poor into the Nigeria social security and financial risk protection system.	
	(d) Nigeria social security administration	
	(i) Administration of Nigeria Social Pension Service	
	(ii) Provision of social non- work related disability and life insurance	
	(iii) Administration of Aide to Disabled Persons Fund.	
	(iv) Administration of Medical Assistance Fund for the Uninsured.	
	(v) Administration of Temporary Assistance to Unemployed Persons Program	
	(e) Sovereign Insurance Against Natural Disasters	
CONCLUSION		Pg 280
ACRONYMS		Pg 282 - 288
INDEX		Pg 289 - 309

“Poverty is the mother of crime”

Marcus Aurelius

“We have to be bold in our national ambitions.

*First, we must win the fight against poverty
within the next decade.*

*Second, we must improve moral standards in government
and society to provide a strong foundation
for a good governance.*

*Third, we must change the character of
our politics to promote fertile ground for reforms”.*

Gloria Macapagal Arroyo

Chapter 1

Introduction

Nigeria should be at war, and I do not mean the war on insurgency and banditry in which we are presently engaged. I am referring to an additional war!

An urgent war, which we must fight with all the will and determination we can muster, with all the belligerence we can throw, with all materiel we can assemble or commandeer, drafting each and every able one of us into that necessary formation, and deploying against a most devastating and debilitating enemy; an enemy, home grown rather than foreign, but most destructive and malignant, ravaging our dear, one and only nation, and leaving in its wake, the scourge of hunger, disease, illiteracy, desolation, destitution, despair, and life rendered hard, brutish and short; an enemy, which has captured more than 50 % of Nigerian people as his prisoners, in extreme captivity, and forcing an additional 25% of our people through the gates.

Who else but poverty?!

Defined by the United Nations and World Bank respectively, the extremely poor are our brothers and sisters who are stuck in a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, healthcare, shelter, education and information; our brothers and sisters who live only on any sum of money below \$1.90 per day, equivalent to N830.

Over 100 million of our brothers and sisters now live in extreme poverty with an additional 25 million hanging listlessly on the threshold.

That is the highest concentration of people living in extreme poverty anywhere in the world. We have overtaken India which has five times our population. Still, 8 million people dropped into extreme poverty in 2 years, according to a World Bank report.

Yet, should these trends continue, by 2030, the year by which we should have achieved the United Nations' Sustainable Development Goal of the elimination of extreme poverty, there would be, to the contrary, about 150 million Nigerians living in extreme poverty.

Causes of poverty in Nigeria, and possible solutions.

There are many factors driving Nigeria's very high rate of poverty and my intention in this book is to review the main causes by setting them out, one at a time and humbly offering possible solutions, which to my mind, provide the pathway to lifting Nigeria out of poverty.

Chapter 2

Corruption.

Possible Antidotes.

a) Overview

If Nigerians were polled as to the greatest cause of poverty in Nigeria, 99% would without hesitation put corruption first on the list. We, Nigerians, regard the nation as one of the most corrupt countries in the world. That is not far from the truth because Nigeria does rank as one of the most corrupt countries in the world on the Transparency International's Corruption Index. And not by mere coincidence, Nigeria has the highest concentration of people living in extreme poverty in the world, for which people derisively dub Nigeria the poverty capital of the world.

Surely, corruption is the single most potent driver of poverty in Nigeria, costing the nation over \$600 billion in direct losses and trillions of dollars in indirect losses since Nigeria's Independence.

For a very long time, the effectiveness of the Federal, State and Local government institutions, measured against capacity, ability and willingness to successfully deliver constitutionally and legally mandated tasks, functions, responsibilities and outcomes, average just about 35%, with average value-for-money, on government expenditures, measuring also about 35% over this period. This delivery/value-for-money deficit brought on mainly by corruption, crushes socioeconomic development, breeds mass poverty, dissuades foreign direct investment, erodes trust in democracy and in the tiers and organs of government, entrenches undue ethno-religious attachment and intolerance, lack of patriotic zeal and above all, insecurity.

Corruption deeply rooted, permeates every fabric of Nigerian life, yet we all speak of corruption in terms of saints and sinners, that is, us being the saints and others, the sinners. So sorry, but we are all sinners.

James Madison, one of the founding fathers of America, philosophized the issue of angels, saints and sinners in a polity when he wrote in the Federalist Papers, "If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government

would be necessary...." Neither those who govern nor the governed are angels or saints, meaning that we need an anti-corruption system that exerts more vigor on all of us who govern because we are in the custody and control of the commonwealth, and since we are no angels, unless there were adequate control measures upon us, our sinful nature as mere mortals would "disappear" the commonwealth.

In Nigeria, it is certain that we, the political class, deserve most of the blame for lapses in probity and the ensuing corruption. To paraphrase President Harry Truman, the buck stops with us. And following a few pegs down the rungs of the ladder of blame, is the public officer class, then the business elite, and so on....

There, however, does not exist any magic or silver bullet that could kill Nigeria's endemic corruption with one shot. However, such malignancy requires a bold action on an epic scale and ingenuity.

We must retool and recalibrate the investigative, prosecutorial and enforcement structures of the anti-corruption agencies of the Federal Government, including the Department of Public Prosecutions of the Federal Ministry of Justice, in a manner that strengthens their capacity, makes them truly independent and inspires the confidence of Nigerians and the international community.

The zealous participation of Nigerians, home and abroad, must be enlisted in this fight, with the aid of massive information flows.

Whistle blowers should be encouraged with options for anonymous or identified reporting of corruption.

Accelerated hearing of corruption cases should be given effect as intended by Administration of Criminal Justice Act. And prospective Appeals against unfavorable court orders and judgments in corruption cases which have now been neglected or abandoned in a suspicious manner should be given a second look.

We must also strengthen and standardize the procurement processes while eliminating the loopholes that render the existing system corrupt and ineffectual.

In other words, the nation should be pursuing these anti-corruption policy prescriptions:

b) Independence of anti-corruption agencies.

The greatest weapons in the arsenal of the anti-corruption agencies and departments are not the gun totting policemen who effect arrest. They are independence and impartiality. The resoluteness and integrity to commence and carry out investigations, prosecutions or enforcement in an unbiased manner, irrespective of the stature, standing or position of the suspect, are the only keys to eliciting and retaining the confidence of the generality of Nigerians, without which there is nothing.

Accusations of bias and partisanship have rightly or wrongly dogged anti-corruption agencies from 2003 till date, tainting the fight against corruption with a major perception problem and sapping the confidence of the majority of Nigerians in the effort. The larger issue here has little to do with the veracity or otherwise of the accusations but simply the fact that those are widely held views by Nigerians. These accusations hold sway because of the perceived non total independence of the agencies and departments from the political authorities.

Therefore, to remove any political influence on the operations of the anti-corruption agencies, reassure the Nigerian populace and the international community, and grow the necessary confidence in the agencies, it has become necessary that the President should lose the power to make any appointment or removal or suspension of persons from office in Independent Corrupt Practices Commission (ICPC), Economic and Financial Crimes Commission (EFCC), Code of Conduct Bureau (CCB) and the proposed Directorate of Public Prosecutions (DPP). Accordingly, the enabling laws of ICPC, EFCC, CCB should be amended to enable the following:

- i) Making the membership of the agencies **ex officio**. That is, by reason of the appointee being a member of a prescribed organization and elected by that organization, and no longer by appointment by the President.

I propose that the membership of ICPC, EFCC, and CCB should be as follows:

- A member of the Nigerian Bar Association – NBA, elected for that purpose by the Executive Council of NBA.
 - A member of Institute of Chartered Accountants of Nigeria – ICAN, elected for that purpose by the executive committee of ICAN.
 - A member of Academic Staff Union of Universities – ASUU, elected for that purpose by the executive council of ASUU.
 - A member of Academic Staff Union of Polytechnics – ASUP, elected for that purpose by the executive council of ASUP.
 - A member of Nigerian Labour Congress – NLC, elected by the executive council of NLC.
 - A member of Nigeria Union of Journalists – NUJ, elected for that purpose by the executive council of NUJ.
 - Three persons nominated by the United Nations under the hand of the Secretary General.
 - 2 persons nominated by Transparency International.
 - Two Nigerians in diaspora from Civil Society engaged in causes relating to probity, transparency and good governance, selected by the above, sitting as the Commission or Board.
 - Director General of the agency, appointed by the Commission or Board through an open and transparent process.
- ii) Introducing internal checks and balances within the agencies by creating a two level structure comprising: Firstly, a supervisory part time Commission or Board level, made up of the above listed members, including the Director General of the agency to be appointed by the Commission or Board. A part time Chairman should also be appointed by the members from among themselves.

Secondly, an operational level, headed by the Director General. All operations staff should be hired and fired by the Commission or Board,

including retaining old staff or otherwise, provided that all old staff found suitable should be retained.

Two-thirds of the votes of members should be necessary to hire the Director General while four fifths of the votes should be required to fire the DG.

Thirdly, operations staff of similar international agencies may be received by the agency on secondment for capacity building as the Commission or Board deems fit.

A Commission or Board member, including the Chairman, may be removed from the agency by four fifths of the votes of the Commission or Board. Where such happens, the nominating organization should nominate a replacement.

- iii) For close coordination, the commission members of ICPC and EFCC should act as the automatic members of the board of directors of Nigeria Financial Intelligence Unit, with the power to hire and fire all staff, including the Director, who should be transformed into a Director General.
- iv) Separating the office of the Director of Public Prosecutions – DPP, from the office of the Attorney General of the Federation and transforming the office of DPP into an independent Directorate of Public Prosecutions.

I propose that the membership of the Board should be as follows:

- Three members of NBA elected for that purpose by the executive committee of NBA.
- Three members of ASUU who are law lecturers elected for that purpose by the executive committee of ASUU.
- Three international lawyers nominated by the United Nations under the hand of the Secretary General.
- One international lawyer nominated by Transparency International.
- Three Nigerians who are lawyers selected by the above, sitting as a

Board, from Civil Society engaged in causes relating to probity, transparency and good governance, one of whom should be resident in Nigeria while the other two persons should be Nigerians in diaspora.

- The Director of Public Prosecutions should be hired by the Board by two-third majority vote.

The Board should have the power to hire and fire all staff, including the Director of Public Prosecutions.

Some provisions of the 1999 constitution as amended, particularly section 174, and relevant provisions of Administration of Criminal Justice Act require amendments to achieve the transfer of the powers of the Attorney General relating to prosecutions, to the Directorate of Public Prosecutions, and also to end the power of the AG to take over or end a prosecution.

c) Massive information flow.

"Democracy Dies in Darkness", the slogan adopted by the Washington Post in 2017, has an uncertain origin. However what remains certain about the slogan is its encapsulation of the existential foundations of democracy, without which democracy will come to naught.

The democracy that took root in the Greek city state of Athens in 508 – 507 BC, was direct in nature involving all adult male citizens in decision making. Overtime, as populations grew exponentially, direct democracy became cumbersome, leading to the representative democracy we have in most polities today. The participation of the people in the government of the people, for the people and by the people became very reliant on information flow to enable the people make informed decisions and to hold their representatives accountable.

In the first world with strong and firmly established institutions, deeper democratic norms, more patriotism, less corruption and much more educated populace, information flow on government and governance processes is robust, with a free and plural press doing the onerous duty of a gadfly. In Nigeria, as in other third world countries, the situation is the exact opposite, with very weak institutions and very strong personalities,

entrenched and widespread corruption and high rates of illiteracy and poverty, hence, massive information flow from public sector activities acquires an urgent necessity. Yet, the people are aware of so little. Very few have the capacity to access information through the Freedom of Information process. Even the few who dare, still come up short.

In the circumstances, the people cannot hold their representatives accountable. It is worthy to note that even Richard Nixon, the disgraced American president, in his farewell speech after his embarrassing resignation, uttered the corruption busting memorable lines when he said that "the people have a right to know whether their president is a crook". In this context, the president represents the elected and appointed public office holders.

We must throw open the books to the people, especially the financial books. Why not! The information contained therein belongs to the people. There is no need to file a formal application to get the information that is rightly theirs, and which they need to help them participate in their affairs, their democracy.

I propose, therefore, that the EFCC Act be further amended to make it mandatory at the pain of penal sanction, that all government expenditures including salaries, allowances, overhead, recurrent, capital, debt servicing etc., by all tiers, arms, organs, parastatals, ministries, departments and agencies, be published on the website of the respective entity.

Lump sums must be broken down to the smallest expenditure amount. For example, how much the President collected as salary last month, how much he received as travel allowance from his last trip, the cost of his breakfast this morning, etc.

I am using the President for illustration to show that no expenditure nor person nor office should be exempt.

If a contractor was involved in a procurement or expenditure, the particulars of the contractor and the expenditure should be provided including, the

contractor's CAC registration number. Social welfare cash transfer as little as N1, 000 must be tabulated along with name of the recipient and the last four digits of his NIN. Any person who because of privacy concerns, does not want his or her name published, should not receive money from government.

Such mandatory provisions would help the people to hold public officers accountable and assist the EFCC and other anti-corruption agencies to fight corruption. Any legal challenge against the provision will fail for these reasons and for the fact that the Supreme Court had earlier affirmed the EFCC Act as valid and subsisting.

The military and other security bodies should maintain detailed expenditure reports like other government organs. However theirs can only be reviewed by those with security clearance, which should include the anti-corruption agencies and arms of government with powers of oversight.

d) Aiding the whistleblowers.

The nation's Whistleblowing Program is still in its infancy, developed to just about 2% of its capacity, despite which the program has aided the recovery of over \$140 million in illicit funds.

There is yet no specific legislation regulating the program. Instead there is a patchwork of disparate sets of guidelines issued by some government agencies including Federal Ministry of Finance, Central Bank of Nigeria, National Pension Commission, Nigeria Stock Exchange and the Securities and Exchange Commission. These guidelines are not comprehensive and are generally weak, and so are the few sections of Investments and Securities Act, EFCC Act, ICPC Act, which seek to protect those who come forward with information.

The Whistleblowing Program, a very essential weapon in the fight against corruption, cannot develop and grow in capacity without a comprehensive legislation offering a detailed framework for identified and anonymous information volunteering, concrete protection of identified informers, collection of rewards, as well as civil and penal sanctions against those who victimize or retaliate against whistle blowers.

The Whistleblower Protection Bill passed by the Eight Senate did not progress to law and was reintroduced for further consideration in 2019 without much progress so far.

Even then, the Senate Bill in its present form does not go far enough. It does not anticipate the explosion of anonymous reporting of corruption in a massive information flow environment, where every government expenditure is published in the "minutest" possible way, and therefore does not provide a framework for the anonymous effort.

In Nigeria, with 75% of the population spread within the poverty spectrum, the authority structure and power is heightened in potency and is literally far reaching, so that retaliation can come in many more ways than one, directly or indirectly. The vast populations are palpably aware of their vulnerability and would never feel protected enough to come forward no matter what is provided for protection in any legislation.

Consequently, in addition to protecting the identified whistle blower, the legislation should create an elaborate mechanism for anonymous reporting, by mandating the Nigerian Communications Commission to procure the design, mass production and wide distribution of untraceable Whistleblower SIM cards, to be labeled ICPC and EFCC, which would be automatically linked to the special phone banks of ICPC and EFCC respectively. All an anonymous whistle blower needs do, would be to obtain either ICPC or EFCC SIM card, switch his or her regular SIM card with the Whistleblower SIM and make an untraceable and anonymous call.

Whistleblowing should cover all wrongdoing including smuggling, oil theft, vandalism, warehouses storing contraband, illicit funds, bank accounts holding ill-gotten gains, home and abroad, illicit drugs, fake drugs, insecurity and all crimes.

e) Accelerated hearing of corruption cases

The Administration of Criminal Justice Act, 2015 (ACJA), a federal law, was enacted to replace the Criminal Procedure Code and the Criminal Procedure Act, and to pave the way to an efficient and speedy prosecution of criminal cases and dispensation of justice. Most States have passed a similar law applicable in their various States.

Hitherto, the wheels of the criminal justice delivery system had been chronically clogged by unnecessary adjournments forced on the courts by defendants' tricks, incompetent prosecution, and in some cases, acts of collusion between the defendants and the prosecution. There were also the ever reoccurring applications for Stay of Proceedings, to abide the outcome of numerous and frivolous Interlocutory Appeals, often times lasting for many years in the course of a criminal case.

However, ACJA has now made it mandatory that criminal proceedings should be on a day to day basis with only a few numbered adjournments allowed when the day to day proceedings become impracticable, and that applications for Stay of Proceedings shall no longer be entertained.

Notwithstanding, the pace in criminal proceedings has experienced only a marginal improvement. This is due to lack of enough judges, making it impracticable to achieve the goal of day to day proceedings, in order to accommodate other cases in the heavily loaded dockets. Nevertheless, the never ready prosecutors also do not help matters. Then, there are thousands of pending corruption cases abandoned by prosecuting agencies and departments out of collusion with the accused persons.

It has become imperative to hire more judges, train and designate some over a number of years for corruption cases, and the judges given a practice direction for compliance with the intendment of ACJA for speedy trials. As for the problem of incompetent prosecutors, and cases abandoned due to collusion, the proposed reform of anti-corruption agencies, particularly the creation of the proposed Directorate of Public Prosecutions, would mitigate that and crank up the wheels of justice.

f) Statutorily extended time to pursue abandoned appeals.

There are many legally weak Ex Parte Orders, Interlocutory Orders and judgments obtained by those accused of corruption against the anti-corruption agencies, which the agencies announced intention to appeal, only to abandon it in order to give "soft landing" to the corruption suspect.

There are over 300 of such "soft landings" and in order to stop such, the enabling laws should be amended to extend time for the prosecutors to

appeal in corruption cases, requiring only an affidavit deposing to the fact the failure to appeal was in bad faith. It should not lie in the mouth of a person who colludes with the prosecution, to complain of inconvenience of a late appeal, besides since the provisions of statute of limitations do not apply to prosecution of a crime, the same provisions should also not apply to the State appeals in criminal cases.

g) Standardized procurement processes.

The Public Procurement Act 2007 (PPA) is 47 pages long. And therein lies the problem. The law meant to remove unnecessary discretion of public officials and to bring the much needed certainty to the public procurement process has achieved the opposite.

Almost all public procurement processes in Nigeria are rigged. Not surprising because PPA leaves every aspect of procurement to the discretion of the officials of the procuring entity and the Bureau of Public Procurement (BPP).

The operative phrases in the law are, Certificate of "NO OBJECTION" to contract award, and "Lowest evaluated responsive bid". The current procurement process largely involves the procuring entity running to BPP to obtain a No Objection certificate to do their thing outside the regular bid process or to go through the bid process and finish by awarding the contract to the "lowest evaluated responsive bid". This means that the contract is awarded ultimately not to the lowest bidder but according to the whims, caprices and discretion of the evaluators who determine the responsiveness of the bid. These are the most potent stratagems for rigging contract bids, and insider dealing.

The procedure for a bid process should comprise, firstly, the procuring entity determining the price above which the procurement would be too costly. That is to say, the maximum allowable price for the contract. Secondly, advertising the call for bids. The bid selection must be in two stages:

1) Pre-qualification involving the submission of technical bids and bidders' qualifying documents, evaluation and announcement of successful pre-qualified bidders who could now participate in the next stage.

ii) Submission and opening of financial bids at a pre – announced date, time and venue. At the venue, all financial bids must be submitted at the same time by all bidders, by dropping the bids into an open receptacle such as a basket. The procuring entity must also drop in the same basket, the maximum allowable price. There and then the financial bids and the envelope containing the entity's maximum allowable price are opened and tallied in the presence of all bidders. The bid with the lowest price automatically wins the contract provided the bid price does not exceed the maximum allowable price. Where all the financial bids exceed the maximum allowable price, the exercise should be repeated to enable the bidders to submit their best discounted price. The bid with the lowest price automatically wins the contract.

It has been argued that the lowest price might not be able to execute the job, making it necessary for the officials to exercise discretion in choosing the winner of the bid. However the bid bond/security and Advance Payment Guarantee are two safe guards against frivolous bidding. Besides, any delay or other inconvenience caused by a winning bid not being able to execute the project would be insignificant compared to the hundreds of billions of Naira stolen in rigged contracts and the accompanying structural damage done to the system.

It should henceforth be made a crime not to adhere to the above proposed transparent process. The relevant offending head of department and accounting officer should be held responsible for any breach.

Any bidder who feels cheated in any part of the process should submit a detailed petition with supporting documents to ICPC or EFCC.

In the light of the above, the PPA should be amended to simplify the process, remove the loopholes that invariably result in insider dealing and rigging of bids, and also drastically reduce the bloated size of the National Council on Public Procurement and the Bureau of Public Procurement.

The criminal aspect should be incorporated into the EFCC Act and made applicable to the 3 tiers of government.

h) Non-Remittance of Operating Surplus by Ministries, Departments and Agencies (MDA)

One of the most perplexing things in our polity is the notion that institutions of government would, even as institutions, defy the law boldly and brazenly in a reoccurring manner and yet no one is held accountable.

The Fiscal Responsibility Act (FRA) mandates that MDAs shall remit 80% of their operating surplus to the Consolidated Revenue Fund (CRF) every year.

Sadly, Nigerians have for many years now been inundated with reports of failure to remit the operating surplus to CRF.

The Fiscal Responsibility Commission (FRC) just reported that as at the end of 2021, 32 MDAs failed to remit N1.2 trillion of their operating surplus to the Consolidated Revenue Fund.

The Senate Committee on Finance recently announced that some MDAs failed to remit over N3 trillion to the consolidated revenue fund (CRF) of the Federal Government between 2014 and 2020.

ICPC also reported that it recovered the sum of 189 billion Naira of unspent wage balances from MDAs in 2 years.

Then there are unending reports of financial lapses by MDAs by the Auditor General of the Federation.

What one rarely hears is that someone has been held accountable for any of these violations of the law. This is obviously because non remittance is not a crime. It should be criminalized.

Accordingly, the Fiscal Responsibility Act should be amended to provide that non remittance of the prescribed operating surplus is a crime against the Federal Republic by those charged with the responsibility. The Chief Accounting Officers and the Directors of Finance of the MDAs should be specifically charged with the function and responsibility of remitting operating surplus of the respective MDAs.

i) State Pardon of Public Officers Convicted of Corruption.

As I was revising the manuscript of this book, rumours were making rounds that lobbying and importuning were in top gear to get the President to grant state pardon to some high profile ex public officers convicted of corruption.

Given the very very few corruption convictions of high profile public officers, such State pardon would be highly controversial, and would be counterproductive in the anti-corruption fight and posture of the government.

Moreover, with hundreds of thousands of poor Nigerian youths held in prison and detention custody simply for the crime of "awaiting trial", such a pardon would seem self serving and insensitive by us the politicians, contributing to the sense of hopelessness and despair in the capacity of the polity to change for good, which in turn increases resentment and drives ease of recruitment of the youths into insurrectionist agitation, banditry and other serious crimes.

Morale in the anti corruption establishment would surely be demolished by such a pardon, while Nigeria would appear unserious to the international community regarding anti-corruption fight, which would then deal a major setback to our quest for foreign aid and the possibility of debt relief.

Above all, such a pardon would furnish an intense moral hazard to the nation's public officers, and thereon fostering impunity in governance.

In sub conclusion, I should submit that the faithful and diligent implementation of these anti-corruption measures should bring about transparency, stem misapplication of resources, increase average value-for-money on public expenditure from 35% to 90%, restore peoples' confidence in their government and its institutions, and save the nation about N6.5 trillion directly and indirectly every year, unshackle the strictures on the economic engine imposed by corruption, allowing the GDP to leap by as much as 20% and creating millions of jobs.

Chapter 3

Rapid Population Growth

And Anemic GDP

For the past 30 years, our population has been growing rapidly at an average rate of 3% per annum, whilst our GDP was limping anemically, averaging 1.2% yearly. This means that the number of human beings we bring forth to the world far outpaces and surpasses the quantities of food, goods and services we produce to feed, nourish and service the teeming and growing populations, thereby impacting negatively the nation's per capita income and pushing tens of millions of Nigerians into poverty.

Nigeria is today the 7th most populous country, and one of the fastest growing in the world. At the present pace, we are projected to become the third most populous country in the world by year 2050, with a projected population of about 400 million people, with about 200 million living in extreme poverty, and with the nation's population density increasing from 214 to 425 persons per square kilometer, making land more scarce and generating more scramble and insecurity.

This projection accords with the 18th Century Malthusian theory of population, postulating population growth by geometric progression, and food supply and sustenance, by arithmetic progression. Figuratively, it is saying that population grows with the speed of a car while food supply and amenities grow at the pace of a brisk walk, leading to the procreation of many more people than commensurate quantities of food supply, and driving a majority of the people into hunger.

Thomas Malthus has been criticized for failing to provide the calculations for his theory, and that he failed to anticipate today's advancements in technologies and agricultural sciences, including cutting edge agro - electro - mechanical equipment, genetic modification of crops, nutritious fertilizers, immense capacities in processing and storing, factors which drive exponential increase in food production and output. Nor did his theory anticipate globalization and trade that make it easy for countries without much land or agricultural resources to purchase sufficient quantities of food through trade. Malthus's forecast has also not played out in the first world

where population has grown at a much slower pace, with most birth rates ranging between 8 to 12 births per 1000 people in 2019.

However, for Nigeria and indeed Africa, with a 2019 birth rate of 38 births per 1,000 people, and without much of the advancements of the first world, Malthus is right on target.

President Buhari, in an article published on 15th August 2021 in Financial Times of London, stated:

"Despite having six of the world's top 10 fastest-growing economies, my continent's gross domestic product gains are insufficient to provide for burgeoning populations.

Since the start of the US-led war on terror in 2001, Africa's population has nearly doubled. Every day, every month, this means more unemployed or underemployed entering the labor market, far outstripping economic expansion.

A lack of hope is the chief recruiting sergeant for the continent's new brand of terrorism”.

Months later, Mr. Femi Adesina, President Buhari's Special Assistant on Media and Publicity, took to his Facebook page to announce that President Muhammadu Buhari has launched the Revised National Policy on Population for Sustainable Development.

Mr. Adesina added that the President also inaugurated the National Council on Population Management, chaired by himself, and the Vice President as the deputy chairman, with Heads of relevant Ministries, Departments and Agencies as members.

Speaking on the revised population policy, the President said: "The policy emphasizes the urgency to address Nigeria's sustained high fertility rate, through expanding access to modern family planning, counselling and commodities, as well as promote birth spacing.

This will enable Nigeria to achieve rapid fertility control, improve the health of women, adolescents, newborns and children, and other population groups."

The President said that the policy's overall goal was to improve the quality of life and standards of living of all Nigerians.

The government must therefore work with religious and traditional leaders to agree to a religiously and culturally acceptable means of managing the nation's population growth, while striving to achieve the necessary advancements directed towards a rapid expansion of the economy, at a rate that comfortably exceeds population growth.

It may be necessary for the newly inaugurated National Council on Population Management to summon a meeting of religious, traditional, civil society leaders to start the conversation, elicit an endorsement, and agree on an action and sensitization plan.

Population management is a sensitive topic in all religions. Consequently, the nation should leverage President Buhari's and Vice President Osinbajo's stature, standing and goodwill in the religious community in continuing to rely on their leadership of the National Council on Population Management even when they leave office in 2023.

*“The foundation
of every Nation
is the Education
of it's Youth”*

Diogenes

Chapter 4

Education Sector.

Challenges.

Illiteracy And Poor Education Without Skills.

Possible Solutions.

a) Overview

The very poor state of Nigeria's education system and the high rates of illiteracy are some of the main causes of unemployment, underemployment, low economic advancement, low scientific and technological advancement, poor social and civic attitudes including superstition, tribalism, ethnocentrism, gender discrimination, religious chauvinism and intolerance.

There are today tens of millions of school age children and young adults, who are out of school at various levels.

At the basic education level, Nigeria's net enrollment rate is just about 65%, with a dropout rate as much as 25% in some areas, against the global enrollment average of 90%. Besides, most of those fortunate to attend school, particularly public schools, receive poor education from ill equipped schools burdened by teacher shortages, and from inadequately trained teachers, and in most cases, without skill acquisition.

Nigeria's adult literacy rate stands at a disappointing 55%, compared to a global average of 86%.

Let's be clear, the most fundamental reason why Nigeria is still a low income, poor third world country, belonging in the low human development category and ranking 161 out of 189 countries in the Human Development Index, is the education and skills gap between Nigeria and the first world countries, and also the education attainment gap between the haves and the have-nots within Nigeria.

Of course, all nations develop in correlation to the levels of their educational achievement since education remains directly or indirectly, the main driver of all other indicators in the Human and Social Development Indexes, Poverty Index and Gender Inequality Index, etc., all in which Nigeria's ranking leaves very much to be desired.

Thomas Piketty, the prominent French economist, has successfully demonstrated that education is the main instrument to unlocking meaningful progress, and narrowing the income and wealth inequality. Piketty advances the importance of diffusion of knowledge, skills, productivity and acuity as the fundamental mechanism to lowering inequality.

The Brookings Institution empirically estimates that it would take a country with such education and skills gap as Nigeria, particularly the educationally marginalized youth within Nigeria, about 100 years to achieve the education and skills levels that the wealthiest enjoy today.

In their 2018 book titled "*Leapfrogging Inequality: Remaking Education to help the young people thrive*," some researchers at Brookings Institution led by Rebecca Winthrop, arrived at the plausible conclusion that in order to urgently close this 100 year gap in education quality, we must pursue vigorously, bold new approaches that have the potential to rapidly accelerate the quality of learning and educational progress, to ensure that all young people develop the skills they need to thrive in our fast-changing world – not a century from now but today!

Winthrop and her colleagues reviewed a collection of over 3000 educational innovations to develop their leapfrog pathway or framework for bridging the gap.

The framework has four elements: teaching and learning; recognition of learning; people and places; and technology and data.

Put simply, these elements prescribe for us, the recalibration of Nigeria's education strategy in a way that urgently and simultaneously reforms and optimally enforces access to education, quality of education and relevance of education, in order to leapfrog Nigeria's debilitating education and skills gap.

The Roadmap for the Nigerian Education Sector, published in 2009 by the Federal Ministry of Education (FME) under Dr. Sam Egwu's ministerial stewardship, sought to address essentially these burning problems of access

and equity, quality assurance and relevance, technical and vocational education and training, and funding. Same goes for another Roadmap published in 2016 by Minister Adamu Adamu led FME, dubbed "Education for Change," based on nine pillars of action plan.

Despite these and various policy thrusts, reviews, interventions, legislations and roadmaps, Nigeria's education system is still stuck in a deep hole. A hole dug deeper and deeper over the past 35 years.

By the stipulation of the National education policy, early childhood care and development education, starting at the age of 3, became the commencement point of education in Nigeria. This stage is so important since it prepares the child for primary education and lays the foundation for the child's cognitive, intellectual, physical, emotional, and social skills development, as well as the foundation for the spirit of enquiry and creativity. In short, it lays the foundation for all that is to come. And yet, out of the 26 million eligible children in Nigeria, only about 3 million are presently enrolled. A shaky start indeed!

And notwithstanding the fact that the basic education, spanning from primary to junior secondary level, is now legally compulsory and free, and that failure or neglect to present a child or ward for schooling is now a crime, and also the fact that charging school fees for public basic education has become a crime, there are as of today about 15 million basic education age children out of school, including internally displaced kids, those with disabilities and those scared away from school by the spate of recent mass pupil kidnappings prevalent in some parts of the country.

But despite these millions of kids out of school, the school system is still so hard pressed by severe shortages of teachers and classrooms, that the teacher – pupil ratios set at 1 teacher – 35 pupils for the primary level and at 1-40, for the secondary level, have altogether been abandoned, with most classrooms overcrowded by over 200%. There exist today, shortages of over 800,000 teachers and 200,000 classrooms in early childhood care, basic education and senior secondary education systems. Yet, in addition to chronic teacher shortage, teacher quality continues to be a major constraint to quality delivery. To ensure teacher quality, teaching was at the least

notionally professionalized, requiring registration with the Teachers Registration Council, and with Nigerian Certificate of Education, obtainable from any of the colleges of education, set as the minimum teacher qualification. The National Teachers Institute was established to provide in-service training for teachers. Nonetheless, training standards remain unsatisfactory. What's worse, participation rates in teacher training are very low, perhaps because teachers suffer such low morale and motivation due to poor remuneration, which are often times delayed, in addition to an absence of an effective reward system. No surprise then that many do not exert the needed effort to train and qualify. In consequence, more than 44% of existing teachers do not possess the minimum qualification. Nevertheless, unqualified teachers are allowed to continue teaching due to the huge teacher deficit. It certainly needs no reminder that teacher quality remains the most significant factor in ensuring quality of learning, especially at the basic education level.

And though the curriculum load for basic education was supposedly enhanced for relevance by notionally emphasizing science, as well as introducing information and communication technology subjects, in reality, the necessary labs and computers and electronic devices for teaching and learning are nonexistent, nor are qualified science and ICT teachers readily available.

And never were mathematics, science and technology subjects, the bedrock of any technological capability, stoutly promoted and advanced, either as school disciplines or as national policy. In our 60 years of independence, there has never been a mass muscular national effort to enlist or enliven the interest of prospective pupils and students toward math, science and tech subjects and courses. Nor did the nation ever deploy any positive incentives, financial or otherwise, to mobilize and sustain this necessary interest. Indeed, many a student's self-motivated desire for mathematics, science or technology subjects, has often been dashed by unavailability of the requisite science labs, learning materials and qualified teachers.

And never was a mass vocationalized basic education program vigorously pursued or targeted to cover all pupils and students on a scope that was verily

and mandatorily universal, and with vocationalization commencing as early as from primary two rather than junior secondary level, in order to heighten early appreciation of and pursuit of practical and technical skills as a basis for career choice.

Moreover, most public schools are so poorly built or dilapidated and lacking in infrastructure, basic teaching aid and materials, so much so that less than 1% of all of them are capable of passing the quality assurance test.

If we cannot provide basic school blocks and class rooms with basic teaching materials and minimally qualified teachers, how can we even attempt the building of a modern educational system that is founded on, and properly equipped for science, technology, engineering, and mathematics (STEM)?

With our present desperate state of education, in-school illiteracy is so prevalent, that nearly 50% of all pupils and 64% of the pupils in the rural areas and 83% of pupils in the lowest economic quartile are not learning because they cannot read and write. These figures, set against the enrollment average of 65%, with a dropout rate upwards of 25% in some areas, show that Nigeria's effective participation rate in public basic education in some areas is less than 10%. A disaster indeed!

This low participation rate perpetuates illiteracy and strikes devastating blows at the foundation of the Nigerian state.

Even so, while adequate funding continues to be a major challenge to basic education, this challenge is made more acute and burdensome to schools by the incapacity of most states government to provide their obligatory counterpart funds in order to access federal funds meant for upgrading school facilities in the respective states. Over N60billion of such federal funds are lying idle in the central bank, eagerly waiting to be accessed and put to productive use.

Consequently, over 70 million Nigerians are illiterate. And to mitigate such a massive rate of illiteracy, Mass Literacy, Adult and Non – Formal Education was instituted, and with an eponymous commission, charged with bringing functional literacy and continuing education to illiterate adults, school

dropouts, and those with impaired access including nomads, migrant fishermen, disabled persons and displaced persons. However, only about 500,000 persons are enrolled in the adult education program, with an additional 400,000 enrolled in nomadic schools. The mass literacy program is therefore an abject failure and will continue to be a failure unless we rethink the philosophical basis of our aims and approach, in order to truly pursue mass education and literacy on a phenomenal scope.

Vocationalization of education was supposed to be introduced at the junior secondary level by including in the curriculum, some practical subjects to avail pupils with basic knowledge and skills, and to infuse them with disposition and enthusiasm for pursuing the path of technical and vocational education and training (TVET) towards becoming skilled workers and combating the frightfully high rate of youth unemployment. Sadly, this objective is yet to achieve even the slightest success.

The TVET program at the senior secondary level has the target of moving 86% of the basic education school leavers into the technical colleges for the National Technical/Business Certificate, equivalent to Senior Secondary School Certificate and thereafter seek the Advanced National Technical/Business Certificate or seek admission to any of the universities, polytechnics or monotechnics, for further relevant technical courses of study. Appallingly, less than 3% of basic education school leavers proceed to technical colleges.

Two additional types of vocational training institutions were recently introduced, licensed by the National Board for Technical Education (NBTE), but meant to be driven and funded for profit or otherwise, by the private and public sectors.

These are Vocational Enterprise Institutions offering vocational programs equivalent to the senior secondary level leading to the award of National Vocational Certificate, and Innovation Enterprise Institutions that offer post senior secondary vocational diploma programs leading to National Innovation Diploma.

Also, there is the Industrial Training Fund, a federal government training and

skills acquisition dispersal agency, which has recently received NBTE accreditation for running courses leading to issuance of National Vocational Certificate and National Innovative Diploma.

More still, basic education school leavers or dropouts may as well opt to receive vocational training from any of the open apprenticeship centers coordinated by National Directorate of Employment.

The reality is that not many people are aware of these programs. And fewer still get enrolled because of low penetration of TVET.

Whatever may be the case, TVET, as a share of Nigeria's education structure, remains abysmally insignificant, representing less than 5% of all enrolment.

Some of the reasons for this very low penetration are: lack of awareness of TVET programs and their advantage to economic mobility, undue preference for the seemingly more glamorous conventional education owing to perception of inferiority of TVET, low quality TVET programs due to lack of adequately equipped technical and vocational schools, and dearth of qualified staff and teachers, poorly designed curricula induced by the absence of reliable labor market data and information.

Generally speaking, the absence of a functional education management information system that ensures the maintenance and update of relevant and credible data usable in educational planning and resource management, is a major roadblock in the administration of education in Nigeria.

As for tertiary education in Nigeria, it fares no better and is bedeviled by the same problems of access, equity, quality assurance and relevance, inadequate funding and imprudent management, in addition to poor scholarship and research capacity, lack of tertiary education resources, infrastructure, befitting scholarly and grooming environment, scarcity of academic staff and lack of autonomy.

Most universities are glorified secondary schools. There are just a few that can pass a basic quality test. And due to insufficiency of seats in such relatively standard public universities (Nigerian standards), admission is so

crises ridden, that only 10% of qualified applicants get admitted in the "standard" universities. Most private universities, though proliferated, are also characterized with low quality. The few standard ones have much fewer seats, are unable to fill this gap, and are even then, more expensive and unaffordable to the majority of the applicants. The pressure and scramble for the limited seats have led to admissions beyond the carrying capacity of "standard" public universities, resulting in overcrowding and declining standards. And often times to bribery and corruption. All those who cannot make the few relatively standard universities, manage whatever "education" they can get in any other so called tertiary institutions. As at June 2021, there were 44 Federal, 52 State and 99 private Universities in Nigeria.

In the 2021 Webometrics global universities ranking, no Nigerian university made the first 1,100 globally. Coming in as the best in Nigeria, the University of Ibadan, ranks 1,196; Covenant 1,314; the Obafemi Awolowo 1,503 and University of Nigeria 1,554. 12 universities in South Africa, 4 in Egypt, 1 each in Kenya, Ghana and Uganda, outrank the best in Nigeria.

Meanwhile, the system of central control and the near- micro management of federal and state universities and polytechnics, through direct government appointment of chancellors, vice chancellors, rectors and governing boards, influence on recruitment of lecturers and fixture of remuneration, infrastructural project initiation and direct appropriation, etc. have deprived the institutions the requisite autonomy growth dynamic, individual institutional initiative and responsibility, healthy rivalry and competition among institutions. Unfortunately, central control breeds a culture of dependence and dis-incentivizes intellectual, scientific, research, enterprise and business incubation drive, and pursuit of alumni endowment funds. The partnership that should exist between our tertiary institutions, the government and big business in relation to research projects and outcomes, including product design and development necessary for economic diversification, is consequently nonexistent.

Nothing, however, portrays the nation's lackadaisical commitment to diversifying her economy, than the neglect of our polytechnics and technical institutions. The essence of these institutions is to provide qualitative technical and technological human resource development, and to produce

the urgently needed highly skilled craftsmen, technicians, technologists, skilled engineers, applied scientists, etcetera – the manpower necessary to diversify the economy into mechanized agriculture and industrialization including manufacturing, mining and utilities.

Disastrously, our polytechnics, monotechs and other technical institutions are undermined by an institutionally entrenched perception of inferiority, stigma and discrimination, under the pervasive system of preference for paper certificates over demonstrable skill and applied knowledge, and so TVET suffers disproportionately in funds allocation from the meager funding available for education in Nigeria. This is so, never minding that applied technical and technological education is much more capital intensive.

Never was the national education policy skewed with a patent bias towards technical and vocational education and training – TVET, from the stand point of mass sensitization, mobilization and promotional campaign, greater share of educational fund allocation, tuition waivers, bursary awards and other financial incentives, etc. To the contrary, there was always the habitual neglect and lack of commitment to TVET. Consequently, with an estimated population of over 200 million people, Nigeria can only boast of 152 Polytechnics, 122 Monotechs, and 370 junior technical and advanced technical colleges which include Vocational and Innovation Enterprise Institutions, compared to the 23,000 general secondary schools existing in Nigeria, portraying the abysmal insignificance of TVET as a share of Nigeria's education delivery. And even less significant is the quantum of new investment in TVET, averaging only about 3% yearly as share of the nation's overall new investment in public and private education and schools start-up. The result of the blatant marginalization against the education and practices of the technologists, technicians and craftsmen, is glaringly manifest in the statistics of registered engineering personnel in the COREN register. As at June 2021, the total registered engineering personnel was:

Engineers	- 62,313,
Technologists	- 6,587,
Technicians	- 937,
Craftsmen	- 2,778.

This is like turning the great pyramid of Egypt at Giza upside-down. There

should be many more craftsmen than technicians and more technicians than technologists and more technologists than engineers.

The ratio should be:

20 craftsmen to 1 engineer

7 technicians to 1 engineer

4 technologists to 1 engineer

So the COREN register with 62,313 engineers should have 1, 246, 260 craftsmen, 436,191 technicians, and 249, 252 technologists.

The technical manpower for diversification and industrialization is simply not there, and still the nation neglects, marginalizes and discriminates against TVET.

Oppositely, the abiding importance of TVET to some other countries is easily shown by the fact that the budding technological and technical know-how powers, especially in Asia, are converting thousands of their general universities into polytechnics, owing to their prioritization of technical and practical education, and the attendant technical and technological skills over academic certificates and college degrees. We do not have enough universities in Nigeria and so cannot convert some to polytechnics, but the larger regrettable point here is that in Nigeria, Polytechnics and technical schools are officially and overtly treated with contempt and usually accorded a second class status. A clear example, is the practice of placing polytechnic graduates on an entry Grade Level 07 on the civil service ladder and a glass ceiling of GL 14 beyond which they cannot climb, while their university counterparts commence on Grade Level 08 and with no career limit. This dichotomy obviously adheres to the nation's continued enforcement of the Independence era Cookie Commission's salary scale differential between the university and polytechnic graduates.

For obvious reasons, therefore, there is a stampede to covert our polytechnics and monotronics to universities. We, the politicians, National Assembly members and Governors, race to outdo ourselves in this quest, sponsoring bills to convert federal and state polytechnics and monotronics into universities as we have failed to understand the imperatives of technical and technological education bias in the dynamics of a compelling march to an industrialized economy.

The proper thinking is exemplified by the executive order signed by the American president on the 26th of June 2020, mandating prioritization of jobs skills over college degrees in federal hiring, which speaks volume coming from the leader of the industrialized world.

Nevertheless, outcome-based teaching of engineering programs in the nation's universities is indispensable to lifting the quality of engineering graduates, and to accomplish this, the engineering lecturers would need to upskill to be able to educate their students with a curriculum that weaves theory and practical knowledge together. Very many engineering graduates are unable to self-employ due to lack of skills.

Moving on, let me point out another malaise that is commonplace in most tertiary institutions today. It is the exchange of cash or in-kind favours for pass marks. This corrupt practice known as "sorting", has contributed to millions of "graduates" being churned out without education, and continues unabated and unchecked till date.

The National Universities Commission (NUC) and the National Board for Technical Education (NBTE) plagued by problems of capacity, have performed woefully in tackling the endemic falling standards of tertiary education, including prevalent corrupt practice of "sorting".

Nigeria's tertiary education is a major victim of low human capacity in NUC and NBTE. If the regulators and enforcers of standards lack the will and power to enforce standards, then there is a fundamental problem. NUC excels in the facilitation of proliferation and mushrooming of university licenses with less attention to post commencement quality assurance. In a short span of 22 years (1999-2021), the number of licensed private universities jumped from three (Babcock, Igbinedion and Madonna) to 99. In the same period, cut-off mark for admission declined from of 250 to 160 over 400. The decline is systemic.

The story is similar with the academic fortunes of the national Open and Distance Learning program. In order to encourage continuing education and to provide the necessary flexibility in lifelong learning, as to time, space and

place, the suspension order on Open and Distance Learning, was lifted by the 4th edition of the National Education Policy in 2004.

Regrettably, the National Open University of Nigeria - the only Open University in Nigeria - can hardly be credited with much impact, with just 515,000 students enrolled, out of whom only 177, 000 are active, as against millions of un-enrolled qualified students who ought to have taken advantage of the Open University.

The eleven distance learning centers recently approved by the National Universities commission face the same road bumps as does the National Open University of Nigeria, including : funding, poor ICT penetration, technophobia, inability to afford personal computers or laptops, low and slow internet connectivity, unsteady power supply, and so forth.

These road bumps have also hampered the virtual and remote learning capacities of all education institutions in Nigeria, leading to the calamity of a complete shutdown of the entire education system during the Coronavirus pandemic, when in-person classes and lectures became impossible.

Other countries with well-developed education systems transitioned to virtual classes and lectures, to the benefit of the students, their families and their societies at large, while in Nigeria, at the very least the full academic session was lost. Terrible for an education system already in severe doldrums.

I have provided this overview of our education sector to emphasize the widely known fact that Nigeria's education system is in a state of deep crisis and can only be remedied by far reaching reforms and measures, the breadth and depth of which must be revolutionary in scale and scope.

b) Way Forward.

I will propose a few broad policy outlines.

c) National Formative Education task force.

Constitutionally, early childhood care and development education, primary and secondary education are within the legislative competence of the states.

Essentially, these levels constitute the formative years of human development. Sadly, like all public educational institutions in Nigeria, the schools in this category are wallowing in stupendous privation and decay.

One of the main reasons why most of today's graduates of the universities are unable to write simple letters or applications correctly is the rot in the primary and secondary school system, including the very low teacher quality, leaving our students without the proper academic foundation.

Rescuing the system, as well as teacher quality, requires an international effort and donor funding. The nation's parlous finances alone cannot carry it.

In order to leverage international know-how and experience, and inspire the confidence of international community, especially the donor class, I do propose, that subject to a formal agreement between the States and the Federal Government, there be set up an internationally composed National Formative Education Task Force (NFETF), with a life span of 10 years extendable by mutual agreement.

The mandate of NFETF should be to oversee the revamping and effective stabilizing measures, and to bring up to appropriate standards, the universal basic education; Federal and States senior secondary schools; mass literacy, adult and non-formal education; Federal and States colleges of education.

NFETF should be composed of 6 renowned Nigerian educators, 3 resident and 3 from diaspora; 5 accomplished foreign educators nominated by United Nations Educational, Scientific and Cultural Organization (UNESCO); 2 accomplished foreign educationists nominated by United Nations International Children's Emergency Fund (UNICEF); 1 representative of Federal Ministry of Education.

NFETF should have power to appoint any other persons it requires to carry out its mandate, including volunteers, and may set up six zonal committees for administrative convenience, work through the relevant state structures, make personnel changes in those structures and make all the changes it considers necessary to succeed.

NFETF should maintain a Fund, into which should be paid Federal Government appropriations, States Government contributions, accruals of share of the Federation account proceeds meant for the development of education, endowments, domestic and international donations, and all monies meant for the rehabilitation.

d) Universal Basic Education and senior secondary school education.

NFETF should double as the Board/Commission of the Universal Basic Education Commission, and should work with a consulting firm to conduct an open human resource process to recommend three persons from which the President would appoint the Executive Secretary of UBEC. NFETF should have power to hire and fire any other staff. It should carry out a needs assessment of early childhood care and development education, primary schools, junior secondary schools and senior secondary schools, including for teachers, school blocks, classrooms, teaching materials, materials needed for early vocationalization, mathematics, science and technology and TVET. Upon conclusion of assessment, it should commence a systematic retrofitting of the schools by the provision of all lacking school infrastructure, equipment and teaching materials.

Vocationalization, mathematics, science and technology and TVET, must be given emphasis right from primary one, while technical education, mathematics, science, technology should be compulsory subjects from class one in the junior secondary through the senior secondary level (Mathematics is already compulsory).

Regarding the chronic shortage of teachers, NFETF should consider ways of hiring willing graduates of universities and polytechnics and equipping them with educationally adequate crash courses, provided that hiring is limited only to those who pass the crash course.

My beloved mother was a teacher. I learned from her growing up that the most important job in human and societal development is teaching since that is the engine for dissemination, dispersal and diffusion of knowledge, upon which our civilization hangs. However, one of the enduring paradoxes in Nigeria has always been how shabbily and contemptibly we treat these guarantors of our civilization, the teachers, the lecturers, the professors,

indeed the academia. The urgent issue of proper remuneration of teachers should be dealt with, side by side teacher education and quality, including timelines within which to satisfy the compulsory educational qualification. The teachers must be well paid and that is the only way to attract and keep high quality teachers. The current teachers' pay structure is utterly inadequate and despicable.

NFETF should have power at any time to make the necessary personnel changes in the State Senior Secondary Schools Administration, Universal Basic Education Board and the Local Government Universal Basic Education Authority.

NFETF should design a set of incentives that would aid attraction of students and teachers to science and technology education. A massive publicity campaign should commence simultaneously with building, refurbishing, equipping and showcasing science and technology laboratories, to publicize the incentives and the new labs with a view to eliciting the interest of prospective pupils and students, and parents towards science and technology classes.

e) Colleges of Education, National Teacher's Institute.

The quality of the teacher is almost the totality of everything in the formative years of a kid. Special care must therefore be employed to refurbish and re-equip the colleges of education and the National Teacher's Institute, with necessary materials and lecturers, both for in person and virtual classes.

f) Mass literacy, Adult and Non-formal Education.

The reason why out of about 70 million illiterate Nigerians, only about 500,000 persons are enrolled in the adult education program and with an additional small number of persons enrolled in nomadic education, is the lack of seriousness and commitment that has attended the organization and pursuit of the program.

The defining word is "mass" which denotes universal. The fitting approach to pursuing mass literacy requires, mass classes and mass student engagement, all happening concurrently. NFETF should, in collaboration with Mass

Literacy, Adult and Non Formal Education Commission, design for the program, a simple curriculum including basic practical skills (e.g. how to perform simple digital tasks) and also design class structure. The classes should be located in council units for the townships and village squares, town halls, district headquarters, etc for the hinterlands, and also in school and religious premises in all cases. Educated unemployed youth should be recruited as teachers and accordingly trained under the auspices of the proposed Infrastructure Youth Corps (IYC, I will explain this proposed entity soon).

Some of those adjudged redundant in the bloated public service should also be trained and employed to teach in the mass literacy program.

Since the mass literacy program would be widespread, spanning the far-flung and remotest parts of the country, the teachers in the program should be trained to handle the National Identification Number registration of citizens in the parts of country where they teach. They should also handle small holder farmers registration into the farmers' digital data base.

g) Quantum of works, jobs.

Revamping existing school infrastructure and building additional ones needed by these levels of the educational system, will involve tens of thousands of school blocks, dormitories, play grounds, workshops, infirmaries, halls, sports facilities, administration blocks, staff rooms, refectories, science labs, internal roads, walk paths, landscaping works, grass lawns, hundreds of thousands of classrooms, etc. These would generate hundreds of thousands of jobs in each State and the Federal Capital Territory (FCT), including teaching jobs in universal basic education under the crash course program for graduates, and under the mass literacy program.

My proposal is that these jobs and many other infrastructural jobs should be handled by mobilizing and training the Nigerian unemployed youth, and recruiting them to provide the required services under the auspices of the proposed Infrastructure Youth Corps (IYC). I will discuss IYC in more details soon under the heading, "*Unemployment, especially youth unemployment*".

h) Strengthening the National Universities Commission (NUC).

The starting point to remedying the quality crises in Nigeria's university subsector and repositioning it as a source of Nigerian and wider global intellectual force is by strengthening the human capacity of NUC and putting a process permanently in place that ensures optimal human capacity at the Commission at all times.

The NUC Act should be amended to internationalize the composition of the Commission so as to reap the benefit of exposure, cognate experience and knowledge in global trends in tertiary education development and organization. It is also necessary to allow NUC some measure of independence to perform its functions for the good of the system. Where the government decrees into existence, universities without the requisite advice from NUC, and necessary funding or processes to ensure quality assurance, the Commission must be able, upon assessment, to shut down the unqualified universities. The Minister should no longer have the power as currently exists under section 4.2 of NUC Act to direct NUC to do or carry out any particular act. Also, the present situation where the Minister appoints four of his staff as members of the Commission is, without question, inimical to the capacity and independence of the Commission.

I propose that the Commission be composed of four Nigerian renowned professors not currently engaged in active service with any Nigeria university, six Nigerian renowned professors currently engaged in active service with foreign universities whose global rankings do not exceed 400, six foreign professors nominated by UNESCO, retired from service or currently engaged in active service with universities whose global rankings do not exceed 200. These professors would, as a Commission, conduct a recruitment process and recommend three persons for the President to choose from and appoint as the Executive Secretary, who automatically becomes a member of the Commission. All other staff of the Commission would be hired and fired by the Commission.

Vacancies of Nigerian appointees in NUC should be filled by the NUC, supported by a two third majority vote of the membership, while vacancies from the nominees of UNESCO should be filled with new nominations by UNESCO.

NUC should also have power to remove the executive secretary with a secret ballot vote supported by two-thirds majority of the membership. The NUC may appoint a member in acting capacity and then nominate three persons from whom the President would appoint a substantive Executive Secretary.

The re-recomposed NUC, should also manage a separate Research Fund that would be established to fund the research activities of all research institutes.

i) New Universities.

The new NUC should immediately set a new quality-assurance-impelled stringent requirements that must be fulfilled before another university license is issued to any persons whomsoever. The requirements would be so detailed that even the architectural planning layout and complete conceptual drawings of the proposed university should be submitted along with the enabling application documents. Of course, the funding projections must be clear and backed up with evidence particularly for the first 10 years of the proposed university.

Where the government legislates any university into being, the NUC must have power to decline license if the university does not fulfill quality assurance requirements. The amendment to the NUC Act should provide a mandatory necessity for all universities, including those established by law, to be issued with a license that is subject to withdrawal upon existential infractions, especially if they were quality assurance related.

There are now pending before the National Assembly, 54 odd bills seeking to establish new tertiary institutions despite the existing ones being literally wedged in squalor, lacking even the basic amenities and facilities, and suffering severe deficit of academic staff.

j) Consolidation of existing universities.

The recomposed NUC should conduct an in depth quality assurance test of all universities and their faculties. Those which pass the test would continue to exist as stand-alone universities, while those which fail the test would be offered consolidation through mergers and acquisitions or on such terms as

NUC deems fit for the orderly development of Nigerian university education. Where a faculty or department fails the test, NUC would determine and impose obligations and conditions with timelines for re-accreditation.

However, we must accept the fact that with the best Nigerian university ranking 1196 globally, all Nigerian universities are in urgent need for proper rehabilitation of physical structures, academic staffing and governance framework, including those which pass the test and those to be consolidated.

k) Nigerian Universities Rehabilitation Task Force (NURTF).

I propose that with a formal agreement between the Federal and States government, there should be established the Nigerian Universities Rehabilitation Task Force (NURTF) with a life span of 10 years to oversee the post-consolidation rehabilitation of Federal and States Universities and the provision of needed facilities. The agreement should specify funding contributions for all public universities between the Federal government and the States government. The contribution should be calculated on the basis of each university, and should be without prejudice to the public universities' share of the proceeds of the first charge on the Federation Account meant for Nigeria's educational development. Any State is free to opt out of this rehabilitation program, provided the exercise should move forward if there exists the requisite majorities to carry through the program.

However, only universities which pass the quality assurance audit carried out by the recomposed NUC should continue to exist after the grace period.

NURTF should design a set of incentives that would aid students in science and technology courses.

The board of NURTF should be composed of three reputable and resident Nigerian professors and four reputable Nigerian professors engaged by foreign universities with global ranking not exceeding 400 in world ranking of universities and six accomplished foreign professors of universities with global rankings not exceeding 200, nominated by UNESCO. Upon inauguration, the board, should shortlist 3 persons, one of whom the President would appoint as Director General of NURTF thereof.

The Nigerian Universities Fund (NUF) managed for the public universities by the NUC, should also receive the public universities' share of the proceeds of the first charge on the Federation Account meant for Nigeria's educational development, and public universities' share of TETFUND. Upon, the re-composition of NUC and the composition and commencement of work by NURTF, public universities should be funded by way of block grant for salaries, emoluments and sundry expenses, with a formula created by NUC, while rehabilitation expenditures should be paid into NURTF Fund. NURTF should work closely with the Vice Chancellor and university administration for the rehabilitation of the respective university.

Refurbishment projects in the institutions must be carried out in such a manner as to secure transparent execution and utmost value for money. All works capable of being carried out by the Infrastructure Youth Corps (IYC) should be so executed.

I) Autonomy of Public Universities.

One of the objectives of the 10 year life span of NURTF, should be as much as practicable, to assist the universities to achieve full autonomy from government, with exception to receiving funding through block grants. To this end and for the purpose of achieving a significant improvement in the academics, administration and quality assurance, in terms of exposure, global trends in intellectual pursuits, scientific and research processes and linkages, corporate governance culture, student exchange programs and greater flow of ideas and information, each university should be obligated to enter into a working/associate relationship with a self-chosen foreign university whose global ranking must not exceed 200.

The foreign associate university should nominate from its personnel roll, 6 professors out of the proposed 14 member governing council of the Nigerian university. The remaining 8 members of the governing council (4 resident and 4 from diaspora, all of whom should be accomplished educators), should be painstakingly shortlisted by NUC and recommended for appointment by the President.

The Vice Chancellor should henceforth be elected or removed by votes of not less than two-thirds majority of the membership of the governing council, conducted by secret ballot.

After the inauguration of the new governing council, any future vacancies in the council from the Nigerian members, should be filled with new members elected by two-thirds majority of the governing council with the consent of NUC, vacancies from the nominees of the foreign associate universities should be replaced by a new nomination accordingly.

After the rehabilitation period, by which time all public universities should have become autonomous and self-governing, funding of the public universities should exclusively be through block grants.

Upon attainment of autonomy, the universities would be self-governing in all respects, including employment, appointments, salary and remuneration structure, projects, curriculum, etc.

The Tertiary Education Trust Fund Act should be amended to remove the governing structure and all the functions, in order to reduce the fund merely to a collection account with the CBN into which the FIRS would remit all tertiary education tax for automatic remittance to Nigerian Universities Fund and NBTE Fund, based on an agreed ratio between NUC and NBTE.

In a case of crises making a federal university ungovernable, the President may suspend the Governing Council with a resolution of the Senate, supported by two third majority of the Senators. In a case of crises of a state university, the Governor may suspend the Governing Council, provided with a resolution of the State House of Assembly supported by two third majority of the members, in addition to a resolution of the Senate.

I will have a few more remarks on research institutes in Chapter 8 of this Book.

m) National Board for Technical Education (NBTE), Polytechnics, Monotechnics, Technical Colleges.

There are presently 644 Federal, State and private technical and advanced technical colleges and tertiary technical institutions in Nigeria.

S/No.	INSTITUTIONS	NUMBERS
1	FEDERAL POLYTECHNICS	37
2	STATE POLYTECHNICS	51
3	PRIVATE POLYTECHNICS	64
4	SPECIALISED INSTITUTIONS	36
5	COLLEGES OF AGRICULTURE	33
6	PUBLIC COLLEGES OF HEALTH	43
7	PRIVATE COLLEGES OF HEALTH	10
8	INNOVATION ENTERPRISE INSTITUTIONS (IEIs)	169
9	TECHNICAL COLLEGES	123
10	VOCATIONAL ENTERPRISES INSTITUTIONS (VEIs)	78

TOTAL 644

The older of these institutions are in terrible decay and stand out for their grossly deficient labs, workshops, machines and other equipment necessary to learn and imbibe practical training, while the relatively new institutions have no equipment and therefore, possess none that would suffer decay. Shortage of teachers and lecturers is chronic. Obviously, technical education in Nigeria has suffered a disproportionately higher neglect due to the enervating effect of institutionally promoted discrimination and perception of inferiority. No wonder then that most of these institutions have sparse student populations.

Yet, the nation is so in dire need of skilled manpower that the government must not only rebuild and revitalize the public technical education system, it must find a way of assisting private technical institutions to repair.

The starting point of renewal, however, is at the National Board for Technical Education (NBTE). The establishment Act as amended, essentially makes NBTE an appendage or a department of the Ministry of Education, just as NUC. These bodies are regulatory entities and therefore require independence to function, and without fear or favour. The Act should be amended to align with regulatory imperatives.

NBTE should be re-composed with six educators versed in technical education, nominated by UNESCO; one person elected for that purpose by the executive committee of COREN; four Nigerian educators with experience in technical education not currently engaged with any of the technical institutions in Nigeria; four Nigerian educators in diaspora versed in technical education. These accomplished persons acting as the Board should conduct an open recruitment process and recommend three persons from which the President would appoint an Executive Secretary of NBTE. The Board should have power to hire and fire any staff. It should also have power to remove the Executive Secretary with a secret ballot vote of two-thirds of the membership of the Board and also appoint a member in acting capacity and then nominate three persons from whom the President would appoint a substantive Executive Secretary.

Nigerian vacancies in NBTE should be filled by NBTE with two third majority vote of the membership. While vacancies from the nominees of UNESCO should be filled with new nominations by UNESCO.

Upon inauguration, the Board should set new quality-assurance-impelled stringent requirements that must be fulfilled before another license is issued to any institution.

n) **National Technical Education Rehabilitation Task Force (NTERTF)**

I propose that there should be established, the National Technical Education Rehabilitation Task Force, to be charged with the task of revamping all technical and advanced technical schools, monotronics and polytechnics.

The Board of Directors and Management of NTERTF should be composed in the same manner and ratio as that of NBTE, and upon inauguration should commence a needs assessment of all technical institutions, government owned and private.

Following the needs audit, NTERTF should start a systematic refurbishment of all government owned institutions, including academic staffing.

Qualified technical, technology and science education teachers and lecturers are scarce therefore a wide enough net should be cast over Nigeria and Africa for qualified technical educators.

NBTE should in consultation with the government determine the extent and terms of assistance to the private technical institutions. However, conditions of assistance should include lowering of tuition fees and living expenses costs for students as the case may be.

Workshops and necessary equipment purchased in bulk should bring economy of scale advantage, while in-kind donations of equipment should be sought from international manufacturers.

Refurbishment projects in the institutions must be carried out in such a manner as to secure transparent execution and utmost value for money. All works capable of being carried out by the Infrastructure Youth Corps (IYC) should be so executed.

NTERTF should work closely with the Rectors and heads of technical institutions and their administration in carrying out the rehabilitation exercise.

o) Autonomy of public polytechnics

HND awarding Federal and State government institutions should strive for autonomy over a period of 10 years, by reaching working arrangements with foreign polytechnics with global rankings not exceeding 200, whereby 6 senior lecturers from the foreign associate would be appointed to the governing council of the Nigerian polytechnic while 6 eminent Nigerian polytechnic educators should be appointed to governing council on the recommendation of NBTE. Thereafter, any vacancies in the governing council should be filled with appointments made by the governing council provided, that vacancies in the foreign nominees should be filled with new nominations by the foreign associate accordingly.

The Rector should be elected and removed by votes of two-thirds of the membership of the governing council conducted by secret ballot.

The tertiary institutions and technical colleges should receive such make-over in terms of physical structures and academic staffing so that for once it would become glamorous to study at or teach in any of the institutions.

NBTE should design a set of incentives that would aid attraction of students to TVET.

A massive publicity campaign should commence simultaneously with the refurbishment showcasing location of colleges, vocational centers, tertiary technical institutions, advantages and prospects.

We must make the technical institutions to be sought after by kids and their families.

Funds, donations, endowments and the technical institutions' share of the proceeds of the first charge on the Federation Account meant for Nigeria's educational development and the tertiary technical institutions' share of TETFUND should be paid into the NBTE Fund which should be reorganized for greater efficiency and transparency. The funds for the rehabilitation program should be paid into the NTERTF Fund.

On attainment of autonomy, public polytechnics should become self-governing in all matters. However, funding should be through block grants.

p) Funding - Federation Account, appropriations, TETFUND, endowments and donations.

A review of the 2022 budget proposal presented to the National Assembly, shows that the President kept his word and ensured a significant increase in budgetary allocation for education from N742.5 billion in 2021 to N1. 29 trillion in the 2022 fiscal year.

It seems however that given the rot, indeed the collapse in Nigeria's education quality, the 2022 provisions for education will come up short.

There is a general consensus that unless we turned around the very deplorable state of our education system, we would most likely never be a developed nation. Not in the next 100 years.

We should therefore tighten our belts, go bold and amend the constitution to establish a significant portion of education funding as a first charge on the Federation Account, at least for 10 years, subject to renewal, to coincide with the life span of the Task Forces on formative and tertiary education.

I propose that the nation devotes 22.5% of Federation Account earnings to funding all levels of education, and as a first charge, effective when the fuel

subsidy regime ends. That should be without prejudice to additional budgetary allocations for education by the Federal Government.

The envelope should be shared with a formula to be worked out by NUC and NBTE and NFETF.

q) Rescuing out-of-school children.

No person has ever been arrested or tried for not presenting or preventing his or her child or ward from receiving basic education. Notwithstanding though, the legal and moral obligation on each parent subsist.

It is however more effective to start by enlightening the minds of parents and the society at large as to the importance of education in the life trajectory of a child. Kids who are pressed into child labour, hawking, farming, apprenticeship without basic education are most likely to grow up poor. Likewise, the kids equipped with only religious education may not have been well served for the journey of the life in the temporal world. Religious education should be combined with civil education and acquisition of life skills in order to provide the kids with the tools necessary to achieve sustenance and be well positioned to perform the spiritual, moral and legal duty of feeding for their families in the near future.

The President must deploy the stature of his office in mobilizing the religious leaders, traditional rulers, district heads, town union leaders, cultural organizations and all civil society groups towards the cause of moving out-of-school children back to school.

In this regard even though much more needs to be done, the school feeding programme of the Federal Government is commendable, though effort should be made to make it more data driven.

Chapter 5

Unemployment, Especially Youth Unemployment.

Possible Solutions.

a) **Overview**

Nigeria's population is so young that the age bracket of 0 – 35 years make up 75% of the nation's population of over 200 million people, depicting a median age of 18 years.

The 0 -14 years sub-bracket, whom I see as the flower of the nation, constitute 44% of the population. Within this sub-bracket, is the basic education category ending on the 14th year with basic education certificate that in turn, would enable the young adult to proceed to senior secondary/technical school or to get a job from the age of 15.

The working-age youth, from 15 – 35 years, make up approximately 31% of the population, and herein lies the energy of this nation, with a potential for peril or promise.

No doubt, therefore, that Nigeria has a massive youth bulge. Described by J Y Lin, a former World Bank Chief Economist and Senior Vice President, a youth bulge comprises a very large share of the population made up of children and young adults, accentuated by the progression of today's children rapidly growing into tomorrow's young adults. Such a bulge is often built by the reduction in infant mortality rates, together with unceasingly high maternal fertility rates.

Without jobs, Nigeria's youth bulge fuels a phenomenally high dependency ratio standing at 87% in 2020, and has unfortunately become a demographic time bomb because the vast population of hapless, restless, marginalized and frustrated unemployed youth are today, a potential source for volatility, social disorder and political unrest, and certainly with national security implications. This is one of the main reasons for Nigeria's ranking as one of the most fragile countries in the world by the Fund of Peace Fragile States Index.

Surely, that was why the topic "Youth Bulge in Nigeria: Implications for National Security", was chosen as the theme of the National Security seminar held on the 19th and 20th of February, 2019, at the National Defense College, Abuja.

But, our youth bulge actually presents a tremendous opportunity, and should earn the nation a handsome demographic dividend, in view of the fact that Nigerian youths brim with innate energy and remain the demographic with the greatest potential for human capital resources necessary for economic development, if only the nation could put appropriate measures in place to harness their promise.

Sadly however, about 60% of Nigeria's working-age youth, that's over 36 million energetic young people are either unemployed or underemployed, thereby sapping the economic energy of the nation in terms of loss of production, productivity and consumption, and thus creating immense poverty.

Among the reasons for this unbelievably high rate of youth unemployment are illiteracy, ineffective education, low skill levels, rural to urban migration, few job opportunities due to industrial, manufacturing and agricultural sectoral weaknesses, alongside poor policy prescriptions and mismanagement of national resources.

Further still, a significant percentage of the adult population also do not have any meaningful employment, with dire consequences to their family fortunes and sustenance.

With 36 million youths presently unemployed or underemployed and with over 12 million men and women stuck in the same category, it has become apparent that the scale of the crises confronting the nation is so monumental and much more daunting and potentially destabilizing than the official statistics seem to capture.

Recognizing the enormity of this scary situation, I hold the considered view that the usual traditional, modest, incremental and risk averse approaches we deploy to tackling our unemployment crisis fall far short and cannot even make a noticeable dent.

I am, therefore, impelled to offer my proposals for taking head on, the burgeoning unemployment disaster, lest it devours the nation.

The situation of hopelessness and despair amongst our youth populations have driven quite a multitude into terrorist and insurrectionist militias, violent gangs and heinous crimes, drug circles and groups.

Most of these youths are recruited easily by the psychological allure of belonging to something erroneously considered a higher cause and to a group wedded to this cause, deriving therefrom some sense of self-worth, particularly with the emboldenment that comes with common intention.

The most sustainable employment generating engine is the private sector because it drives much higher productivity, cuts waste and slothfulness, creates wealth and well-being. However, the growth rate of the private sector, especially the critical employment drivers - industrialization and manufacturing, is woefully out of step and pace with population growth, and therefore throws up masses of unemployed and marginalized youth looking for something to believe in.

The government must therefore compete against the anti-social and anti-societal dark impulses of fringe anarchists who are fast becoming mainstream. The competition is increasingly stiff, necessitating that government must step up and find productive ways to generating mass employment for the youths in such a manner that not only provides training and inculcation of discipline but also gives them the pride of belonging to some organization dedicated to a higher cause.

b) Way Forward

The most productive way to generates mass employment in the circumstances is by mobilizing and channeling the raw energies of the youths towards the provision of infrastructure.

c) Infrastructure Youth Corps program (IYC).

I propose that subject to an agreement between the Federal and States government, there should be established a national Infrastructure Youth Corps program (IYC), a body corporate with a fixed but renewable life span,

charged with harnessing, mobilizing, training and employing Nigerian youths for the provision of infrastructure in their various states.

d) Infrastructure – context and scope.

Infrastructure in this context is wide and includes the provision of any physical structure or services that help or aid Nigeria's economic and social development. In relation to the youth employment and engagement, infrastructure may be subdivided into eight broad categories:

e) Provision of physical structures that aid the economic and social/human development, such as:

Rural roads and bridges; School blocks, classrooms and other school facilities; Primary health care buildings and centers; Rural electrification; Small scale irrigation; Pipe borne water reticulation; Urban renewal, recreation parks, tree planting; Social and affordable housing; Services for industrial parks and agro industrial processing zones; etc.

f) Provision of services and non-physical structures that aid the economic life or social/human development, such as:

Registration services for National Identification Numbers in remote and rural areas for maximum penetration; teaching in mass literacy, Adult and Non formal Education program; Agriculture extension services; etc.

g) Fight against fake drugs.

Trained and working under the State branches of NAFDAC in collaboration with IYC for mass spot checks in drug markets, kiosks, stores for fake drugs using technological tools.

h) Provision of physical structures and services that aid security of life and property such as:

Construction of border walls at Nigeria's international boundaries to stem cross border terrorism and banditry; Provision of security services and protection of pipelines, rail tracks, etc.

l) Resettlement of internally displaced persons.

There are today over 2.7 million of our brothers, sisters and kids in displacement camps driven from their homes, communities and farmlands mostly by terrorists of different kinds.

Some youths in the affected States should find employment in joining the effort to return the displaced persons back to their homes where feasible, but where long term safety and security cannot be guaranteed, particularly those on the remote frontiers, building new homes and creating new communities elsewhere in the state should be considered, subject to express approval by the displaced persons. Youths under IYC should also be employed to participate in enumeration and cataloging of displaced persons by village, community and kindred, and in construction of homes and community centers for the displaced persons.

j) Food and agricultural production by collectives, such as cooperatives and farm settlements:

This would be an initiative aiming to create sustainable employment and economic value addition by attracting 5 million new entrants into the agricultural value chain in 5 years, under the Youth Agricultural Program (YAP), a cooperative farming and agribusiness scheme coordinated by IYC and the proposed National Agriculture Task Force (NATF), whereby youths would receive training, form cooperatives, receive allocation of land by the respective state government and receive funding (under terms) for agricultural production. I will discuss YAP and NATF in more details under Agriculture as a topic.

k) Solid minerals production by collectives such as cooperatives:

The vast opportunities in the solid minerals sector remain untapped. Solid minerals sector therefore accounts for less than 0.3% of the GDP. While pursuing the needed large scale production, and the accompanying employment opportunities, a significant segment of youth population would find employment in small scale solid minerals exploration and production under the Solid Minerals Artisanal Cooperatives Scheme (SMACS), wherein youths would receive training, form cooperatives and receive funding (under terms) for production.

l) Cottage and small scale manufacturing; ICT development and Start-ups; other Small and medium enterprises undertaken in cooperative structure.

The IYC would collaborate with Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) in promoting and midwifing cooperative ventures in manufacturing, ICT and Start-ups, Information Technology Enabled Services-Business Process Outsourcing and other SMEs that can conveniently be carried out as cooperatives of upwards of 20 members. The idea being, getting as many people gainfully employed as possible, while achieving significant economy of scale.

m) Board of Directors . Management. Modus.

In order to leverage a diverse base of experience, motivate the international Development Agencies' interest and buy in, generate immense international donor interest, attract a huge number of international technical and professional type volunteers, and position such a gargantuan logistical operation on the sure path to success, the Board of Directors of IYC should be composed with 12 experienced nominees of the United Nations Development Program (UNDP), and 12 experienced Nigerians, 6 of whom should be resident in Nigeria and 6 from diaspora. The Board would conduct an open recruitment process and therefrom recommend three suitable persons out of whom the President would appoint one as the Director General of IYC.

The Board would, in consultation with the Head of Service of the Federation and the Secretary to the Government of the Federation, interview and recruit interested civil and public servants as staff via secondment. The recruited staff would still be permanent staff of their original Ministries and Agencies, and would continue to draw salaries therefrom. The Board would have the final decision on recruitment and termination from IYC.

There should be a State Finance and Procurement committee appointed by the Board, made up of four international volunteers and four indigenes of the state, two residents in the state and two from diaspora, charged with finance and procurement tasks as may be assigned by the board.

Due to the huge number of youths expected to participate in IYC, there should also be an operations committee comprising two military personnel with relevant experience and who are indigenes of the respective state, three members of Nigeria Security and Civil Defense Corps and six indigenes of the respective state with requisite technical experience appointed by the Board. A military personnel would head the operations committee. Additional staff of the state committees would be appointed by the Board from the public service of the state and would continue to receive their salaries from the state public service.

The Board would put together design teams and planning teams for the whole IYC program including registration, short training, deployment, execution and in the case of cooperative ventures, such as in agriculture, solid minerals, and other SMES, planning would be in collaboration with relevant Task Forces and MDAS. Also, in the case of services for National Identification Number registration and penetration, agricultural extension services, teaching and organizing in Mass Literacy, Adult and Non Formal Education, planning would be collaborative with the Task Forces and MDAS.

Priced Quantities for designed physical structures should be produced to ensure value for money. For example, if it were determined that it would cost N5 million to build a prototype classroom block, a State given N100 million for classroom blocks would be expected to produce 20 blocks. The value-for-money requirement would be strictly observed because the government-money-mentality would be rife as the youths would be engaged on salary basis. It would be the state IYC's job to overcome it by enforcing strict discipline and productivity.

Since the youths are engaged on salary basis, the program should help them save up some money, say like 30% of their monthly pay with which to start a Nano/micro enterprise when IYC winds up.

n) Funding.

There should be established an Infrastructure Youth Corps Fund into which should be paid all Federal Government allocations, grants and appropriations; dedicated levies and taxes; States Government

contributions; funds budgeted to pay for certain infrastructure items and facilities which IYC undertakes to provide, as though IYC were a contractor doing those jobs, as well as domestic and international donations to IYC. In addition to the above, I propose a slight increase in VAT by 1% as a dedicated tax as part of the funding bucket for IYC.

o) Retraining of tertiary education graduates.

There are over 700,000 graduates from Nigeria's tertiary institutions who enter the labor market yearly without practical skills, seeking nonexistent white-collar jobs and ending up growing youth unemployment rates across the nation.

It is therefore necessary that at least two permanent centers be established in each State for retraining of desiring tertiary education graduates towards obtaining practical skills and lessons in entrepreneurship, as a means to self-employment as sole proprietors or in partnerships or cooperatives. Successful completion of training schedules should qualify graduates for micro startup loans from SMEDAN.

Chapter 6

Insecurity

a) Overview

Insecurity is threatening the very existence of the nation and raining havoc on our way and quality of life. The Nigerian civilization ebbs by the day, our humanity challenged, denigrated and degraded by the hour, countless innocent lives lost by the minute, and multitudes of people thrown into unemployment and extreme poverty by the second because of economic disruptions and social dislocations driven by insecurity.

The youth victims of economic disruptions and social dislocations are then easily recruited into the business of terrorism, banditry, insurrection, armed robbery, kidnapping, etc. Also recruited are victims of unemployment, underemployment, corruption, ethnic jingoism, religious bigotry, inequity, etc.

The devastating impact on the economy by insecurity is that of a process of asphyxiation – drying up of the oxygen within while preventing an intake, gradually leading to suffocation unless a quick remedy is applied.

The sum of over N6 trillion has been spent on security in the past 10 years to no avail. 2.7 million people remain displaced.

The rate of school dropout has risen sharply in areas most affected by kidnapping of pupils and students, blighting an already weak educational system.

Despite CBN's series of interventions in agriculture running into trillions of Naira, the sector grew only by less than 2% in the fiscal year 2021, mainly because of insecurity; well below average population growth rate of 3.2%, driving up food inflation to about 25%, and placing 100 million Nigerians at a significant risk of food insecurity. Right now, access to raw materials, mainly primary produce, is a major problem to manufacturers, while capital importation suffered a loss of about \$14 billion between 2019 to 2020. It is estimated that the GDP took a hit of \$100 billion in the past 7 years, due to insecurity.

b) Sustainable solutions to Nigeria's security problems must address the endemic social problems alongside ways to strengthen the security architecture and structures.

c) The nation's most consequential social-cum-criminal problem is corruption. It damages the institutional capacity of government, and is the biggest driver of all other challenges.

Corruption undermines the functioning legitimacy of government and leads to erosion of rule of law and erosion of trust and confidence in institutions of government and ultimately the State.

The lack of trust bred by corruption critically jeopardizes government's efforts to mobilize patriotic instincts of the citizens.

Distrust in government and its institutions, particularly under the condition of poverty, misery, unemployment or underemployment, creates a potent cauldron of resentment, vitriol and repressed anger, and enables a person to find justification for easy recruitment into heinous crimes against the State and her citizens.

I have laid out an anti-corruption plan that anticipates no saints in the ruling class of our nation, political or bureaucratic or business elite; an anti-corruption plan that is truly independent of us, the political class, and which ensures citizen participation, and a pathway to rekindling the trust of the people in their government, its institutions and processes.

And aware that the present precarious situation of over 36 million youths without employment demands such urgency of action that affords no patience for the conventional approach of waiting for the economy to grow and produce the necessary employment opportunities, I have put forward the outlines of a Federal program for mobilizing, training and engaging mass numbers of youths to provide various prescribed infrastructure in their respective States under the Infrastructure Youth Corps program (IYC).

IYC should compete for the hearts and minds of the youths, and provide them with an organization of higher ideal and calling to belong to, as a counter narrative to organized terrorism, banditry, insurrectionist agitation, cultism, armed robbery, kidnapping, ethnic and religious chauvinistic violence, drug running and abuse etc.

d) Strengthening the Security Services and Structures.
Anti-corruption reforms.

All the Services should benefit from the anti-corruption reforms that would apply to all arms and tiers of government and its institutions.

The Services should work in a collaborative effort with the revamped anti-corruption agencies to develop and produce a template for transparent and verifiable but secure processes of procurement and disbursement of allowances to service men and women. The effect of these would significantly increase efficiency and morale in the armed forces and services.

I do not deem it prudent to discuss military tactics, strategies and critiques publicly on the pages of this book, and so for the military services, I will make a few light comments that may aid the protection of vulnerable populations.

e) Protection of the geographically vulnerable.

Vast lands, thousands of square kilometers in size, sparsely populated, located in the frontiers, relatively close to the border, and forced into being the theaters of asymmetric warfare, are a doomsday scenario for the inhabitants. For states with very large land areas with sparse populated hinterlands like Niger and Kaduna, this scenario also holds true even without dangerous external borders.

The defense of these kind of spaces is challenging and costly. In an asymmetric offensive, the terrorists hit and run, ambush, inflict damage and disappear into the forests or meld into the local population to generate collateral damage which in turn saps support for the defenders. These bad guys also forage supplies from the locals and kidnap for manpower.

In open plains where there are no obstructions or cover, there is nowhere to hide. So the terrorists must give or take battle. A set piece battle. Where the two sides see themselves, with no local populations to extort supplies from or be used as hostages, the terrorists would be no match for the security personnel.

A decision would have to be made whether it were not more tactically prudent to move the vulnerable communities inward to more defensible positions and scorch the earth in the new open areas in order to give the security personnel more operational maneuverability.

This would come with emotional pain. Moving people from their ancestral homes where they were born, farmed, bore their children and buried their loved ones, would be traumatic. But staying put for incessant killings, kidnappings, rapes and other forms of cruelty and possibility of collateral damage is much worse. And so is putting our security personnel in difficult battle terrains, having to be painstakingly careful to limit collateral damage while fighting an asymmetric foe.

High mobility of asymmetric belligerents require a concerted, coordinated, simultaneous and sustained application of offensive land, air (river if applicable) resources to all the "safe heavens" of the foe in order to significantly reduce the advantage of mobility. Pinned down, escape would become difficult. However intelligence is key. The bad guys must be infiltrated for information gathering, whatever the material cost.

The Military is stretched. Most of the military personnel are deployed across most states of the Federation suppressing insurrection and acting in aid of civil authorities to restore order. Economy of force – concentration of all combat power to achieve desired operational objectives, one of the nine Principles of War enunciated by Carl von Clausewitz's, is becoming a challenge.

Every effort must also be made to train and energize the Police towards building capacities and capabilities necessary to relieve Military personnel, at least in some of the states, so as to beef up combat power in more challenging theaters.

f) The Nigeria Police Force

By virtue of the provisions of the Police Act, the Nigeria Police Force is vested with the power of maintaining and securing public safety and public order, protecting the rights and freedoms of all persons in Nigeria as provided in the Constitution and other enabling laws.

Simply said, Nigeria Police Force is statutorily vested with the power and primary responsibility of maintaining internal security. But due to the incapacity of the police to discharge this duty, the military forces, pursuant to the provisions of the Constitution, have assumed the responsibility and are today dispatched to all parts of the country to maintain security.

There is therefore a national consensus on the need to reform and reposition Nigeria Police system. The very nature and structure of the reforms, however, generate divergent opinions and rancor.

One view point is that Nigeria needs separate State police services to coexist with the Nigeria Police Force, the Federal police organization, to foster sound federal principles.

Some States have established state-wide security outfits with distinct uniform styles while clamoring for the full State police services.

The South West States have each set up Operation Amotekun, a State security outfit under the auspices of Western Nigeria Security Network.

All the States in the South East geopolitical zone have each established Ebube Agu security outfit.

The Governors of South South States in October 2021 reached an agreement to establish a South South zonal security outfit.

The quest for State security outfits and ultimately, State police services, has been vociferously rejected by the other school of thought as totally unacceptable as likely to threaten the unity of the nation.

I hold the view that establishment of State Police Services may be impracticable at the present stage of the nation's development.

g) Challenges of State Police

Funding a police force is very expensive, and as it were, most states are in deep financial doldrums, and cannot meet basic obligations – payment of salaries, pensions, contractors, maintenance of facilities – and so, cannot shoulder additional financial burden for a state police force.

Then there is the fear that some governors would wield the state police against their personal enemies and political opponents, not unlike state electoral commissions with which the Governor's party always wins elections conducted by them in all the Local Government Areas, with a few exceptions.

In any event, mustering the super majorities in the National Assembly and amongst the States Assembly necessary to amend the constitution towards establishing state police forces would be difficult. Section 214 of Constitution as amended provides that *"There shall be a police force for Nigeria, which shall be known as the Nigeria Police Force, and subject to the provisions of this section no other police force shall be established for the Federation or any part thereof."*

Other current provisions of the Constitution and the Police Act, place the appointment of Inspector General of Police and police officers, and the operational use of the Police, directly or indirectly under the control of the President. The Nigeria Police Council of which Governors are members only play an advisory role, while members of the Nigeria Police Service Commission are appointed by the President.

h) Stronger role and participation by the Governors

The Governors are dubbed the Chief Security Officers of their States, yet the Constitution as amended in section 176 (2) merely provides that *"The governor of a State shall be the Chief Executive of that state."*

Section 215 (4) of the Constitution as amended provides that *"Subject to the provisions of this section, the Governor of a state or such Commissioner of the*

Government state as he may authorise in that behalf, may give to the Commissioner of Police of that state such lawful directions with respect to the maintenance and securing of public safety and public order within the state as he may consider necessary, and the Commissioner of Police shall comply with those directions or cause them to be complied with:

Provided that before carrying out any such directions under the foregoing provisions of this subsection the Commissioner of Police may request that the matter be referred to the President or such minister of the Government of the Federation as may be authorised in that behalf by the President for his directions.”

The community reading of the foregoing sections shows that the establishment of State Police Services is not allowed under the present Constitution and that the Governors have no compelling and legally enforceable powers over security in their States as against those of the President. The Public Order Act also amplifies this.

Anyhow, the vital advantages of the Governors' stronger input, participation and direction in the security affairs of their respective States should never be downplayed, nor the importance of local know-how and local personnel content in the formal and first tier security structure of the state.

Constitutionally, the Governors are the embodiment of popular mandate of the people in the state. They get the blame for mass killings, kidnappings, grave destruction of property etc., because the people are so beaten down and traumatized to pierce through the fog of distress to sequence the security structure and hierarchy of responsibility. Even the so called security meeting oftentimes convened and chaired by the Governors do not achieve much because the Governors cannot compel any action.

By the very nature of their duties and ceaseless interactions with the people, the Governors receive the first intelligence of security breach, troubles and serious crimes against the State. Still, situations get worse with avoidable loss of life, limb and property because of the powerlessness of the Governors to order immediate deployment of Police forces. To stop criminals from

continuing to exploit this gap, the President should specify by Executive Order the exact situations where the Commissioners of Police could decline immediate compliance with Governors' orders by seeking presidential approval first.

Of course in matters of politics or in a matter where a commissioner of police has justifiable reason to believe that a governor has a personal interest, the CP should request further directions.

A stronger role for the Governors in the security affairs of their States should include input. In order to achieve closer coordination and cooperation between the States Police Command and the States Government, the posting of the Commissioners Police to the States should receive some input by the respective Governors. The President should nurture a convention whereby the Governors quietly nominates three police officers within the qualification band to the Police Service Commission to be considered for posting to the respective states. The Governors should also be consulted regarding posting of the senior police officers to their states.

i) Local personnel content in policing.

The form, character, ideologies, depth, tactics and strategies of insecurity purveyors have evolved from mere armed robbery and kidnapping for money without ideology and strategic planning, to conquest of populations by non state actors with maximum terror and mayhem, driven by religious or political or materialistic ideology, and characterized by strategic planning wherein crimes like armed robbery become funding mechanisms for the strategic objectives. Large scale banditry in some parts of the country is imbued with materialistic ideology, where the given territory is sought to be overwhelmed and subdued with extreme terror of mass killings and kidnappings etc., to make way for expropriation of material resources.

The common tactics of the insecurity business groups is asymmetric offensive measures – hit and run. They hit and run across borders or meld back into the populations or nearby vicinity. Most parts of Nigeria are rural. Firsthand knowledge of terrains, local cultures, attitudes, behavioral patterns and languages is therefore life-and-death important. Extremely important.

Policing and insecurity mitigation must adapt to this relatively new insecurity landscape by increasing the number of officers posted to serve in their respective states, senatorial zones and local government areas.

One remembers the crippling insecurity that was foisted on Benin City, Edo State, by the criminal gang of very deadly armed robbers, led by the infamous Lawrence Anini, Monday Osunbor, Iwebelua and co. Every effort made to capture the criminals was in vain until the then Head of State, General Ibrahim Babangida, directed that a Bini police officer be posted to lead the effort. Assistant Inspector General of Police, Parry Osayande, arrived Benin and ordered the immediate removal of the choking kilometer-interval security check points. He didn't need them. He was a Bini man. He knew his way around and the local people were going to trust him with intelligence. In just a few weeks, a 3 year nightmare was over. Parry arrested every one of the gang members, including their accessories within the police force.

As I was revising the manuscript of this book, I watched a viral video of a most brazen and murderous multi bank armed robbery in Uromi, Edo State, in which many people lost their lives. The authenticity of the video was soon confirmed by the mainstream media. It took the knowledge of terrain and audacity of unarmed local youths to block the only access out of town, and forcing the armed robbers to abandon their loot and getaway vehicles. Advantages of Local content and familiarity with terrain, at play.

Nonetheless, in making these postings, care should be taken in areas with divergent ethnic peoples so as not to exacerbate ethnic tensions.

j) State sponsored continuing training and education of police officers.

Every effort spent trying to reinvigorate the Nigeria Police Force will come to naught without proper training and education of members of the Force, especially the lower cadre. Training and education in broader sense include provision of hygienic living quarters with safe drinking water and sanitation since squalor degrades the mindset, disrupts psychological refinement and inhibits intellectual development.

Assured that members of the Force would be posted to serve in their home states in increased numbers, the States would mobilize and partner with their well to do public spirited persons and corporate bodies to sponsor the provision and donation to the States Command, training centers and equipment, continuing education facilities, proper living quarters, etc.

By retooling the Nigeria Police Force along the above lines, we would have a Force that has a single command structure with enhanced gubernatorial role, local personnel content, attendant local know-how and location familiarity. The Force would also enjoy the patronage of States and well-meaning persons from the standpoint of training and educational facilities, habitable living conditions and other infrastructure.

The less training the police receive, the less effective they are to terrorists, insurgents, bandits etc., and the more stretched thin the military forces would continue to be, having to fight to maintain the nation's territorial integrity and being dispatched to every corner of Nigeria to enforce domestic security, which the police ought to take charge of.

k) Porous borders.

The nation's borders are largely unguarded, unmanned, and without physical or technological barriers. Our borders are porous.

Nigeria is bordered in the North by Niger Republic by about 1,497km, in the North-East we are bordered by Chad by about 86km, in the Western parts by the Republic of Benin with about 773km, and in the Eastern region by Cameroon, with about 1,600km.

Nigeria's borders with Benin Republic and Cameroon are not properly manned but there are known major entry and exit routes in Lagos and Cross River respectively. In contrast, all that exists along the border with Niger are forests and swathes of lands, most of which are not covered by any barriers, immigration officers and security agents.

The Nigeria–Chad boundary used to lie entirely inside Lake Chad, but with the drastic reduction in the body of waters of the lake over many years, the major length of the boundary now runs across land, swamps and islets in the lake and all without much of any barrier.

These porous borders have remained unfettered access exploited by terrorists and bandits to unleash mass destruction of lives and property, displacement of populations, trans-national organised crimes, disruption of livelihoods, mass kidnappings of women and children, disruption of educational activities of pupils and students, illegal arms proliferation, degradation of quality of life, extreme poverty and destabilization of social cohesion and humanity.

The border communities, the most vulnerable to these onslaughts, are permanently at the mercy of the marauders. These communities now feel abandoned.

Our seeming helplessness towards the porosity of our borders fosters despondency in the border communities and States.

The challenge is daunting, no doubt. Securing such a border like Nigeria-Niger Republic/Chad borders, the length of about 1,600km, would challenge first world powers (America's Southern border), not to speak of a country such as ours. It is impracticable for us to build a fortified border wall the length of 1,600km.

But we must not be helpless. Apart from harmonization of strategy and policy, and collaboration with Niger Republic and Chad, a carefully planned combination of three elements would go a long way in providing deterrence. These elements are, border wall, technology, Border Patrol agents. The proportion and exact locational deployment of each would depend on survey data, geographic study, other technical information and the resulting design.

I) Oil theft

The Nigeria Extractive Industries Transparency Initiative (NEITI) reported that in 2019, Nigeria lost 42.25 million barrels of crude oil to oil theft, valued at \$2.77 billion. The Chief Executive of Nigeria Upstream Petroleum Regulatory Commission (NUPRC), was quoted as reporting that Nigeria was losing about 115,926 barrels per day, and at the day's price levels, exceed \$4 billion per annum.

The thieves employ very sophisticated methods of hot-tapping and cold-tapping for large scale thievery from the pipelines. Thefts also occur at the terminals, in vehicular transportation and from storage.

The impact of crude oil theft is multifaceted - severe environmental degradation, health risks, avoidable fatalities owing to chemicals toxins and explosions at illegal refining places, huge revenue losses by the Federal Government, etc.

Oil theft is a value chain involving oil industry experts, militant organizations, government security forces operatives, local population, government bureaucrats and businessmen.

Apart from sensitizing the local populations on the environmental dangers of oil theft and vandalism, and persuading a good number of the people to become whistleblowers, the government must choose the security personnel with utmost care.

However, the main solutions should include intelligence gathering, deterrence and technological applications - automation, drones, internet of things, electronic monitoring systems, such as Supervisory Control And Data Acquisition (SCADA).

The government should produce a profile of the problem and use that as a basis to call for entries in an international competition of concept designs for integrated security solutions from companies, corporations and government entities. The best protective and cost effective concepts should be short listed, and again used as a basis to invite technical, implementation and financial bids on success fee basis. The chosen security entity would be entitled to a pre-advertized percentage of the value of what is saved. If, for example, the loss is cut down from say, 115 thousand bpd to 10 thousand bpd, the security contractor would be entitled to a percentage of 105 thousand bpd. The tactical plans for deterrence, interdiction, seizures and apprehension should include ways of achieving a seamless collaboration and joint operations with Nigerian Security Forces.

Due to the vastness of the area to be secured, the security contract may be parceled out in zones.

m) Dialogue.

Unilateral disarmament is not an option for the nation in the face of daunting security challenges. But reasonable opportunities of dialogue should not be forsaken, especially regarding religious, political and resource agitation. However, Susan Massie's phrase popularized by President Ronald Reagan should undergird any dialogue. Trust but verify.

Chapter 7

Lackluster Exploitation Of The Nano, Micro, Small And Medium Enterprises And Informal Sector.

Possible Solutions.

a) Overview

Nigeria's informal sector is nothing but a poignant story of resilience, perseverance, resourcefulness and the indomitable spirit of Nigerian men, women and young adults, most of who, without much skill, education and capital, but with grit, toil and tears, pull themselves up to engage in nano enterprises (employing 1-2 persons), micro enterprises (employing 3-9 persons), with which they get by and feed their families. These ventures operate without registration or regulation by any tier of government, and are therefore known as informal. They include small holder farming, small and local contracting, petty trading and vending, mechanic workshops, bike, tricycle and motor transport services, hairdressing, seamstress services, carpentry, painting, masonry works, furniture making, small scale manufacturing etc. The informal sector is estimated to account for 60% of the nation's GDP and employs 80.4% of Nigeria's labor force, according to the World Bank, and generates income for over 170 million Nigerians.

However, the sector operates without proper health and safety standards and lacks the capacity to lift most of the operators above poverty line, due to illiteracy, low skill levels, underemployment of its labor forces, low productivity levels and sparse management knowhow, dearth of capital, financing and banking services. Almost all the 70 million Nigerians who suffer financial exclusion, do not have bank accounts and are unable to apply for any micro loan to energize their ventures, operate in the informal sector.

There are, however, a relatively small number of operators in the sector with specialized skills in ICT, entertainment, general business, professional services etc. The informal sector overlap with nano and micro enterprises, rarely extends to small enterprises (employing 10-50 persons) or medium enterprises (employing 51-200 persons).

Globally, NMSMEs are the heart, bedrock and linchpin of the typical economy, and even more so for Nigeria.

According to NBS/SMEDAN Survey report, Nigeria's NMSMEs account for 96 per cent of the total number of businesses in the country and contribute about 80% per cent to the GDP.

The NMSMEs 2020 survey report however reveals a decline in the number of businesses in the country. The 2017 survey report put the number of NMSMEs in the country at 41,543,023 while the 2020 survey report indicates a decline to 39,654,385.

According to the survey report, nano and micro businesses account for 38,413,420, which is 96% of the total survey while small and medium businesses make up 1,240,965.

It stands to reason, therefore, that about 92% of all businesses in Nigeria are made up of nano enterprises and sole proprietorships.

These statistics are important to understanding the significant missed opportunities resulting from the lackluster and haphazard attention we as a nation have paid to this sector.

b) Nano and micro

In this segment are mainly sole proprietors and 2-3 person partnerships with none or very few employees, very little capital base and largely overlap with the informal sector. They require the most attention from the policy makers, civil society and government, because they comprise most of: the illiterate; the unskilled; the un-captured in NIN registration; the financially excluded – no bank accounts, those most excluded from access to capital and micro loans, those most excluded from social investment, welfare and interventions pay outs, which incidentally, were actually meant for them; those most excluded from social security and protection; the poor; the inequality prone; those most affected by corruption; those most affected by lack of physical infrastructure and human infrastructure – safe drinking water, sanitation facilities, education and information, health, housing, etc.; those most neglected.

Please think of Abubakar, he is a wheel barrow pusher in Kano, he has two other wheel barrows manned by two other gentlemen engaged by him, whom he pays daily. Abubakar is a sole proprietor of a logistics business. Abubakar is also an employer.

Please think of Tunde, he is a tailor, sharing a shop with three others. Tunde is a sole proprietor of a fashion business. He has an apprentice.

Think also of Ngozi, a mother, who carries on trade in fruits and vegetables from her kiosk at the outskirts of Ochanja market, Onitsha. Ngozi is a sole proprietor of a business in the downstream agricultural sector.

Abubakar, Tunde and Ngozi operate within the nano-micro enterprises segment, and they suffer in common all the privations listed above, essential to growing their businesses, lifting themselves out of poverty and lifting Nigeria out of poverty. However, they cannot open bank accounts and gain financial inclusion if they are unable to write or read their names and scribble their signatures. These sole proprietors may not also join the digital economy if they are unable to perform simple digital tasks on their phones, the starting point of which is, being able to do basic reading and writing. I have put forth a plan with the proposed National Formative Education Task Force, collaborating with the Mass literacy, Adult and Non-Formal Education Commission, to simplify the curriculum while including simple digital tasks, and further collaborating with the proposed Infrastructure Youth Corps program to channel educated unemployed youth to teach in Mass Literacy program. Redundant public officials would also be drafted. To encourage attendance, enrollment and active participation should be one of the conditions for receiving Conditional Cash Transfers, grants and low/non interest loans – Government Enterprises and Empowerment Program (GEEP) under National Social Investment Program (NSIP). National Identification Number registration should also be a condition for such receipts under NSIP. Enrollment in a skill acquisition program, where necessary, should be a condition for second level (higher amount) receipt for such funds under NSIP.

Government assistance towards access to capital under this segment should come from GEEP. It is therefore necessary that a system be put in place in collaboration with micro finance banks to handle disbursement and recovery of loans in such a way that ensures sustainability.

Financial inclusion will remain a challenge to the residents of remote and rural areas, because of absence of commercial banks in those places. The States Government should work under the guidance of CBN to establish micro-finance banks in secure rural town centers which would be affiliated to the nearest commercial banks.

Recently, the Central Bank of Nigeria issued an approval in principle to two of the nation's largest telecommunication firms MTN Nigeria and Airtel Africa, to operate as Payment Service Banks (PSB).

PSB is a company licensed to leverage on technology and agency banking to accept deposits and handle transfers for unbanked customers in the rural areas in Nigeria.

The key objective of issuing PSB licenses is to boost financial inclusion, especially in rural areas and to facilitate transactions.

"To enhance financial inclusion in rural areas by increasing access to deposit products and payment/remittance services to small businesses, low-income households and other entities through high-volume low-value transactions in a secured technology-driven environment," the CBN stated.

We should not think that we are making a huge success of the NSIP, when those who need the payouts most do not have bank accounts to receive the money, nor basic literacy to open accounts.

Likewise, we should not impose deadlines for NIN registration, even if to drive turnout, when the likes of Abubakar, Tunde and Ngozi have never heard of such a thing as NIN, such an important item of infrastructure. That's why I propose that educated unemployed youth would be engaged under the Infrastructure Youth Corps program, in addition to redundant public officials, to disperse across Nigeria for massive registration drive. There should also be a sensitization campaign.

Abubakar could grow his logistics business with a low/ interest free loan from manpowered wheel barrow to motorized bike. Tunde could get the additional sewing machine with more sewing functions that he has been desiring to buy, with his low/ interest free loan.

Ngozi could use her low/non interest free loan to purchase a solar powered storage equipment designed by Nigeria Stored Products Research Institute (NSPRI), to increase the shelf life of fruits and vegetables, and also increase her working capital.

I restate, however, that there are operators in the nano-micro enterprises segment who are literate, somewhat skilled, with NIN registration, and financial inclusion, although the numbers are small. They face challenges of access to capital, inadequate training, high cost of doing business, infrastructural problems etc. These will be discussed further under the small-medium enterprises segment, being of similar challenges.

c) Cooperatives schemes across sectors

In order to get more people productively engaged while boosting economic output, SMEDAN should encourage start-up of cooperatives – businesses owned and run jointly by its members, who share the profits - such as helping desiring farmers to undergo training and thereafter form cooperatives under the proposed Youth Agricultural Program (YAP. Explained under Agriculture). A significant segment of youth population should find employment in small scale solid minerals exploration and production under the Solid Minerals Artisanal Cooperatives Scheme (SMACS), wherein youths would receive training, form cooperatives and receive funding (under terms) for exploration and production.

The IYC should collaborate with Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) in promoting and midwifing cooperative ventures in small scale manufacturing, ICT Start-ups, and other SMEs that can conveniently be carried out as cooperatives of upwards of 20 members, with the State Governments appointing cooperatives moderators and accounting officers from the ranks of States civil services.

The idea being, getting as many people gainfully employed as possible, while achieving significant economies of scale.

Single digit funds should be earmarked under the SMEDAN to provide loans to such cooperatives, under terms for sustainability.

d) Small – Medium Enterprises Segment

The NMSMEs would only rise to their promise of being the engine of sustainable, resilient and inclusive economic growth if the challenges of poor access to financing, non development of human capital stock, huge infrastructure deficit, high cost and lack of ease of doing business, were tackled successfully.

Access to capital under this segment (including the literate nano-micro operators with small-enterprises style output and capital requirements) should continue via development finance banks such as Bank of Industry (BOI) but should be robustly expanded to include regular commercial banks under an NMSMEs credit guarantee scheme from the CBN. All NMSMEs loans must be structured on single digit interest rates but in a recoverable manner to ensure sustainability.

Development of human capital stock and infrastructure are discussed in detail in other chapters of this book.

Cost and ease of doing business in relation to infrastructure and prevalence of corruption are also discussed in other chapters.

e) Innovation and Competitiveness

NMSMEs could double their outputs, contribution to the GDP, employment generation rates, export earnings, etc., by becoming dynamic, inclusive, innovative and competitive.

Competitiveness in key sectors can only be driven by the promotion of innovation in products and operating processes, individual creativity, entrepreneurship, quality, and cost effectiveness.

The nation's scant skill levels and low technological base engender low

quality products and low productivity. Prioritizing Science, Technology, Engineering and Mathematics (STEM) education, as well as Technical Vocational Education and Training, has been strongly canvassed in this book as the means to producing technical and technological knowledge, skills and innovative capabilities and capacities. Marching on to manufacture and produce with what limited capabilities we have, while infusing knowledge and skills as we acquire them, is what creates the technological base now, and improves it overtime. Adapting the influences of science, technology and know-how to our productive processes translates to innovation. We should, therefore, not only promote manufacturing and technological production in NMSMEs, we must pursue horizontal venturing, striking out into high technology ventures we may presently be ill prepared for, and picking up the pieces as we go along. Our techies should be encouraged and actively supported to go into such areas as microchips and semiconductors, electronics, electrical and machinery and other sunrise sectors etc. NMSMEs have inherent advantages of flexibilities, in terms of locationing, size, smaller capital deployment and ability to adapt in adverse conditions. So the consequences of failure are less hazardous.

A technological base and quality of products evolve for better with time, so far as consistency endures.

After the 2nd World War, Japanese products were inferior, lacking in quality and were derisively known as "Occupied Japan". The then Western Europe, which was undergoing reconstruction under the Marshal Plan, had to move their business class and organized labor to America to relearn quality production, organizational and managerial processes. As the Japanese and European quality assurance improved, Taiwan became the poster child for inferior quality products. After a long time, the inferiority baton was handed over to Asian Tigers and China. Today all these countries produce quality products in complex goods and in cutting edge technology.

It does not mean in any way that quality requirements and standards are to be postponed. NMSMEs should be made aware of domestic and international standards, and should be encouraged to take ISO certification courses. Compliance with standards and certifications are all the more

stringent and strictly required in export trade. Non compliance is the reason most of Nigeria's export goods are rejected, especially agro-allied products for which there must be proven traceability, sanitary, phyto-sanitary and other necessary certifications.

SMEDAN should collaborate with Nigeria Export Promotion Council in moving many more NMSMEs into export trade and training them on how to get their products qualified and certified for export, through enterprise development programs which work to strengthen entrepreneurial and management skills by capacity building and training resources. The export incentives, Export Expansion Grant and Export Development Fund, should be of major assistance in this regard.

An important innovation the NMSMEs must bring to their businesses is marketing their products and services on the internet and making them better known among customers. With the use of rapidly growing digital platforms such as Facebook, Instagram, Google, WhatsApp, Website, etc., NMSMEs should strive to multiply by many folds, the visibility and accessibility of their products and services in AFCTA and globally.

Nigeria has the highest internet active population in Africa with about 102 million people in 2021 using their smartphones for streaming, and financial transactions. The figure is projected to grow to 130 million people by 2026.

According to data from Nigeria Inter-Bank Settlement System (NIBBS), electronic payments in Nigeria increased to over N700 trillion as at end of 2021.

Mobile payments transactions are on a robust increase. Currently, cash in circulation is N4 trillion, just 10% of money supply at N45 trillion, electronic payments make up the rest.

On the continent, the introduction of the Pan-African Payment and Settlement System (PAPSS), means that Africans will no longer need international banks and third party currencies such as dollars for intra-African trade, and no more payment delays, as PAPSS will work in Africa, the same way Nigeria Inter-Bank Settlement System (NIBSS) works in Nigeria.

It is estimated that PAPSS will aid Africa in the next three years, in increasing intra-African trade from the current 16 per cent, representing \$70 billion, to about 55% - \$300 billion, which is almost 15 per cent of Africa GDP, eliminating settlement costs running into billions of dollars and benefiting households and NMSMEs.

Notwithstanding the significant growth rate of e-payment penetration, and the potential for e-commerce, only a little proportion of NMSMs have set up online presence to take advantage of these opportunities.

There are about 39 million NMSMEs in Nigeria, but only about 110,000 .ng domains were registered by 2019, compared with about 1.2 million .za domains for the 2.3 million SMEs in South Africa. The local domain penetration in South Africa is almost 50%, in the US, 50%, in Nigeria, a negligible 0.25%.

Only a very few NMSMEs have digitized their operations and services in Nigeria. Although there is a lack of access to information on how NMSMEs can digitize, the main problem is the lack of interest to set up online presence or digitize. Most business owners think they are too small or too unknowledgeable or too poor to shell out funds to create and maintain an online presence or to digitize their operations.

The SMEDAN should collaborate with the Ministry of Telecommunications and Digital Economy to orchestrate the public campaign of awareness on state basis, on importance of online presence and digitization, ways to assist businesses to achieve these objectives, including mobilizing and channeling unemployed tech savvy youths under the Infrastructure Youth Corps program, to assist NMSMEs in this quest.

f) Strengthening SMEDAN.

MSME and SME are the conventional acronyms for small and medium sized enterprises. My preferred acronym which I used throughout this discussion is NMSME – Nano, Micro, Small and Medium Enterprises. I included the word *nano*, describing only one or two person enterprise, because it covers over 80% of Nigeria's working men and women, most of the poor, the very poor,

needing the most assistance and guidance, and yet the most neglected. Inclusion of *nano* (tiny) is to constantly remind us of the tiny one in the country with absolute majority in numbers, and that Nigeria would be lifted out poverty only when the tiny, the poor are lifted out of poverty. It is therefore apposite that the jurisdiction over the Government Enterprise and Empowerment Program (GEEP) be transferred to SMEDAN, as a veritable lever to lifting higher, the businesses of the *nanos* - Abubakar, Tunde and Ngozi.

If NMSMEs are the bedrock and growth engine of the economy, the agency charged among others with initiating and formulating policies for the development of, and overseeing the development of NMSME, should not be any less fortified.

The Small and Medium Enterprises Development Agency (SMEDAN) should be reconstituted by appointing six non executive directors versed in the field of NMSME, nominated by our international development finance partners to bring international experience to Nigeria's NMSME development. The chief executive should be appointed through an open recruitment process conducted by the Board, with three shortlisted candidates presented to the President.

Chapter 8

Unsuccessful Industrialization And Dreadful Effects Of Non-Diversification

Overview.

The failure so far of Nigeria's industrialization process (comprising manufacturing, mining and utilities) in meeting the desired expectations, continues to be a major force driving huge unemployment rates, mass poverty, insecurity and social tension in the nation. With over 140 million Nigerians living below or struggling to stay afloat barely above the poverty line, driven by massive unemployment and under-employment, the present 18% (10 year average) contribution to the GDP by the industrial sector is grossly inadequate to produce a significant remedial lift in the economy.

Still, without a major surgery, the long term prospects of the sector do not seem bright, for ours continues to be an industrial sector with a very weak production base, that is mainly import-dependent and severely constrained by shallow technological capabilities, and so far without a concrete roadmap to retrofit and steady the ship.

The quest for industrialization formally streamed right out of the gates of independence, embodying the highest hopes and deepest flaws.

The 1st, 2nd and 3rd National Development Plans, covering the period between 1962 – 1980 (less the civil war interregnum), adopted a government led import substitution industrialization strategy (ISI), heavy on nationalization and subsidization. National resources were mobilized to undertake certain industrial utility projects to provide the infrastructural backbone for economic development and to catalyze a manufacturing take off. Kainji Dam, Security Minting and Printing Company, the first Port-harcourt petroleum refinery etc, were some of the industrial projects that came on stream in the 1st National Plan.

The 2nd National Plan, 1970 -1974, witnessed the first tentative effort towards linking the industrial sector to the primary sector and to the nation's factor endowments, with a policy goal of producing intermediate inputs, capital goods, consumer products and durables.

In this period, Nigeria came of age as a player in crude petroleum export. And with robust foreign exchange earnings, embarked on industrial projects in such subsectors as cement, sugar, paper and pulp, salt, etc., including setting up the Steel Authority to chart the course for iron and steel production.

The dearth of capital and techno – managerial capabilities in the private sector, meant that government continued to invest directly in medium to large industrial projects, while the private sector strove in the light technology and low capital undertakings, often times powered with imported raw materials and basic machinery.

Nigeria's indigenization law, the Enterprises Promotion Act, was also introduced in the 2nd plan, which legislatively mandated the transfer of ownership or controlling rights over businesses and companies from foreign nationals to Nigerians in order to promote the nation's endogenous business savvy and capacity. No doubt, however, that this forcible dispossession and transfer of ownership of businesses from foreign investors to untrained and unprepared Nigerians were ill advised and led to the collapse or near collapse of the transferred businesses.

Buoyed by the continuing oil boom, an ambitious target for a direct public industrial investment of about N43 billion was laid out in the 3rd National Plan, 1975-1980, equivalent to today's sum of about \$70 billion.

Within this period, government attained full ownership of the first Port Harcourt refinery by purchasing the remaining 40% stake of Shell BP, and thereon went further to complete the Warri and Kaduna refineries. In the iron and steel sector, government commenced the construction of two integrated iron and steel plants at Ajaokuta and Aladja, and three rolling mills at Katsina, Oshogbo and Jos.

Also in the same period, most of the government joint venture partnerships with international vehicle manufacturers such as Volkswagen of Nigeria, Peugeot Automobile of Nigeria, Anambra Auto Manufacturing Company, Leyland Nigeria and Steyr Nigeria, commenced production. All these were 100% imported knocked-down-parts assembly plants, involving as in other

industrial projects of the era, wholesale turnkey transplantations of technology complete with sector specific techno – managerial skills, expertise, and tasks, including feasibility studies, engineering designs and drawings, construction, erection, supply and installation of machinery, equipment, spare parts, and management.

However, public ownership and management of enterprises and utilities, the main plank of ISI, bred inefficiency, huge waste, mediocrity, corruption, and misapplication of resources, and inexorably caused the floundering of these entities, leading to heavy subsidization due to inability of the enterprises to cover even their running expenses.

The dance party came to a halt in 1981 with the onset of a global recession. The oil boom was over, heralding a steep decline in foreign exchange earnings, and disequilibrium in the form of balance of payment deficits, deficit financing, inflation etc. and hitting the overly subsidized and import driven industrial sector very hard, by saddling it with a severe scarcity of foreign exchange needed to import raw and intermediate materials, replacement machinery and spare parts. To make matters worse, the scarce foreign exchange available was mismanaged through a corrupt import licensing scheme.

The structural flaws embedded in the nation's industrial strategy were laid bare and carved into a sharp relief, so that the period of 4th national plan 1981 – 1985 mostly dwelt on fallout containment. Some aspects of the 1982 emergency stabilization measures including a 40% across the board cut in domestic spending, without priority, made matters worse for industry. As a result, within this period, industrial output crashed following ubiquitous plant closures. Average capacity utilization went into a downswing from 74% in 1981 to 38% in 1985, while the aggregate index of manufacturing declined by as much 55% in some subsectors, over this period.

The biting recession and slump in industrial activity alongside other macroeconomic imbalances, which accelerated rising unemployment and poverty rates, continued and forced the government into borrowing stabilization funds from IMF/World Bank, conditioned upon the introduction

of IMF prescribed structural adjustment program (SAP) in 1986, as a different necessary pathway to pulling the economy out of recession and remedying the flaws in industrial structure and planning. The main thrust of SAP strategy was to liberalize the economy, promote efficiency and competitiveness through private sector led investment and development, and by commercializing and privatizing public enterprises. SAP aimed also to stimulate non-oil exports, while encouraging the development and use of domestic technology, local raw materials and locally made intermediate inputs in industry.

However, some of the of key policy instruments deployed by SAP, including devaluation of Naira, holding nominal wages fixed below inflation rates, liberalization of import regime, and reduction of liquidity by a significant cut in public expenditure, immediately intensified hardship amongst the populace and weakened the demand for industrial products.

Overtime, the application of the full basket of SAP measures including especially, reorientation towards market economy principles in the allocation of factors of production, generated growth trends of about 6% early in the decade of 2000, powered by an expansion in trade and services. The industrial sector was however not significantly impacted and continued to lag.

The economic policies of the 1999 democratically elected government accentuated free enterprise trends in planning and application of resources, ultimately crystallizing the 2004 National Economic Empowerment and Development Strategy (NEEDS) and the 2009 Nigeria Vision 2020. The two strategic planning frameworks, whose main macroeconomic ambitions were: achieving and sustaining very rapid and broad based GDP growth rates, massive investments in infrastructure and human capital, and a robust diversification of the economy away from the primary sector and export of raw natural resources, by stimulating the manufacturing sector and strengthening its linkages to the agricultural, oil, gas, and other mineral sectors, marshaled towards a sustainable employment generation environment and poverty reduction.

Nevertheless, the year 2020 has passed, with the nation now designing the Medium Term National Development Plan - MTNDP 2021 – 2025 and 2026 - 2030, as well as the Nigeria Agenda 2050, and yet, none of the strategic objectives of NEEDS and Vision 2020 was achieved. In fact, the number of Nigeria's unemployed or underemployed working age citizens increased from 22% in 2009 to about 42% 2020, while 75% of the population are today living on some level of poverty.

On the throes of the 2016 and the 2020 Covid 19 global recessions, the GDP growth rate tumbled from upwards of 7% in 2009 to an unimaginable minus 6% in 2020, crushed by the recessions and the dreadful effects of non diversification which has kept the economy perennially susceptible to shocks and aftershocks at the slightest tremor or volatility in crude oil prices, the natural resource on which the nation still relies on for about 90% of its foreign exchange earnings and 65% of government revenue.

The ever increasing volatility on oil prices, the runaway costs of fuel subsidy and the burgeoning national appetite for imports have resulted in the Naira losing about 75% of its value since 2009, unleashing an inflation rate hovering at 25% in 2020, effectively wiping out the purchasing power of the wobbly incomes of the nation's vast vulnerable populations.

This depressing situation was not unexpected; given that the unprocessed primary sector of which subsistence agriculture commands a major proportion, continues to account for over 45% of the GDP, while industrial sector adds just about 18% to the GDP of which the manufacturing sector contributes 10%. The manufacturing sector overall accounts for just about 7% of the total export output and 7% total foreign exchange earnings, while employing only about 11% of Nigeria's labor force.

Africa and indeed with Nigeria leading, have over the years, wasted their vast endowment of natural resources, by simplistically harvesting and exporting most of the resources raw, without adding any value through processing or manufacturing, either to the intermediate stage or to the finished product. This explains why the average growth rate of manufacturing value added has stagnated at less than 2% annualized, from 1960 to date.

Between 2015 and 2017, the sector declined by -1.5%, -4.3% and -0.2%.

We have foolishly been satisfied with earning the average of just about 20 cents to the dollar from export of the natural resource as against a net average of 80 cents to the dollar from the finished product, and in the process, we have given away the potential for hundreds of millions of manufacturing jobs, the ensuing income, and growth in domestic demand for manufactures. By so doing, we have also lost countless opportunities for creating virtuous circles of industrial development and establishing different streams of industrialization spearheads such as agriculture-led industrialization, oil and gas-led industrialization, solid minerals led-industrialization, etc.

Even worse is the fact that we deplete the meager earnings realized from export of natural resources, to finance importation of finished products, often from the same countries to which we exported our raw materials in the first place. A double whammy of not earning appropriate sums of foreign exchange from export of unprocessed natural resources, and frittering away the measly inflows on import of all manner of intermediate inputs and finished products, necessary and unnecessary, and sometimes downright frivolous, with grave consequences to the nation's external balances.

Yet, manufacturing remains the surest, fastest and the most fundamental path to Nigeria's economic transformation, growth, and reduction of poverty, because of its preeminent capacity to alleviating our balance of payment aches, as well as absorbing huge populations of workers for production and related jobs, especially in the labor intensive manufacturing subsector, capable of engaging millions and millions of uneducated, semi-educated and unskilled workers of low cost labor in relatively well paying jobs, and boosting their family income, and with it, domestic demand. Unfortunately, we are under a spell of indolence into which we are lulled by gargantuan availabilities of natural resources.

This Dutch disease was mournfully lamented by one of Africa's foremost academics and writers, Professor Ali Mazrui, in his lecture, 'The Garden of Aden in decay', wherein he decried the paradox of Africa being the first on the

starting block of civilization, and the very last to develop, her crises of habitability and self-development and the condition of Africa producing what she does not consume and consuming what she does not produce.

The African Union, therefore, has perhaps not too belatedly placed an overarching importance on manufacturing and industrialization in her agenda 2063, in furtherance of which she launched in 2018, Africa Continental Free Trade Area- AFCFTA, a "single liberalized market for trade in goods and services," operating in a customs union, with a population of 1.2 billion people and a combined GDP of \$2.5 trillion, geared towards unlocking and harnessing the manufacturing and industrial potential of Africa. Indeed, it is projected to expand intra-African trade from 16% to 53% and the Continental GDP to \$29 trillion by 2050, while the business to business spending in manufacturing in Africa will climb to \$700 billion by 2030.

But the parlous and lamentable state of our manufacturing and industrial sector, with no concrete plan and effort for course correction which for long prevented the nation from fulfilling or even scratching the aggregate of Nigeria's domestic demand for manufactures and those of the Economic Community of West Africa States (ECOWAS) sub region, is sure to deprive Nigeria of the expectedly very big commercial benefit from AFCFTA's huge manufacturing market. Nor can Nigeria at this rate benefit from the 100 million labor intensive jobs and associated manufacturing that would be leaving China by 2030 through industrial relocation as Chinese labor costs rise and as she consolidates high tech manufacturing.

To be clear, most of the structural flaws hampering the proper take off, development and growth of our industrial sector were enmeshed in the original industrial architecture and planning framework, from the period of colonial Nigeria through independence, and up till date remain great impediments to the nation's industrialization process.

These flaws also hamper other sectors of the economy and social well-being of citizens. The most consequential of these flaws and hindrances are the non development of the necessary human capital stock and huge infrastructural deficits.

I intend to discuss these hindrances in relation to the various sectors of economy in the oncoming Chapters.

Chapter 9

Non Development Of The Necessary Human Capital Stock.

Possible Solutions.

a) **Overview**

Nigeria has always been blessed with a huge low - cost labor force and supply, right from independence, but we have never articulated nor implemented an effective plan to develop the labor force into a qualitative human capital stock necessary to drive industrialization, as shown by the following strategic misses:

b) **Vocationalization of basic education**

Never was a mass vocationalized basic education program vigorously pursued in order to heighten early appreciation of and pursuit of practical and technical skills as a basis for career choice.

c) **Promotion of Technical and Vocational Education and Training (TVET)**

Never was Technical and Vocational Education and Training (TVET) properly promoted. To the contrary, there was always an institutionally ingrained bias and perception of inferiority against TVET, leading to neglect, lack of commitment and lukewarm acceptance.

d) **Promotion of Mathematics, Science and Technology Education**

Never were Mathematics, Science and Technology - the bedrock of any technological capability - stoutly promoted and advanced as school disciplines.

I have dealt with vocationalization, TVET and Mathematics as school disciplines in previous pages.

e) **Promotion of Science, Technology and Innovation as a National Policy**

I also dealt with Science and Technology as school disciplines, but as a national policy, I should add that Nigeria's extremely lackluster attitude towards Science and Technology is prominently showcased by the inexplicably late formulation and adoption of a national Science and Technology policy, which finally took place for the first time in 1986. A whopping 26 years after independence and 26 years after the formal

commencement of Nigeria's industrialization process, akin to building a house without foundation. This metaphorically summarizes the story of Nigeria's industrialization effort.

The severe scarcity of foreign exchange resulting from 1981 global recession, persisted, and in 1986 compelled the government to recognize science and technology as the vehicle for industrial expansion and national development, and particularly for achieving self-reliance through the development and use of domestic technology, locally made raw materials and capital goods in industry, and through the translation of science and tech results into actual goods and services. To this end, the Raw Materials Research and Development Council was established in 1987, in addition to other research institutes.

Nevertheless, the reality on the ground today, is that Nigeria's Science and Technology policy remains a near failure, with grave negative impact on the economy, and especially on the industrialization process. Is it not such a sad tale that most countries are now in their fourth industrial revolution, while most parts of Nigeria are yet to properly experience their first industrial revolution of water, steam and basic mechanical power. Yet, the nonperformance of Nigeria's Science and Tech policy is not surprising since the policy was constructed without a proper foundation, and therefore unsustainable.

To be sure, it is only a robust, integrated, universal, and properly equipped and taught Math, Science and Tech education that spans the entire spectrum of Nigeria's basic, post basic, and tertiary education systems, in addition to research outcomes, that would provide the necessary foundation and ballast to the national Science and Technology (S & T) policy.

To make matters worse, whatever is left of the enfeebled policy is further weakened by the fact that the existing research institutes are poorly staffed, poorly equipped and poorly funded, and operate without proper collaboration with each other and therefore cannot build the necessary synergy while giving way to unnecessary duplication of effort. These institutes also operate in isolation of the industrial sector, and so make it difficult to commercialize initiatives and ideas.

Consequently, with the S&T policy not properly anchored, the nation is unable to benefit from the influences of S&T on the processes of industrial development, nor could she improve these influences, i.e. achieve innovation. In other words, Nigeria could not progress from S&T to science, technology, and Innovation (STI), meaning that while poor education and low skill levels deprive majority of Nigerians the ability to imbibe or absorb new technology, i.e. build innovative capacity, poorly anchored S&T policy deprives the nation of ability to create innovations. The Federal Ministry of Science and Technology in August 2021 changed its name to Federal Ministry of Science, Technology and Innovation, in recognition of the necessity of transitioning from S&T to STI, from capacity to imbibe technology to the improvement of the technology that is imbibed.

For these seemingly lofty interventions to have the desired impact, they should be accompanied with measures tackling the critical problem of nonexistence of the proper educational foundation to the S&T and STI.

I have set out in the previous pages, a plan to revamp Federal and States Government schools with particular attention to math, science, technology and TVET education, including aiding (with terms) privately owned technical schools, as one of the important parts of the foundation of our Science and Technology and Innovation. I should now look at another important part of that foundation: the research institutes.

f) Promotion of Research and Development, and a serious commitment to the Research Institutes

Research outcomes lead to innovation, new products, new processes and new equipment. Research processes form an inexorable path to continuous education. These processes train researchers, build human capacity and expand scientific methodology.

As stated earlier, our research institutes do not make a significant contribution to Nigeria's Science, Technology and Innovation policy, and neither do they aid our industrialization and diversification journey because they are poorly staffed, equipped and funded.

There are in existence over 70 research institutes, most of which get funding from the federal government through research grants, and without much impact. The starting point of renewal is to change the management cadre of the government institutes in a manner that is open, transparent and strictly on merit. The best way is to empanel experts in respective fields from home and abroad to handle best practices recruitment for the institutes.

A separate research fund should be established, into which all appropriations, accruals, grants, endowments and donations meant for research activities should be paid, and it should be managed by the NUC.

g) Promotion of local content in terms of know-how, knowledge intensity and human capability.

Never were the deeper meaning and implications of Local Content concept properly construed, understood and systematically pursued. The nation has tended to simplistically construe Local Content to mean the quantum or value of contracts for engineering, technical, technological, scientific, or knowledge-intensive works or services awarded to Nigerians or Nigerian owned companies as a share of overall procurement or as compared to works awarded to expatriate companies. Actually, the full import of Local Content represents endogenous capacities and capabilities including local know-how and techno-managerial capability, and plus the quantum of works or services awarded to Nigerians in relation thereto. Since education manifests best with lived experience, rigorous training, including training courses and on the job training programs, at all times offer a great opportunity to grow local capacity, an opportunity the nation has failed to take. For all the criticisms that trail the nation's initial Import Substitution Industrialization strategy, it provided Nigeria with excellent space and auspices to equip generations of workers with techno-managerial capabilities through training. Let's remember that with the financial incapacity in the private sector, ISI meant that the government directly invested and owned wholly or by majority stake, most of the medium to large industrial undertakings spanning manufacturing, utilities, mining, oil and gas projects, all of which projects were wholesale technological transplantations. So that being on the driving seat, government had the singular opportunity and duty to strenuously pursue on-and-off the job training of huge numbers of workers, which regrettably did not happen.

The enactment of Nigeria Oil and Gas Industry Content Development (NOGICD) was a good step forward and should be expanded to cover all sectors of the economy.

h) Leveraging the procurement powers of government to drive training of Nigeria workers.

Never did the government wield its immense power over procurement and concessions to drive mandatory and strictly monitored technical training of Nigerian workers in the private sector, and among government contractors and joint venture partners. From the beginning of our nationhood, one of the conditions precedent to securing government contracts, concessions and partnerships, involving technically or technologically complex undertakings, ought to have been the presentation by the potential bidder, of a detailed on-and-off job training schedule for Nigerian workers on the arcane processes of the respective undertaking. Accordingly, there should have been set up a department charged with the monitoring of compliance with agreed training schedules, any breach of which should have been penalized in line with the sanction regime provided for in the originating agreement.

It is clear that besides the inefficiency bred by public ownership and management of entities, Nigeria's non training of her labor force into a human capital stock providing skilled manpower with the necessary techno-managerial capabilities, constitutes the greatest cause of collapse or floundering of our critical foundational industrial projects, utilities and enterprises, which should have been producing the building blocks, raw materials and intermediate inputs for Nigeria's manufactures. Some of these non performing entities include Portharcourt, Warri and Kaduna refineries; Ajaokuta and Aladja integrated steel plants; Jos, Oshogbo and Katsina steel rolling mills; VON, ANAMCO, Leyland and Steyr vehicle assembly plants; Aluminum Smelter Company; etc. So sad that on these failed or failing entities, the nation has cumulatively invested over \$100 billion, all to no avail.

More so, the failure by the government to leverage its powers of procurement in ensuring adequate training of Nigerians has left the nation with no option than to continue to rely mainly on foreign contractors for

complex road works, bridges, dams, power projects and other infrastructural facilities.

And sadly in a perpetuating chain, the contracts awarded to foreigners by reason of Nigeria's non development of human capital stock continue to be so awarded without obligatory training schedules of Nigerian workers.

Take, for example, Julius Berger Construction Company, estimated to have received over \$50 billion in government contracts and payments over the years, covering many projects, all of which contracts were awarded without any obligatory training schedules and programs for Nigerian engineers and other construction professionals.

These lapses have had the effect of stultifying and stunting the growth of local capabilities and the accompanying wealth creation, while ensuring considerable outflows of foreign currency. The situation is the same in all spheres of government procurement for complex works, and since 95% of these works are, as at date, awarded to foreign contractors, and without mandatory training provisions, let's imagine the magnitude of missed opportunities and the horrendous outward transfers of foreign exchange.

Chapter 10

Huge Infrastructure Deficit.

Overview

Broadly defined, infrastructure comprises the basic underlying systems and fundamental facilities, both human and non – human alike, required for effective and sustainable operation of the society and its wellbeing.

Consequently, infrastructure includes food, safe drinking water, sanitation facilities, health, shelter, education, information, skills, good governance, national identification number registration, financial inclusion, security, power and energy, steel based facilities, railways, navigable waterways, roads – rural, urban, interstate, bridges, dams, airports, other transportation facilities, digital facilities – internet backbone, internet penetration, broadband, data center installation, fiber optic cabling, other information and communication technologies, etc.

What is common to all aspects of infrastructure in Nigeria is deficit, very huge deficit. The Moody's 2020 report – Infrastructure in Emerging Markets: Focus on Nigeria – estimates that Nigeria requires \$3 trillion in investment over the next 30 years to close the national infrastructure deficit, at \$100 billion annually.

Yet, without the necessary infrastructure, Nigerian economy can neither attract investment, nor diversify, nor grow, nor attain competitiveness, nor create jobs and wealth, nor build capacity to unlock the huge trade opportunities provided by AFCFTA.

All the more, industrial category includes manufacturing, utilities and mining, all of which are infrastructure. Building of infrastructure, in and of itself contributes in a major way to the GDP and creates millions of jobs. And more importantly, infrastructure constitutes the fulcrum upon which all other sectors of the economy anchor to produce, the indispensable shaft on which every segment of economy turns and churn out productivity, and that lever of Archimedes which moves the whole economic world.

In a larger sense, this book is essentially a discussion on the doleful status of Nigeria's infrastructure—soft, human, non-human and physical infrastructure, with various aspects taken up in different chapters. Those not already covered before now will be discussed in the following chapters.

It is however important to acknowledge the effort of the Jonathan administration in infrastructural development and more particularly that of the Buhari administration which graciously completed the inherited projects such as Itakpe-Ajaokuta-Warri railway line, Abuja International Airport Building, Port Harcourt International Airport Building etc, and has gone on to execute outstanding projects among which are the 2nd Niger bridge, Lagos-Ibadan railway line with world class stations, Roads, and all the while partnering in such projects as Lekki deep sea ports etc.

The obvious reason why inspite of these humongous projects it still feels to some people as if much has not been done is because of the Nigeria's ocean-sized infrastructural deficit, against which these projects in totality seem like a cup of water.

To make a noticeable impact, infrastructure would need to be mass produced and that would only be possible when Nigerians have developed adequate human capacities and capabilities in order to execute the projects by ourselves and not needing to pay foreigners exorbitantly, and in foreign exchange, in addition to sorting out the electricity crisis and also achieving a measure of success in steel development.

I should review the railways sector first, wherein Nigeria's deficiency in human capital is perpetuating 100% foreign supply of professional labour and materials.

Chapter 11

Railways Sector.

Perpetuating 100% Foreign Supply.

Possible Solutions.

a) Overview

Nigeria's fledgling railway sector is a signpost of doubling down on that crass mistake of not leveraging the federal procurement Might to deepen local technical know-how through training.

The nation inherited two principal Cape - gauge railway lines at Independence, the Lagos – Nguru line, and the Port Harcourt – Maiduguri line which reached Maiduguri terminus in 1964. The operative capacity of the rail network was also at its peak in 1964 with an inventory of 260 locomotives, 340 carriages and 4000 freight wagons, etc., and with passenger and freight traffic at a respectable and respective 11,000,000 riders and 3,000,000 tons annualized, this was just after the take-over of management and maintenance responsibilities by Nigerians from the British. Not surprising, without properly trained Nigerian managers, railway engineers and technicians, and coupled with the inefficiencies of public management, the railway system proceeded on a downward spiral of mismanagement, disrepair, dysfunction and collapse. So that by 2003, human and freight traffic had crashed to 1.6million passengers and 100,000 tons respectively, and by 2009, the Port Harcourt – Maiduguri line had gone comatose altogether, laid waste by prior failure to keep up with repair of rail tracks and such components as non roller bearing axles, couplings, vacuum brakes, and locomotives generally. Meanwhile, the Lagos – Nguru line was by this time literally gasping for life. By 2014 Nigeria's entire railway system had only 15 locomotives.

The government had embarked on some initiatives to stem the rot and revitalize the system, including engaging Rail India 1978 -1982, Ogbemudia Turn-around initiative 1989-1992, and CCECC Rehabilitation project 1995-1999, without much success. It was reasonably foreseeable that not much success was to be achieved without dealing with the problems and inefficiencies associated with public ownership and management, and without building the necessary local techno-managerial capabilities in a sustainable way.

b) Human capabilities

Upon Independence and long before the award of contract in 1987 for the construction of Itakpe – Ajaokuta line (later extended to Warri, being the first standard gauge rail development in Nigeria), government ought to have partnered with Nigerian universities to create Railway Engineering courses carefully tailored to meet the strategic National Rail Transport Plan. Those courses would have produced railway engineers tutored on standard gauge and lower-cost-narrow-gauge railways, and in such disciplines as rail track design, railroad construction and management, highway-rail crossing, control and signaling, railway vehicle, and systems engineering, etc. Also, government should have partnered with Nigerian polytechnics to create rail technician course programs focusing on manufacturing of steel rails and guard rails, rail joints, rail fasteners like clips, railroad tie plates, turnouts, rail sleepers, track ballasts, etc, mechanical and electrical fabrication, and assembly of commuter trains, rail automation and various aspects of repair of rails and rolling stock.

Thereafter, the technical knowledge and capabilities of the engineers and technicians would have been strengthened through further practical training by the contractors, pursuant to the obligatory terms that should have been provided for in the contracts. Unfortunately, no such thing happened.

The ongoing and proposed national rail projects include Lagos – Kano, Kano – Maradi, Warri – Abuja, Lagos – Calabar standard gauge rail lines development, and the Port Harcourt- Maiduguri narrow gauge reconstruction, altogether projected to cost the nation about \$30 billion. And yet, there are no readily available Nigerian railway systems engineers and technicians to provide local content and benefit from further practical training, and worse still, there are no provisions made or contemplated in the construction contracts for obligatory and closely monitored crash course and practical training programs for engineers and technicians. These omissions and lapses ensure a near-zero growth in local capacity, and condemn the nation to perpetual dependence on foreign contractors for maintenance of the rail lines and rolling stock, and will also jeopardize the expectation and ambition that Nigerians by ourselves would in the near future build standard gauge rail lines or even the lower-cost narrow gauge rail branch lines

connecting vast agricultural and mineral resource rich hinterlands to the national rail network.

Proactive training measures for Nigerians and extra vigilance are rather crucial in the railways and other infrastructural projects handled by Chinese contractors including Abuja and Lagos airport expansion, inner-city light rails, multiple road projects, AKK pipeline project, etc, because Chinese contractors are known to have scant regard for growing local capacity and technology transfers, and do, in fact, import almost all technical workers, now running into thousands in Nigeria. The fact that China provides the loan finance for these projects and that the jobs are mostly awarded on non-bid basis do not help matters.

For whatever it is worth, few number of Nigerians from the Ministry of Transport are in China for training in management, fewer still are receiving training in Nigeria on such light tasks as train driving. Also, CCECC, the Chinese contractor, is building a University of Transportation in Katsina. However, no effort is underway to commence the urgently needed academic sessions in a temporary setting pending completion of construction. On its part, government sponsors a poorly equipped railway training institute in Lagos and has just announced the inauguration of a National Institute of Transport Technology in Gombe State, though yet to be undergirded by physical and academic structures. These efforts are therefore few and far between to creating the technical manpower needed to build a sustainable railway industry with a vast network of rail lines necessary to unleash the desired immense economic advantages.

c) Benefits, and Nigeria's requirement of a 25,000km rail network

The benefits of railways are inherent in their economies of scale with an elaborate network delivering the efficiencies of safer, more secure, cheaper and faster long - distance travel, moving many more tens of millions passengers and freight tonnage, imbued with a huge potential for accelerating massive agricultural production, agglomeration of industries and trade through connecting resource-rich hinterlands to port cities and markets, and all the while promoting social integration amongst ethnic, religious and linguistic groups, and also transforming new railway hubs in the

rural and undeveloped areas into urban commercial cities driven by inward investment and migration, as exemplified by the commercial cities such as Lagos, Ibadan, Oshogbo, Port Harcourt, Enugu, Maiduguri, etc. Urban and city air, as the medieval saying goes, breathes free.

There is also the benefit of a substantial spin-off of upstream manufacturing supply chains in steel, electro-mechanical equipment and other construction materials.

For context, the direct and indirect impact of a properly developed railway system has the potential of contributing up to 7% of Nigeria's GDP, with 650,000 jobs yearly.

However, given our population of over 200 million people, with a geographic size of 925,000 square kilometers, Nigeria requires a rail network with a minimum of 25,000km of installed standard and narrow gauge rail lines connecting the disparate length and breathe of the nation in order to create the economic conditions necessary to transform Nigeria in no time from a third-world low income country into a second-world medium income country, at the very least. Presently, Nigeria's railway foot print (including the Port Harcourt – Maiduguri line under reconstruction), consists of 3,505km narrow gauge lines,-- out of which 1,976km are sharp curve; and about 669km of standard gauge lines which will increase to 3,648km upon the completion of Lagos – Maradi, Lagos – Calabar and Ajaokuta – Abuja lines. Standard and narrow gauge lines, existing and proposed, are altogether 7,153km.

The nation however needs additionally, a minimum of 18,000km of at least lower-cost-narrow-gauge lines and rolling stock, for an adequate network, estimated to cost an additional \$42 billion, circa, an impossibility in our present dire economic straits, unless we found ways of cutting the cost drastically. Fortunately, we can slash this cost by immediately embarking on the urgent task of building the local technical manpower through crash course training of desiring engineers and technicians, as the case may be, in the relevant aspects of railways systems, and taking serious steps to manufacture steel rails, accessories and freight wagons here in Nigeria.

d) Unbundling the Nigeria Railways System

To ensure sustainability of the nation's railway systems and industry, and to end mismanagement and prevent another collapse, Nigerian Railway Corporation should be broken up to allow commercialization and private sector participation.

A new enabling legislation, *Nigeria Railway Act*, would be required to provide the legal and regulatory framework, and to provide for the establishment of following successor entities to Nigeria Railway Corporation:

- i. **Nigeria Railway Regulatory Commission**, an industry-wide regulatory body.
- ii. **Nigeria Rail Network limited**, to build, own and manage rail infrastructure, including railway tracks, signals, overhead wires, tunnels, bridges, level crossings, stations and workshops.
- iii. **Nigeria Rolling Stock Company limited**, to own and maintain railway engines, carriages and wagons which would be leased to train operating companies and rail freight services companies.
- iv. **Train Operating Companies (TOC)**, should be private sector businesses to run passenger train franchise services on the Nigeria railway system, allocated by competitive bidding processes, and under a collective brand. TOCs would pay track access charges to Nigeria Rail Network limited and rental charges to Nigeria Rolling Stock Company.
- v. **Rail Freight Services Companies (RFSC)**, should be private sector businesses to operate freight franchise services on the Nigeria railway system. Franchises would be allocated by competitive bidding processes. RFSC would pay track access charges to Nigeria Rail Network limited and rental charges for freight wagons to Nigeria Rolling Stock Company limited.
- vi. **Nigeria Rail Telecommunications limited**, Private sector business should exploit wayleave rights to build and manage thousands of route kilometres of fibre optic and copper cables necessary to provide train – to – shore mobile telecommunications – (Industry's voice, data and radio networks).

e) Composition of management boards

The management boards of the entities to be controlled by government in the near and medium term (Nigeria Railway Regulatory Commission, Nigeria Rail Network Limited and Nigeria Rolling Stock Company Limited), should be

composed with experienced Nigerians at home and diaspora, and some foreign non-executive directors of repute, who in turn should conduct a diligent and transparent head hunt to shortlist 3 persons from whom the President would appoint the respective Chief Executive Officer.

f) Security

The traumatic reverberations of the Madrid trains bombing of 2004 still echo in the subconscious.

The coordinated attacks on four commuter trains left 191 dead and more than 2000 injured.

Apart from improvised explosive devices (IEDs) detonated on board trains or at stations or seeking to derail trains by sabotaging tracks with IEDs or with other obstacles placed on tracks, the railway system is exposed to other risks such as shooters at the train station or aboard a train, and traffic disruptions brought about by sabotaging signaling equipment, cables or other sensitive systems.

Vandalism of tracks or parts of the rolling stock is also a clear and present danger to the railway systems.

An elaborate security architecture that anticipates these dangers must be put in place, including prevention, early detection and mitigation systems.

The best approach is to call for conceptual design presentations and proceed with those best suited for Nigeria's peculiarities.

Chapter 12

Maritime Sector

Local Participation Deficit In The Maritime Sector.

Possible Solutions.

a) **Overview**

The maritime sector is another gigantic conduit pipe from which we hear giant sucking sounds (apologies to Ross Perot) moving vast sums of foreign currency out of the country due to very low participation rates of Nigerians in the critical domain of the sector.

Situated along the corridors of Gulf of Guinea and the Bight of Benin, Nigeria is endowed with a coastline of about 853km, 200 nautical miles of Exclusive Economic Zone and a vast inland waterways resource of which navigable portions stretch out over 3,000km. We are also endowed with very large oil and gas deposits and one of the fastest growing populations in the world, altogether driving a vibrant domestic and international trade that produces an annual freight cost of about \$7 billion, generating an annual ship importation and repair cost of \$6.5 billion coupled with cabotage seafarer labor cost of over \$200 million. Consequently, Nigeria has the potential to become a major maritime nation that rakes in a significant portion of her national revenue from the maritime sector. Yet, most of Nigeria's maritime revenues go to the foreigners because of the very low capacity of Nigerians for ownership, manning, management, construction, maintenance of ships and maritime infrastructure.

Nigerians own less than 6% of all the ships and less than 1% of ocean going vessels that call at the nation's ports, and is without a viable ship building and repair subsector. Obviously, one of the main problems is non-development of human capacity, starting with inadequate awareness of the lucrative job and business opportunities in the maritime arena. Relative to Nigeria's population and the huge number of the unemployed, only a few thousand youths have ever contemplated a career journey in the sector simply because they have never been made aware of the sector's potentialities.

b) **Cabotage, Seafaring, new National Shipping line, Maritime University, Ship building and domestic shipping lines.**

The National Maritime Administration and Safety Agency (NIMASA),

estimates that the nation requires about 50, 000 rank and cadre certified Nigerian seafarers to man vessels plying the coastline and inland maritime transportation, which is exclusively reserved for Nigerians by the Coastal and Inland Shipping (Cabotage) Act. Yet, there are in all less than 3,000 non retired world-class certified Nigerian seafarers, a meager number that leaves foreign seafarers to man the vessels in Nigeria's cabotage transportation. The exemption clause in the Cabotage Act allowing rare participation in cabotage trade and transportation by foreigners only where Nigerians cannot fulfill personnel and vessels requirements, is now in everyday use.

Even so, most of the few who venture for training at the Maritime Academy of Nigeria (MAN), Oron, and Federal College of Fisheries and Maritime Technology (FCFMT), and National Maritime University (NMU) are refused admission owing to limited carrying capacity of the institutions, while those admitted seethe with frustration at the inadequacy of training facilities and the nonexistence of ocean going vessels for the mandatory sea-time training segment where applicable.

MAN, originally called the Nautical College of Nigeria, was belatedly established in 1979 to train shipboard officers, ratings and onshore management personnel. When the initial effort to affiliate it to Arab Maritime Academy of Egypt became unsuccessful, an OND/HND program with a gap year for sea-time training was adopted by the academy.

MAN, FCFMT and NMU are severely constrained by the nonexistence of Nigeria owned ocean going vessels and deficit of world class instructors, adequate training equipment, and other essential facilities. Before the collapse of Nigeria National Shipping Line (NNSL) in 1995, students of MAN were automatically enrolled there for their sea-time training.

The collapse of NNSL was therefore a strategic and monumental disaster for maritime human capacity development of the nation. With the collapse, the cadets of MAN were no longer able to receive the compulsory sea-time training and could not therefore obtain the seaman's certificate of competency usually issued to qualified members of a Watch relative to their specific functions and responsibilities on board. As a result, there are over

5,000 MAN graduates whose certificates are worthless without sea-time training, some of whom have taken up such menial tasks as cab driving for survival.

Perhaps, NIMASA's way of remedying the situation was to set up in 2009, Nigeria Seafarers Development Program (NSDP), designed to train some seafarers abroad in such countries as Egypt, England, India, Romania, Philippines etc., and meant to be funded jointly between NIMASA and States government of the prospective cadets. Before long, the burden fell solely on NIMASA as the States could not cope.

Under the NSDP, NIMASA has since produced about 2,500 sea-time trained and certified seafarers at the approximate cost of \$140 million, as at December 2020.

Surely, \$140 million would have gone a long way to expanding the carrying capacity of MAN, FCFMT and NMU, in addition to equipping the academies with appropriate facilities and personnel to train tens of thousands of cadets and in line with international standards and stipulations. Ocean going vessels necessary for sea-time training could easily be provided by prudently organizing a new shipping line on a market oriented public private partnership under the aegis of an incorporated joint venture.

At the formation of NNSL in 1957, the Nigerian government held 51% of the share capital while Elder Dempster Line and Palm Line, two British companies, jointly held 49%. Instead of selling down its shareholding to Nigerian business men and companies to strengthen private sector involvement in NNSL with the attendant benefits, Nigeria, in 1961, made the calamitous mistake of acquiring the stake of the British companies and creating a Nigerian government wholly owned company.

Not too long after Nigerians assumed full responsibility, insufficient management experience and technical know-how coupled with the same inefficiencies, waste and corruption that are usually bred by public ownership and management of enterprises, pushed NNSL into hard and hazardous times. Many of her ships were routinely arrested in various foreign

ports for commercial debts, and for drug trafficking and smuggling. It became a guzzler of government bail-outs, subventions and subsidies exceeding \$700 million. Ultimately, NNSL collapsed.

With the collapse, Nigeria lost a total of about \$2 billion of her direct investment in NNSL. We lost over \$40 billion in missed freight fee earnings and proceeds from international shipping of Nigerian outward and inward bound cargo over the years. We missed an opportunity to provide sea-time training to tens of thousands of seafarers, and an opportunity to breed maritime business persons trained in shipping technology, management and entrepreneurship. We lost the opportunity for the creation of hundreds of thousands of jobs. We left in place a sad situation where Nigerian wet and dry cargo are exported on free-on-board basis while our imports are shipped on cost, insurance and freight basis. No wonder then that Nigeria has for the fourth time failed to win even the lower ranked Category C seat on the International Maritime Organization (IMO) Council, losing to Kenya in the last election.

Worst of all, the failure of NNSL seems to have sapped the nation's will and confidence towards facilitating the emergence of Nigeria backed International shipping line or lines.

Yet, we must not be defeated. We must not be defeated because of the above stated compelling reasons and more. Our commonwealth and economic wellbeing are critically at stake.

It should not be too difficult for Nigeria to leverage her huge freight costs and the potential award of a National Carrier Status (which enables a shipping company so awarded to have exclusive rights to the carriage of export and import cargo belonging to federal, state and local government and their agencies, in addition to participating in carriage of not less than 50% of bulk dry and liquid cargo generated through technical assistance and international aid) to attract renowned international shipping companies to partner with the nation and her private sector in the formation of a new shipping line, especially where the international companies would be allowed to take 51% stake while Nigeria holds 49%.

Such a shipping line would necessarily adhere to a market oriented management principles and in no time grow its assets to over 50 ocean going vessels of various sizes and hue, yielding tens of billions of dollars in taxes and dividends to Nigeria, and training and breeding maritime business persons.

However, the provisions of NIMASA Act mandating a 60/40 Nigerian/foreign ownership structure to qualify for National Carrier Status, should be amended to allow the possibility of a foreign majority stake in order to spur potential foreign investors' interest.

The nation should also create a suitable and competitive trade climate to attract and sustain interest of international shipping lines. Import duty regime and tonnage tax, tax holiday/Pioneer Status, VAT, etc., are areas the President may show some flexibility for Nigeria to win the day.

There are also scenarios where the government and Nigerian business persons can team up to secure 60% stake. Whichever way it goes, as soon as practicable, the government should sell down its stake to the Nigerian private sector.

Meanwhile, MAN has continued to offer low-quality training far below international standards, and often times blames its underperformance solely on inadequate funding rather than the patently prevalent incompetence, mediocrity and mismanagement of resources.

Relative to other institutions, MAN's funding is much more certain because it statutorily receives 5% of NIMASA's yearly earnings, as well as appropriations by the National Assembly. MAN also receives various donors' assistance with projects. But no organization or individual does more for MAN than NLNG which regularly provides it with numerous training equipment, as well as providing sponsorship now and then for further training of its instructors. NNSL also hires the average of 25 cadets of MAN yearly for its operations and provides them with sea-time training. However, these donations have not been able to pull MAN out of its doldrums, because her inadequacies are structural and systemic. To urgently remedy the situation and bring MAN, FCFMT and the NMU up to international standards in all necessary

ramifications, the laws establishing these institutions should be amended with a view to merging them into a single multi-campus federal tertiary maritime institution offering Degree, OND and HND programs. The institution would then be formally associated with one of the best maritime institutions globally. The governing council should be composed with 4 nominees of the foreign associates, 2 nominees of NLNG, 2 nominees of the proposed national shipping line, 5 persons versed in maritime affairs appointed by the President, 2 of whom should be from diaspora.

The governing council, upon inauguration, should appoint the Vice Chancellor by two third majority vote. Vacancies in the governing council should be filled by two third majority vote and same with removals. The institution would be revamped under the Nigeria Universities Rehabilitation Task Force program (NURTF), and would receive funding from the Federal Government through block grants, in addition to the 5% statutory accrual from NIMASA.

In no time, Nigeria would develop some world class maritime human capacity, become a supplier of seafarers, unite and achieve her international shipping and cabotage ambitions. For sure, without domestic human capacity, pay-outs from the cabotage vessel financing fund (CVFF, established by the Cabotage Act for assisting and promoting indigenous ship acquisition, manning and management) would amount to money thrown overboard.

Financial and infrastructural handicaps, low technological base, poor skill levels and lack of domestic technical know-how are the principal constraints militating against the successful berthing of a ship building and repair industry in Nigeria.

Yet, the Nigerian public and private sector import the yearly average of upwards of \$6 billion worth of ships and vessels majorly for operations in the oil and gas sector, such as Liquefied Natural Gas vessels, Jack up rigs, Floating Production Storage and Offloading ships -FPSO, etc., the latest of which was the \$3.3 billion Egina FPSO. Fishing trawlers and Naval training and military vessels, as well as cabotage trade vessels are also routinely imported.

With as much as 35% of the ex – dock yard vessel price going for human capital costs, it means that Nigerian government and companies spend about \$2.1 billion annually sponsoring employment costs in ship building overseas, while over 60 million Nigerians are unemployed. Also lost to the nation are millions of well-paying jobs, technological transfer advances, human capital development, and billions of dollars in foreign exchange.

The nation must therefore make every effort to ensure that the necessary steel sheets for ship building are produced in Nigeria. The government should leverage its powers of procurement to attract foreign high capacity ship builders into incorporated joint ventures with foreign equity holding at 51%. That would make for the establishment of sizable and properly equipped world class dock yards for ship building and repairs in Nigeria and wherein Nigerians would be trained in the high precision processes of ship manufacturing. Samsung Heavy Industries Nigeria Yard which carried out Nigeria's first in-country fabrication and integration of topside modules for Egina FPSO platform is acknowledged but we need to do much more.

Due to the capital intensiveness of ship building and ship acquisition, the government should pursue and incentivize mergers and collaborative effort among existing domestic ship builders as well as shipping lines to enable them achieve the necessary critical mass for survival and growth. High tariffs on import of vessels (except for the proposed National shipping line) and an outright ban should be considered for vessels below 3500 tons in order to encourage local manufacturing.

c) Inland waterways

On a larger note, the chronic under performance of Nigeria's maritime sector, including inland waterways transportation and ports logistics infrastructure, in many ways reflect the chronic deficit of human capacity and sectoral leadership.

The nation is blessed with over 10,000km of inland waterways out of which about 3,000km are navigable, comprising rivers, lakes, lagoons, coastal creeks and canals, principally sourced by River Niger and its tributary, River Benue, with their confluence at Lokoja, Kogi State. Our inland waterways are capable of linking 28 out of 36 states and the FCT. Presently, 18 states are notionally accessible by waterways, with 5 neighboring countries connected by river channels.

Inland waterways, one of the oldest means of transporting goods and services, provide the most economically and environmentally efficient means of transportation, it also promotes commerce, boosts agricultural production, youth employment, wealth creation and ancillary services like boat and water craft building, and with a capacity of over \$3 billion in direct and indirect government revenues annually. Despite these benefits, Nigeria's inland waterways resources remain grossly undeveloped and mismanaged.

In 1997, Inland Waterways department of Federal Ministry of Transportation was transformed into Nigeria Inland Waterways Authority (NIWA), as a regulator and operator, charged with improving and developing inland waterways for navigation, and with issuing permits and licenses for, and/or undertaking construction of piers, jetties, rivers ports, dock yards, shipyard operations, sand dredging, pipelines, boats and other river crafts including registration, licensing or operating ferry services for goods and passengers, and cruise services for tourism and leisure, removing derelict wrecks and other obstructions including hyacinths and harmful weeds from waterways, carrying out hydrological, hydrographic, cartographic and aerial surveys, river charting and mapping, and installation of water marks and buoys, and above all maintaining security on the waterways.

Over 25 years after its establishment, NIWA has yet to successfully achieve any category of its responsibilities and mandates listed above. Navigability has not exceeded and still hovers around 3,000km with more than 7,000km of Nigeria's inland waterways remaining unnavigable, keeping the number of states accessible by water at only 18 whereas 28 states have natural waterways links. 8 Nigerian states still have no waterways links whatsoever. If we are unable to increase navigability on already existing natural waterways, how would we be able to connect the states without water links through canals?

If the grand canal of China connecting the north to the south, Yangtze river to Yellow river, the longest canal in the world was first built in the 5th century BCE, and if Mr. Pierre Paul Riquet could single handedly midwife and finance the 240km Canal Du Midi connecting the Atlantic Ocean to the Mediterranean Sea in the 17th century, surely we can in the 21st century make

our natural waterways navigable and accessible for all the 28 states with water links and connect the remaining 8 states without links by building canals.

Still, our waterways remain underdeveloped and under utilized and cannot provide a viable alternative to road transportation because of easily solvable problems. Security is a major issue despite the existence of a marine police department, due to inadequate training and lack of patrol gun boats and other necessary security equipment. Many stretches of the so-called navigable 3,000km waterways are barely navigable, clogged by sunken wrecks above and under water, hyacinths, silts, sand, debris and sediment. Clogging, over-crowding of vessels and poor watercrafts cause many accidents on the nation's waterways.

It does not help matters that jurisdiction over inland waterways in some respects overlap between the Federal and States Government, blurring the line of authority and responsibility. Such an overlap also exists with regard to the river basins. The functions of the NIWA intersect and sometimes overlap with those of River Basin Development authorities. It is therefore my view that Federal and State Government should negotiate, define and stipulate respective responsibilities.

I should also propose the subsequent merger of NIWA and the River Basin Development authorities in order to cut waste, achieve economy of scale and better coordination. I will discuss this a little further later but suffice it to say for now that the new entity should be placed under a management comprising an international and professional Board of Directors who would be able to issue long-term bonds to finance the increased navigability to the 10,000 plus kilometers of Nigeria's waterways and making the entire 28 States with water links accessible by navigation and mobilizing our idle youths to build canals to the remaining 8 States without water links.

Above all, inland waterways, the most financially and environmentally efficient domestic transport system, should be seamlessly linked to the seaports and factory floors for the transportation of containers, petroleum and gas products, cement and other heavy cargoes. It is time we spared the roads, and make money doing it.

d) Port infrastructure

Just like the inland waterways and the river ports, the nation's sea ports and logistics infrastructure have since independence been bogged down by deficiencies in sectoral and operational leadership, planning and managerial capacity.

The direct effect of this incapacity is among others, the frustrating and paralyzing congestion at Apapa and Tinian Island ports in Lagos.

Efficiency and competitiveness are so low that the median waiting time at Apapa and Tinian Island ports is 27 days, compared to the average time of 23 hours that ships spend on a typical port across the world. In fact, per kilometer, cost of shipping to Apapa port is the most expensive in the whole world, leaving Nigeria at the bottom of the Logistic Performance Index and losing cargo to the West African ports of Benin Republic and Cote d' Ivoire.

The overall loss to the economy brought about by the ports inefficiency and maritime logistic incompetence, through high transportation costs, constraints on trade facilitation, as well as loss of revenue in port fees, loss of thousands of job opportunities, etc, is as much as 1% of the GDP annually.

Absence of strategic planning which has led to the absence of an intermodal transportation network has created a huge ditch of clogged and impassable road system around the port corridor. The corridor itself is enmeshed with residential housing and businesses, some as close as 12 meters to the port, while a substantial part is built up as permanent storage area rather than a holding and transit zone.

Devoid of high capacity scanners, Nigerian Customs Service conducts 100% physical examination of containers which breeds lack of trust and in turn drives multiple check points in the ports and contributes immensely to the horrendous congestion. And worse, there are no matching alternative ports to which big ships can easily be diverted to berth, as the Eastern ports are of shallow drafts, especially the Calabar and Warri ports.

The Lekki Deep Seaport now under construction expected to ease the congestion at the Lagos ports is nearing completion, with a capacity of 4.7m TEU.

Also nearing completion in the same area is the Dangote 650,000 barrels-per-day refinery and 3 Million Tons per annum Fertilizer complex.

And in that same area is the Lekki free trade zone expected to accommodate 48 mega companies.

The slight problem is that the access road to this area is Eloko Road. So this slight problem is really a disaster waiting to happen. Influx of people to the Lekki-Epe corridor has jacked up the number of vehicles, resulting in snarled up traffic, even before the completion of those behemoths.

To prevent the impending imbroglio, 4 things needed to have happened 4 years ago. First is a rail link to Lekki. Rail lines take an awful length of time to design and build. Second is the widening of road infrastructure along Lekki corridor. Third is laying of pipelines for the evacuation of Dangote products as a way of minimizing truck traffic. Fourth is harnessing and integrating coastal and inland waterways in the transportation network.

An intermodal transportation system is a must.

e) Professional Board of Directors

Since 90% of world trade is transported on the sea, the seaports play outsize and indispensable roles in trade facilitation. As a result, there is an urgent need to end the logistics mess at the seaports, infuse a business mindset and savvy in the management of ports and maritime infrastructure and optimize trade facilitation. I do, therefore, hold the view that NPA requires a Board of Directors composed by maritime professionals and reputable private sector management titans and with a minimum of four foreign non-executive directors experienced in maritime affairs and in the turn-around of failing corporations. The Board of Directors would then mount an international head hunt for the Managing Director of the authority and then narrow the list to three alternatives to enable the President appoint one of his choice.

The Board should also have the power to hire and fire all other staff.

The new management board should reimagine Nigeria's port operations in line with 21st century realities, and should accordingly raise money through long term bonds or from Africa development finance organizations to carry out a complete automation of the ports, particularly Apapa and Tincan Island ports.

Surely, the new business savvy Board would recognize the easily discernible fact that instead of waiting endlessly for the Customs Service to provide the scanners, the lucrative and much sought-after concessions of the port terminals should be tied with the responsibility for the provision of the high capacity scanners, cargo handling plants and other necessary equipment on adjusted commercial terms. Likewise the very lucrative concession for pilotage services at Onne Port ought to have been tied together with the concession of either or both Calabar and Warri Ports and with the obligation of the dredging and deepening of the drafts to berth bigger ships, based on commercial terms.

Chapter 13

Oil And Gas Sector

Low Local Capacities, Capabilities and Participation.

Possible Solutions.

a) Overview

In the oil and gas sector which generates 90% of Nigeria's foreign exchange earnings and 65% of government revenue, the nation continues to suffer low skill-set levels, low local capabilities and capacities and low participation rates by volume.

Nigeria is the 15th largest oil producer in the world with proven reserves of approximately 37 billion barrels of oil and 203 trillion cubic feet of gas. Nonetheless, indigenous producers (independents and marginal field operators) account for less than 40% of exploration and production, and if the input of their foreign technical partners are discounted, Nigerians would account for less than 6% of technical and technological input in Nigeria's total oil and gas production.

b) Human capacities and capabilities

Of course, the cause of these low participation rates of Nigerians in their God given commonwealth is lack of human capability development and its inexorable consequences, scarcity of skilled manpower, low technological and manufacturing base, and difficult access to the quantum of capital required by the capital intensive industry.

The situation is worse because of the rather late start in the pursuit of local content and higher participation rates for Nigerians in the sector.

The first successful exploration of an oil prospect in Nigeria was in 1956 but it was only in 1969 that the Petroleum Act made it mandatory that within 10 years from 1969, the minimum of 75% of mid to upper level employees of all oil companies operating in Nigeria should be Nigerians. This mandate was never enforced because there was no readily available pool of skilled Nigerian professionals to fill the positions, neither was there any deliberate nor systematic effort to lay the educational ground work necessary to produce the pool of skilled professionals in the near future.

As part of the indigenization measures and creating a beneficial petroleum fiscal regime, the Nigeria National Oil Corporation (NNOC) was established and proceeded to acquire direct interest and stake in exploration and production. NNOC's acquisition of stake was done through joint ventures partnerships with IOCs which, at this stage, was not a bad idea due to scant domestic know-how and capital.

The partnerships afforded the government the opportunity to vigorously pursue the training of Nigerians in all complex technical, technological and managerial aspects of petroleum exploration and production which the nation was sorely lacking. The nation failed to take the opportunity.

It seemed therefore, that the nation forgot she was lacking in the relevant technical and managerial capabilities when she ended her partnership in Port Harcourt refinery with Shell BP by acquiring Shell's stake, and when she built Warri and Kaduna refineries as wholly owned Nigerian government ventures.

In 1977, NNOC was merged with the Ministry of Petroleum and became the Nigeria National Petroleum Corporation – NNPC, amorphously combining the status of an oil company and that of a regulator. The combination, however, did not improve the fortunes of oil and gas industry, especially in the twilight of oil boom and the onset of 1981 recession which was propelled by the collapse of oil prices. Also, that combination did not advance human capacity development of Nigerians in the industry, nor did it advance measures and processes for higher participation rates of Nigerians in the industry. In fact, up to 1986, there were almost no existing private indigenous oil companies. The only two such companies that existed in the 70s had collapsed.

The Ministry of Petroleum Resources was de-merged from NNPC and reestablished in 1986 which tended to bring a sharper regulatory focus on indigenous participation in exploration and production.

In a space of three years, few indigenous companies started functioning and by 1998, there were 42 indigenous companies with oil licenses. However, the aggregate production of these companies was still less than 4% of Nigeria's

total oil output, and virtually all the companies were dependent on their foreign technical partners. Human capacity development continued to lag.

Indigenous participation effort was boosted with the introduction of Marginal Fields program in 2001. Marginal fields were those oil blocks with reserves but rendered unproductive by the owning IOCs through inattention or abandonment for a period upwards of 10 years. These fields were thrown open to the indigenous companies for bidding. The program, though not an abject failure, cannot be assessed as resoundingly successful. Many licensed marginal fields remain unexplored, undeveloped and unproductive with the licensees constrained by lack of technical and managerial experience, and inability to raise capital.

In a further step to spur indigenous participation in upstream exploration and production of oil and gas, the Local Content Vehicles Program was initiated in 2005 and imposed on license bidding processes a requirement that a minimum of 10% of each bid was reserved for local content vehicles which were meant to be financial paying partners in the prospective oil license.

This program failed badly as most of the vehicles were fronts, and of the 150 or so vehicles approved, only about 12% had any experience in the industry. It was therefore not surprising that most vehicles did not make payment for their equity stake. The program was never used again after 2005.

Meanwhile, capacity development continued to suffer neglect, costing the nation dearly. The Nigerian government's 100% ownership and management of the Port Harcourt, Warri and Kaduna refineries without the requisite technical and managerial experience was a tragic mistake. Lack of maintenance and timely repairs of several non-life threatening technical faults degenerated into serious decay and severe damage, overtime leading to shutdowns and of course, leading to the need for turnaround maintenance costing billions of dollars. The various turnaround maintenance exercises were most times mishandled, and accelerated the ultimate collapse of the refineries.

The collapse of the refineries ended our weak-kneed quest of adding value to crude petroleum by refining the crude to premium motor spirit (PMS – Motor

Fuel), liquefied petroleum gas (LPG – Cooking gas), dual purpose kerosene (DPK), automotive gas oil (AGO Diesel), low and high pour fuel oil (Fuel Oil), etc. These collapsed government owned refineries had a total capacity of about 445,000 barrels a day, which would have been doubled by now had the refineries been managed with know-how and business acumen.

Increased capacity would have satisfied domestic consumption with a spare for export. Instead, Nigeria may have expended over \$500 billion on the importation of refined products, with such massive foreign currency transfers weakening the Naira. The weakened Naira has in turn forced the nation to expend trillions of Naira on fuel subsidy and losing over \$20 billion in subsidy fraud. All these losses occurred because of the weak human capacity that has attended the entire structure of our national endeavor in terms of corruption, leadership, technical capacities and capabilities, and inefficiencies of public ownership and management.

More so, the prevalence of poor technical know-how and Nigeria's weak industrial development have made us bystanders to the hundreds of billions of dollars shoveled down as costs of exploration and production. With the average cost of production at \$25 per barrel of oil over the years, the total cost calculated with the average production rate of 1.9 million barrels per day, results in the staggering sum of \$17.3 billion per annum for cost of production, and \$173 billion over a ten year period. Yet, Nigeria's earnings from professional labor, engineering, procurement and construction as a share of this humongous cost element has been in the low single digits.

This unsavory situation, together with the continuing overall low participation rates of Nigerians in the industry, led to the enactment of Nigeria Oil and Gas Industry Content Development Act 2010.

I am at once most humbled and highly honored to have participated in the passing of the bill that led to this law during my time in the Senate, 2007 – 2011.

The Act, no doubt the epoch in the pursuit of indigenous participation in the petroleum industry, recognizes local content as the value added to the

economy by a systematic development of capacity and capabilities through the conscious, intentional and purposed use of Nigerian human, material resources and services in the oil and gas sector. It creates the Content Development and Monitoring Board (the Board), with far reaching enforcement powers for the implementation of the provisions of the Act.

Amongst other things, the Act, at the pain of sanctions, makes it obligatory for all bids for permit , license or interest of any kind in oil and gas industry to include a local content plan which must contain provisions to ensure that employable Nigerians, Nigerian independents operators, Nigerian goods and services must be given first consideration.

It requires of all operators, the submission of a program of planned initiatives aimed at promoting the effective transfer of technologies from the operator and alliance partners to the Nigerian individuals and companies.

The law also requires operators to give full and effective support for transfer of technologies by facilitating joint ventures, partnerships and licensing agreements between foreign contractors and Nigerians.

It goes further to mandate that the operators shall submit annual reports detailing their technology transfer initiatives and the corresponding results.

The Act furthers local content and preferential access for Nigerian companies by providing that award of contract shall not be based solely on the submission of the lowest bid, provided that the bid of the Nigerian company does not exceed the lowest bid by more than 10%, and that where bids are within 1% of each other, the bid with the higher level of local content shall be selected, provided its local content is at least 5% higher than the lower bid.

The law makes it mandatory that only Nigerians should be employed in the junior and intermediate levels of the operating or consulting companies in the oil and gas industry, and that only 5% of the management positions can be retained for expatriates, while the operator or project promoter shall submit a succession plan to the board for the positions not held by Nigerians. It is compulsory for Nigerians to understudy the expatriates for no more than 4 years after which the position is *Nigerianized*.

It domesticates certain works by making it mandatory that all fabrication and welding activities shall be carried out in Nigeria.

All legal services, insurance brokerage services and as much as practicable, all financial services shall be sourced from within Nigeria, while a minimum of 10% of all revenues accruing from operations in Nigeria shall be retained with Nigerian banks.

In order to encourage other in-country manufacturing, the law empowers the Minister to grant tax incentives to companies which establish facilities, manufacturing concerns, factories and production units in Nigeria.

To aid local content development, the Act creates the Nigeria Content Development Fund, into which must be paid the sum equivalent to 1% of all contracts awarded in the upstream subsector.

The Act provides a powerful impetus and tool to reorient and reorder the processes of indigenous participation in oil and gas industry. There is a noticeable modest improvement on the edges of the local content push since the enactment of the law. The substratum of the problem, however, remains unscathed.

The necessary foundations for a sustainable content development have not been erected after 11 years and this is due to the lack of a profound appreciation of the philosophical imperative and basis of the Act.

The essence and necessary intendment of the Nigeria Oil and Gas Industry Content Development Act is to exponentially increase the quantum of value added to or created in the Nigerian economy by the systematic development of capacity and capabilities through the use of Nigeria's human, material and economic resources, leading ultimately to a sustainable takeover of the industry by Nigerians.

The operative phrase upon which everything else hinges is, *“the systematic development of capacity and capabilities....”*

Capacity in this context denotes quantum: the amount of something an entity, thing or person can produce in a given time frame; a finite resource; the limit of ability to produce, make or deliver something; what a person can do in a standardized, controlled environment.

Capability, except in military perspective, refers to the skill and knowledge with which to do the *something*; the know-how required for a particular task.

It is important to note that capacity is substantially increased, changed or recalibrated with capability, that is to say, with the necessary skill and knowledge. For example, to increase the number of pipes per day a factory manufactures from 1,000 to 50,000 pieces (i.e. capacity), it would entail factory extension design, construction, installation of additional machinery, testing and commissioning, all of these processes require different acquired skill sets and knowledge, i.e. capabilities.

Even raising the necessary capital for the project is dependent on its feasibility and on the positive assessment of the technical and managerial capability of an individual or company by the financial institution.

It, therefore, becomes apparent that the most fundamental long term and strategic function of the board is the systematic development of capabilities of Nigerians in relation to all aspects of oil and gas industry. That is so because the more Nigerians acquire proven world class proficiency in skills, know-how and knowledge, the more market forces would impel their hiring, engagement, employment and award of projects, contracts and consultancy for all aspects of exploration, production and transportation of oil and gas industry, since it would be more effective to hire Nigerians for jobs in Nigeria than expatriates for all obvious reasons.

The short-course project based training programs, direct intervention training, seminars, workshops presently dispensed by the board, though useful, are part of the near and medium term stop gap intervention. They do not satisfy the mandate for systematic development of capabilities. The board misreads this mandate by limiting same to "targeted capacity building interventions that would deepen indigenous capabilities – Human capital development." See NCDMB website, ncdmb.gov.ng.

It is for the same reason that the Board sets its planning framework on a "10 year strategic roadmap."

It was the decrepit state of our education sector which left the nation's human capital and material resources undeveloped that led to the dismal Nigerian participation rates in the oil and gas industry. This necessitated the enactment of the Act and the creation of the board with a mandate *"to supervise, coordinate, administer, monitor and manage the development of Nigerian content in Nigerian oil and gas industry."*

Therefore, Nigerian content development, through a strategic and systematic development of capabilities geared towards an intrinsically grown oil and gas skilled manpower, requires the involvement of the board from the earliest possible time in the prospective child's education. It should start from primary school all the way to tertiary and post tertiary education, as the case may be, including further practical training and internships. And this would be without prejudice to the board's ongoing training interventions. Thankfully, the board is financially equal to the task, given the robustness of the Nigerian Content Development Fund.

The board should, in collaboration with the Petroleum Technology Development Fund (PTDF, a special purpose Fund to train and make available skilled, competent and qualified local manpower for the oil and gas industry), and the corporate social responsibility departments of the industry, create a Trust to own and sponsor from the scratch, say 30 primary schools and 30 technical schools of world class standard, taking off at the same time, as the first batch (economy of scale), sited in the oil producing states for ease of excursions and field trips, but open to all Nigerians, selected for admission through a transparent criteria prescribed by a single Joint Board of Administrators (JBA).

The JBA should be composed by one nominee of each of the NCDMB, PTDF, the IOC's and NLNG, who together would select three accomplished Nigerian educators from diaspora, and one observer each from UNICEF and Federal Ministry of Education.

The JBA should be independent. And without interference, should hire and fire all teaching and non-teaching staff. Hiring teachers and educators should be irrespective of ethnicity, religion or nationality, expatriate or Nigerian, and with open arms welcome proficient expatriate volunteers and diaspora-Nigerians. The JBA should also appoint its chairman.

Each of these primary schools should be located in proximity to a technical school for ease of curiosity-inducing visits by the pupils to laboratories, equipment sheds and workshops of the technical school.

The primary school and junior segment of the technical school should adhere to the guidelines of the Universal Basic Education scheme but the curriculum should be infused with vocationalization, practical science and elementary technology, ICT, taught with play toys, games, gadgets, visuals, practical subjects, field trips and other relevant materials necessary to entice interest in the Sciences, Technology, Engineering and Mathematics (STEM).

Beginning from the junior secondary level, all the way to the final year of the technical school, STEM should receive a more attentive touch, added to which should be a yearly recurring superficial story-telling style general subject dealing with all aspects of exploration, production, transportation of oil and gas, including manufacturing of associated equipment and components such as rigs, ships, pipes, even floating production storage and off-loading platforms, etc., associated professions i.e. geology, geophysics, engineering, ship building, seafaring, deep sea diving, etc.

The issue of global transition to cleaner energy should also be introduced. And also, Nigeria's Decade of Gas initiatives, i.e. gas to power, gas to auto, gas to cooking, gas based industries, etc.

Challenging problems of the industry and solutions should also be introduced as future fields of study and professional undertaking, such as pipeline vandalism, crude oil theft, security, as science and profession, environmental degradation, prevention, mitigation and remediation, etc.

The planning and design of the primary and technical schools should proceed simultaneously with the planning, design and eventual construction of two universities of science and technology, four polytechnics and one stand-alone research institute, to respectively achieve world ranking in the first 200 within 10 years after take-off.

These tertiary institutions should be owned by a Trust facilitated by NCDMB, comprising NCDMB, PTDF, IOCs and NLNG as owner members. Academic staffing of the institutions must be international in scope, based strictly on professorial competency devoid of any iota of consideration for nationality.

With carefully designed courses tailored to meet the needs of all aspects of the industry for which there was already a sound preparation in those purpose built primary and technical schools, these tertiary institutions would produce that much needed Nigerian human resource for the entire industry, including transportation and associated manufacturing, requiring only further on-the-job-training for maturity.

I foresee a future where, with the maturity of these well-schooled and tutored young Nigerians, the human content inclusion monitoring aspect of NCDMB would abate because Nigerian content would have taken over the oil and gas industry, and in a systemic and organic manner.

The Trust, once set up, should reach an agreement with the Federal Government to take over the Federal University of Petroleum Resources, Effurun, which today cannot even pass the assurance test of a proper secondary school, in order to turn it around.

In terms of funding the primary, technical and tertiary institutions, much of the start-up capital should be shouldered by the Nigeria Content Development Fund, with corporate social responsibility contributions from the IOCs, and other corporate titans. However, to assure sustainability, financially capable parents of pupils, students and undergraduates should pay properly assessed school fees. This can be verified with the use of Bank Verification Numbers (BVN), among other factors. Indigent ones should apply and obtain financial aid in order to skip school fees. These schools, owned by

a public-private trust, would not be under the legal obligation to make the primary and junior secondary level (basic education) free.

In the meantime, NCDMB's present and medium term training interventions should become more systematic, predictable and criteria-based. There should be a program where all university and HND graduates with first class and its HND equivalent in chosen industry-related courses, qualify automatically for NCDMB's sponsored practical training or post graduate courses, with possible line of sight for employment. The driving factors here are criteria, predictability and expectation. These should keep more lamps burning at night by those students studying very hard to make first class and qualify. And when it is necessary to prune down the numbers of qualifying candidates, an additional factor could be imposed such as First Class Honors with a particular grade point average - GPA.

There should be a program of preferential access to sponsorship for students willing to study very arcane or knowledge-intensive courses required in the industry or those courses considered inferior or less edifying. There should be established by NCDMB and PTDF, well equipped and industry – related skill acquisition centers in all the oil producing states, each dedicated to no more than two skills different from others, for ease of "specialization".

The evaluation of the competency of the NCDMB affiliated organizations offering training services is a matter of public interest. Nowhere on their website, nor elsewhere was the academic accreditation of the respective members of Oil and Gas Trainers Association of Nigeria stated. It does seem, from the review of the course titles they offer, that they may require the accreditation of the National Board for Technical Education.

Then there is the issue of leveraging of the status of being a Nigerian company in securing jobs without much Nigerianization of the actual work or content. The Act simply defines a Nigerian Company as a company registered in Nigeria in accordance with CAMA, with no less than 51% equity shares by Nigerians.

The tendency has been for Nigerians to incorporate companies and "employ" foreigners who do the work or handle the technical aspects, oftentimes making up 95% of the undertaking.

The Board should therefore put as much effort on lifting the veil of all companies, all endeavors, all goods and services and all equipment in the pursuit of quantum of Nigerian content.

e) Nigeria's Oil and Gas future in the era of divestment and decarbonization.

By 2017, the loud gongs of energy transition, net zero, decarbonization etcetera, had acquired a fever pitch frenzy and militancy, matching in severity with the insecurity, oil theft and pipeline vandalism in the Niger Delta. The dam therefore broke. The International Oil Companies (IOCs) which had been selling assets gradually since 2010, went on a divestment spree, selling off their interests and stakes in onshore and shallow water blocks.

The Independents have since been snapping up these offers off the IOCs, thereby notionally increasing local participation in production.

However, most of the Independents do not have the technical and financial capacity to develop the oil and gas fields.

Although the IOCs are still holding unto some of their deep offshore assets, new investments have become very scarce and this is one of the main factors contributing to Nigeria's inability to meet her OPEC quota.

f) Way Forward.

The first point of business is to bring security, order and pacificity to Niger Delta. The main weapon of choice should be value-for-money in all government interventions and remediations, which is currently languishing below 28% due to age old endemic corruption. My anti-corruption plan spelt out in chapter 2 should be of assistance.

I have also laid out a success-fee based anti oil-theft plan in chapter 6.

New partnerships, funding channels and mechanisms should be developed.

Incorporated joint venture partnerships should be established along the lines of Nigeria providing oil block assets, while technical know-how and operatorship are provided as equity by experienced international oil companies not beholden to puritanical shareholders, and funding provided as equity by a Nigeria oil and gas focused international mutual fund.

An example of an IOC that might be suitable is Petrobras, the Brazilian oil giant wherein the government and Brazilian Development Bank hold about 36% of the share structure. Petrobras has adequate technical experience. It recently sold its interests in Nigeria to raise cash. It is therefore possible to partner with such a company on a know-how-for-equity basis.

The nation should retain the services of Afreximbank as advisors and facilitators towards creating an international Nigeria oil and gas focused mutual fund with a target of 100 billion dollars. There is a lot of money on the prowl not affected by net zero absolutism.

Chapter 14

Solid Minerals Sector.

Pitiful State, Capacity-challenged And Chronic Under Performance.

Possible Solutions

a) **Overview**

The pitiful state of Nigeria's solid minerals sector is another clear manifestation of the lack of human capacity for strategic planning and operational know-how. The nation is richly endowed with vast commercial quantities of over 40 broad species of solid minerals, and yet derives only about 0.3% of her GDP from solid minerals compared to Botswana's 40%, Republic of Congo's 25% and South Africa's 18%.

b) **Integrating artisanal miners and fighting off illegal miners**

It is estimated that artisans account for 80% of all mining activities. Most of these artisans are without training, and mine without legal permits and licenses. They also mine with crude implements dangerous to themselves and the environment, and sell their mined minerals in unofficial sale channels which are oftentimes embedded in smuggling and run by unscrupulous cartels. All these result in loss of revenue to the government from taxes and royalties, non adherence to health and safety standards and exposure of miners to risk, environmental degradation, pollution and erosion. It is estimated that the Government lost about \$3 billion from 2013 to 2019 from illegal mining of gold.

Notwithstanding, the artisanal miners present a significant opportunity because of hundreds of thousands of persons so employed. What must be done is to integrate them into the formal mining sector by making sure they obtain their NINs, training on basic mining skills, safety standards and environmental issues and assisting them into financial inclusion by obtaining bank accounts and transforming them into small scale miners, with most encouraged into mining cooperatives. Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), in collaboration with Infrastructure Youth Corps program and Ministry of Solid Minerals, should promote energetically Solid Minerals Artisanal Cooperatives Scheme (SMACS) by advertising the scheme whereby interested youths would register either online or in-person at their local government headquarters.

Trainings would ensue after which the youths would form cooperatives with their friends, families, kindreds or village people. Registration of the cooperatives should be done also at the LGAs. The State Government would appoint a civil servant as an account officer and moderator for each cooperative (The moderators would continue to receive their salaries from the state). Funds would be made available as single digit interest rate loans for acquiring the necessary tools and take off, from the Solid Minerals Development Fund.

A painless integration process has the potential to attract millions of young people into mining and lifting them out of poverty. In 2019, the government launched the Presidential Artisanal Gold Mining Development Initiative (PAGMI) to integrate artisanal gold mining activities in the country, so far without much success and impact. To achieve success, the Federal Government would have to appoint the States Government as her agents in tracking down artisanal miners and integrating them, and in ferreting out illegal miners in consideration for partaking in the royalties and taxes.

The States in turn may engage communities and individual whistle blowers in this task as their foot soldiers. The Minerals and Mining Act should be amended to allow the States to receive a share of the royalties as agents, and to allow non body corporate entities such as business names and cooperatives to obtain small scale mining leases. The regulations and the procedures for obtaining reconnaissance permits and small mining leases should be simplified.

Nigeria's solid minerals sector was not always this redundant. In the 60s, we were the world's second largest exporter of Columbite and the world's sixth largest producer of Tin (Cassiterite). We also had decent world rankings in the production of Coal and Lead/Zinc. The discovery of oil in commercial quantities, together with the abject failure in strategic planning, hurt solid minerals exploration and production terribly, as government and private sector shifted focus to the new resource. The windfalls of the oil boom period really dealt a very big body-blow to the prospects of solid minerals development. Abandonment ensued.

c) Revitalization

Efforts to revitalize the sector, though epileptic in nature, finally led to the enactment of the Minerals and Mining Act 2007 as the principal legislation that regulates the sector. This was followed by the mining regulations of 2011, issued by the Federal Ministry of Mines and Solid Minerals Development, setting out the rules and procedures giving effect to the legislation, and for the acquisition of mineral titles and other related processes, with the aim of ending discretionary allocation or grant of mineral titles.

Seeking to ensure certainty, security of tenure and transferability of titles, the legislation created the Mines Cadastre Office as an independent body corporate with perpetual succession, charged with the administration of titles, including consideration of applications, processing, issuance and suspension of titles, and where the Minister so approves, revoking titles. The Cadastre Office is also vested with the responsibility of maintaining cadastral registers including for reconnaissance permits, exploration licenses, mining leases, small scale mining leases, water use permits and quarry leases.

Revitalization efforts recorded further gains, including some airborne geophysical survey, tax and customs duty waiver incentives and the introduction of community development agreement. However, despite these improvements, the solid minerals sector is still mostly unproductive, challenged by inadequate geosciences and mineral production data, dearth of funding, prevalence of illegal mining and weak regulatory enforcement, insecurity and poor investor perception, lack of technical know-how and a huge infrastructure deficit.

d) Geoscience data

One of the main roadblocks to raising funds by investors in the solid minerals sector is lack of geoscience data on their mining leases, making financial institutions wary of accepting the leases as collateral or the basis for lending or investment.

The data from the country-wide aerial geophysical survey undertaken by the government does not provide reliable and bankable details of the quantities

of the solid minerals contained in the various locations. These can only be provided by geoscience surveys which are quite expensive to carry out successfully.

This problem of lack of geoscience data can be solved by the government raising funds to undertake geoscience surveys and pricing the cost of data into permits, licenses and leases or engaging the private sector to fund the surveys and sell data to potential investors to recoup the market cost of the surveys. The government may also partner with the private sector under an incorporated joint venture to achieve the same objective.

Insecurity debilitates the economy and all aspects of life in Nigeria. However, it does not affect solid minerals sector disproportionately, and so can neither explain nor excuse the 0.3% miniscule contribution of the sector to GDP. Indeed, some of the incidents of insecurity in the North West zone of Nigeria are fueled by illegal mining. It is, therefore, safe to say that poor investor perception and attitudes are both driven by the non bankability of mining titles owing to absence of geoscience data, lack of investment funding, illegal mining, insecurity, infrastructure deficit, etc., and the lure of the seemingly easy profits from the oil and service sector.

e) Catalyzing through FGN incorporated joint venture partnerships

Like any colossal system long abandoned and driven into redundancy, the revival of the solid minerals sector would require a simultaneous effort to mitigate the enumerated challenges, and a push for direct participation of the Federal and State governments as a catalyst for re-engagement of investor interest and building local human capabilities through training.

Through the vehicle of incorporated joint ventures, the Federal and State governments should partner with interested and capable private sector investors selected by due process, in the exploration and exploitation of solid minerals, albeit, with government holding a minority stake in order to avoid the pitfalls associated with public ownership and management, and to make the ventures attractive to the private sector.

The Federal Ministry of Mines and Solid Minerals Development has identified seven strategic minerals for priority development, specifically: coal, iron ore,

limestone, bitumen, barites, lead/zinc and gold. Also identified by the Ministry are the potential minerals in commercial quantities per state.

Most States are struggling with heavy financial and debt burden, so should welcome extra revenue accruals from participating in solid minerals ventures. More so as the States would be earning dividends and state taxes, and partaking in royalties as agents of the Federal Government in the task of integrating artisanal miners and in the fight against illegal mining.

On its part, the Federal Government must become aggressive in the marketing of Nigeria's solid minerals potentialities and in seeking out joint venture partners. The President would have to personally lead this effort with the prestige of his office and through domestic and international road shows.

The upsurge of these mining ventures would provide job opportunities and training to hundreds of thousands of Nigerians, and contribute appropriately to the GDP and to diversifying the economy, while stanching the humongous outflow of billions of dollars for the import of these minerals we have in Nigeria in untapped abundance.

Despite having untapped reserves of 17 billion barrels of bitumen and 42 billion barrels of tar sands, Nigeria spends about \$600 million importing bitumen.

Despite having untapped reserves of about 25 million metric tons of barite, mostly used as weighting agent for drilling fluids in oil and gas industry, Nigeria spends about \$300 million annually importing barite when all that was required to compete globally was to produce barite to American Petroleum Standard. And so on and so forth.

f) Solid Minerals Development Fund.

The Minerals and Mining Act established the Solid Minerals Development Fund to aid in building human and fiscal capacity, fund geoscience data gathering, equip Solid Minerals institutions to carry out their duties, provide land infrastructure to mines and to provide extension services to artisanal miners.

The Fund is crucial for the survival of solid minerals industry, given the level of underdevelopment, lack of human and fiscal capacity, poor investor perception and skepticism, crude and untrained artisanal dominance in the sector and incapacity of sectoral institutions.

However, the Fund has over the years been diverted to other private concerns and a few public uses totally unconnected with its mandate. The wanton diversions are contained in the 18-page report of the Committee of the House of Representatives which catalogued 53 illegal expenditures from the Fund. The Punch Nigeria newspaper also ran an exposé on the looting of the Fund, recently.

This, surely, is one the main reasons why till date, the Solid Minerals sector contributes relatively next to nothing to the GDP.

To reposition the Fund, the establishment Act should be amended to provide for an independent Management Board which should henceforth be composed by 12 members, 6 Nigerians versed in Solid Minerals development, 3 from diaspora and 3 resident in Nigeria, and 6 persons versed and experienced in Solid Minerals development nominated by the UNDP.

The board would appoint its chairman, and through an open and transparent process, appoint the Secretary to the board. It should have the power to remove the Secretary by two thirds majority vote. The board should have the power to fill any vacancy on the board by two thirds majority vote. And also to recommend the removal of a board member by two thirds majority vote.

And then there is the irony of infrastructure deficit being one of challenges to optimal performance of the solid minerals sector despite the fact that our neglected, untapped and vast reserves of solid minerals are indeed the necessary ingredients and raw materials we require to build out the hard infrastructure.

Chapter 15

Power Sector

Epileptic Power. Energy Poverty.

Possible Solutions.

a) Overview

In today's world, power ranks on the same level as education, safe drinking water, health and shelter, right there in the first tier of infrastructural facilities.

National development, industrialization, economic diversification, and domestic and foreign direct investment inflow are impossible without regular power supply. Most poverty stricken Nigerians are wedged in poverty primarily by energy poverty.

About 80 million Nigerians do not have access to electricity. Nigerians and businesses receive grid electricity averaging not more than 12 hours a day. As a result, Nigerians cumulatively spend over \$14 billion yearly on generators and generator fuels, with immense hazardous impact on health, environment and business competitiveness.

For the more than 100 million Nigerians in extreme poverty, quality of life is made more dire and extreme. No electricity, no energy and wherewithal to enjoy the most basic of human needs in a modern civilization; light to see, to read, to refrigerate, store and cool stuff, to iron clothes, etc. Most poor people cook with solid biomass fuels like firewood and charcoal, and inhale hazardous smoke. Others litter high density households with unsafe generators spewing hazardous noxious fumes and decibels of noise without end.

Nigeria's electricity needs presently hovers between 28,000 to 30,000 MW but the total installed generating capacity is about 14,000 MW, which the generating companies were contracted to produce and supply. However, due to shortage of gas and aging plants, the functional generating capacity is about 7,000 MW while the functioning transmission capacity is between 4,000 to 5,000 MW.

On the whole, besides capacity problems, not more than 4,000 MW are paid for and evacuated monthly due to issues relating to cost reflective tariff. Nigeria, a member of the West African Power Pool (WAPP), has been supplying un-evacuated electricity to Togo, Republic of Benin and Niger. The recent announcement that Nigeria would sell additional 2,000 MW unusable electricity (evacuation capacity problems) to these countries including Burkina Faso, through the North Core transmission line, rankled the nerves of all but few Nigerians.

It was to deal with the perennial incapacity of the power sector and consequent disruptions to the economic, technological and social development of the nation that the Electric Power Sector Reform Act (EPSRA) 2005 was enacted, which paved the way to privatizing the sector by unbundling it into 6 generating companies (GenCos) and 11 distributing companies (DisCos), with the Nigeria Bulk Electricity Trading PLC (NBET) incorporated to purchase bulk electricity from GenCos and sell to DisCos. The Transmission Company of Nigeria (TCN) was kept as wholly owned government entity. Nigeria Electricity Regulatory Commission (NERC) was established by EPSRA to regulate the Nigeria Electricity Supply Industry (NESI).

Privatization of the power sector, though a huge step in the right direction, is yet to yield the desired improvement in power generation, transmission capacity, power supply and access to electricity. And so far, more than 65% of the subscribers are yet to receive billing meters.

In 2019, the government embarked on a Presidential Power Initiative project (PPI) under the Nigeria Electrification Roadmap - MOU with Siemens of Germany - to revamp Nigeria's Electricity infrastructure and increase power production and supply from the present average of 4,000 to 25,000 MW by 2025.

The PPI is organized in three phases, aimed at increasing the transmission capacity to 7,000MW in first phase, production and delivery to 11,000 MW in the second phase and 25,000 MW in third phase. The first phase of the project is to be executed at the cost of \$2.3 billion. Powerco has been set up

as the Special Purpose Vehicle (SPV) to warehouse the project's contingent liability. Also established is a Nigerian Project Management Office (PMO) vested with the responsibility of providing project management services.

Various projects to enhance electricity infrastructure capacity are ongoing. There exists a World Bank \$486 million International Development Association credit for Nigeria Electricity Transmission Access Project (NETAP), a segment of Transmission Rehabilitation and Enhancement Program – TREP.

The World Bank, African Development Bank (AfDB) and Japanese International Cooperation Agency (JICA) have assisted the government to raise \$1.6 billion for Transmission Rehabilitation and Expansion Program - TREP II, which is funding some ongoing major projects.

Efforts are also underway to build out our national generating capacity which at present is dominated by gas/thermal plants accounting for 79% of total output, hydropower 20% and solar power, less than 1%.

Nigeria's energy mix targets include producing 12,000 MW hydropower by 2030 and achieving 30% renewable energy by same date. Coal fired power is also targeted to reach 30% of total power production.

It is estimated that Nigeria has exploitable hydropower potential of about 14,000 MW in large scale production, mainly resourced by Benue and Niger Rivers, and Lake Chad basin. There are currently a number of stalled and ongoing hydropower projects of different sizes including Mambila, Zungeru, Gurara, Kashamanbilla, Lokoja, Benue, etc, ranging in the total of about 6,000 MW.

Renewable energy in any form has yet to witness a noticeable movement or, indeed, any serious attention. In 2016, the government signed a Power Purchase Agreement with independent power producers for solar power plants to be located across the country but the projects never really got off the ground.

The nation is endowed with over 2 billion metric tons of coal with low sulfur content that could add 11,000 MW to electricity production tally, but as with all our natural resources, very scant value added uses have been achieved with coal.

The government announced plans to establish 6 medium to large coal fired power plants, all to become operational by 2037. These plants are to be located in Enugu, Benue, Ashaka, Ramos, Nasarawa and Ashaka/TPGL. These remain future plans, as even the two-phased Lafarge coal power plant development at Ashaka has missed completion targets.

The smart money seems to be on gas fired power plants. Apart from the nine gas plants planned by the government to come on stream by 2037, there are a plethora of gas fired power plants at various stages of development across the country. The \$1.7 billion Ajaokuta-Kaduna-Kano (AKK) gas pipeline under construction is making some steady progress. The Gas Gathering Company of Nigeria (GCAN) has been rather active signing MOUs with gas off-takers across catchment zones of the pipeline.

However, the country's power and energy landscape remains besieged by challenges, including weak human capacity of personnel at the helm of affairs, lack of progress on national metering schemes, huge populations still lacking access to electricity, unsustainable electricity tariffs, financial capacity deficit of DisCos, unsustainable transmission infrastructure liquidity strategy, weakness of Rural Electrification Agency governance structure and weak mini grid/off grid proliferation strategy.

b) Human capacity at the helms.

The privatization of major parts of generation and distribution of electric power in Nigeria has alleviated, to a large extent, the problems of human capacity deficit at the helm of power management which was hitherto exclusively occupied by public servants.

But it would be unfair not to mention with pride, the staff of NBET, a cadre of public servants that would give any high niche private sector company workforce a run for their money. These young men and women, average age

of less than 27 years, competent, self-assured, forward looking, effortlessly terminating trillion Naira power purchases and sales without a glitch or hint of corruption, are the future of Nigeria.

Yet, much more must be done in the present Nigeria to arrive at that NBET-like future. Three years after the widely and highly acclaimed roll out of Nigeria Electrification Roadmap (NER) with Siemens, progress has been little and tentative. This is perhaps one of the reasons why the former Minister was unceremoniously relieved of his appointment.

Poor coordination of projects owing to low human capacity of the coordinators was the bane of many projects.

I know of a transmission line project that was frustrated because of failure to secure the right of way/way leave and payment of necessary compensation, thereby resulting in endless fracas and violence against expatriate and Nigerian staff of the contractor, pulling down of erected structures and confiscation of construction materials, burning of contractor's heavy equipment, and prompting many calls to hospitals and police stations.

Even when the contractor paid some compensation from its pocket for the right of way for a portion of the transmission route, rival claimants emerged, leading to more violence. The contractor could neither get help from the Federal nor State government. The impasse lasted for a couple of years, ultimately frustrating the project. Proper coordination by the government of the project could have solved the problem. There are so many of such stories of incompetent project management.

This is precisely why it is terrible that National Assembly is considering a bill to place all public agencies in the power sector, including commercialized entities, directly under the control of the Ministry of Power. The nation needs less Ministry, not more. The Ministry has an abundance of intruding political influence and not necessarily abundance of competence.

And so, to ensure a competent project management for all government power projects (pending full privatization of the power sector), prevent cost

overruns, meet targets and drive quality delivery, the Project Management Office (PMO) set up to manage NER should be elevated to an independent central superintending PMO for the electric power sector, to superintend the management of all public projects, including NER, TREP I, TREP II, Power Sector Recovery Operation (PSRO), construction of all power plants, rural electrification, mini grid, off grid, National Mass Metering Program (NMMP), etc.

The PMO should be composed with experienced Nigerians - home and diaspora, and experienced persons each recommended by development partners, World Bank, African Development Bank, Afroexim Bank, JICA, Power Africa.

Apart from management, the mandate of the PMO should include advisory services to the government, publication of progress reports, critiques and assessments on projects and related issues on quarterly basis at the minimum.

c) Lack of progress on metering schemes.

Non-cost reflective tariffs.

Metering of all electricity customers is important on two critical fronts:

Firstly, complete metering of all customers would eliminate the problem of estimated billing or capping or any other nomenclature that describes unmetered billing.

Secondly, full metering would create the basis for central computing with smart meters for both operators and customers, yielding important information flow for policy makers, stakeholders, government and research institutes.

There is at present a metering deficit of more than 65%.

NERC reports that as at 31st Nov. 2021,

The total number of consumers = 12,848 000

Unmetered customers = 8,181 000

Metered customers = 4.667,000.

Various metering initiatives have been introduced and none is yet to check all the boxes. In 2013, just after the privatization of GenCos and DisCos, the Credit Advance Payment for Metering Implementation (CAPMI) was ushered in to plug the metering deficit. It didn't work out so well.

In 2018, the Meter Assets Provider (MAP) regulation was introduced to attract new money and third party participation into the market to finance metering deployment. Success has been slow to close the meter gap, prompting a CBN intervention with a National Mass Metering Program (NMMP) billed to fund the procurement and distribution of 6 million meters with cost and interest of 9% passed on to customers but with repayment amortized. MAP and NMMP are running simultaneously.

The CBN intervention may seem necessary, but with Nigeria's rapid population growth, a million new customers may be requiring meters yearly. It is therefore unsustainable for CBN to abandon or be distracted from its core mandate with perennial chase for meters.

The cost of meter assets and provision of metering services (assessment, installation, reading, repair and maintenance) are some of the recoverable expenditure items by DisCos from tariffs paid by customers, under the current Multi Year Tariff Order (MYTO).

The metering crisis is an offshoot of the overall liquidity problems in NESI. The hurdles to solving the liquidity crisis by attracting financing and capital investments necessary to address various challenges, including plugging the metering gap, funding network improvement and reducing technical and non-technical losses, are the absence of cost reflective tariffs and poor equity capitalization of DisCos. The irony here is that without adequate capital investments and consequent optimization of network efficiency and power supply regularity, the DisCos cannot achieve economy of scale to earn such profits as to bring down the tariffs. In other words, without cost reflective tariffs and adequate equity capital of DisCos, the customers will continue to face irregular power supply and disproportionate high tariffs.

The Nigeria Electricity Regulatory Commission (NERC) clearly captured the problem of illiquidity induced by non-cost reflective tariffs in its consultation paper on the review of the MAP Regulations, wherein it stated - “prevailing absence of cost reflective tariffs, a contributory factor to the impairment of DisCos' balance sheets, adversely impacts on the capacity of DisCos to raise the necessary financing to support critical investments, including but not limited to the metering of customers.”

Mr Ebipere Clark, Special Assistant to the Governor of Central Bank, was quoted as expressing the view that no serious investor would finance any infrastructure in the power sector unless the tariff mismatch is addressed. He stated thus:

"There is a major disconnect between collections and distribution, leading to serious shortfalls. If you want investors to invest in the power sector, they would need some level of confidence that they would get their money back.

"Right now, we don't have a system that gives that guarantee to investors. Government no doubt has limited financial capacity to address infrastructure issues in the power sector. It is fiscally stranded to address major electricity infrastructure. So, there is a need to create environment for private players to participate actively in driving the sector to a sustainable level. Investors need confidence on capital and return on investment.”

d) Liquidity crisis – Weak capital base of DisCos.

Non-cost reflective tariff regime is a contributory factor to the liquidity crisis in NESI, but so is the weak capital base of DisCos.

Electricity distribution is capital intensive. But at no time was a qualifying minimum equity capital fixed and verified before the acquisition bids took place. The result has been today's DisCos with a weak capital base, burdened by debt and with limited capacity to make the capital investments necessary for effective service delivery.

The CBN reported that the combined indebtedness of power firms to the commercial banks for acquisition loans was about N820 billion as at the third

quarter of 2021. And debt to the Federal Government through the CBN is said to be over N 1.5 trillion.

Abuja Electricity Distribution Company (AEDC) was placed under receivership due to loan default by United Bank for Africa (UBA), with the Board of Directors and key management staff sacked. Apart from loan default, the company was having difficulties meeting its recurrent and overhead obligations.

And just a couple of weeks after that, Ibadan Electricity Distribution Company (IBEDC) was taken over by the Asset Management Corporation of Nigeria (AMCON), again for defaults in the loan repayment.

President Buhari, in a television interview, decried the past administration's handing out of majority stakes in DisCos to inexperienced politically connected persons, without financial capacity, rather than conducting a selection process based on due process and national interest. He blamed the flawed exercise for the current failure of capacities in power sector. The President said: "The people that own them, who are they? They are not electrical engineers, they don't have money, it was just a political favor."

The DisCos have also been plagued by poor corporate governance culture and practices, misplaced priorities, weak financial management processes and insider dealing. It was alleged on many occasions that huge sums of revenues collected were diverted or misappropriated, instead of paying down CBN loans or making critical operational investments. One DisCo was fined N50 million by NERC for making an interest free loan of N6 billion to its core investor and not recovering the loan.

These anomalies forced the CBN to take a direct action of escrowing the accounts of DisCos and allowing withdrawals based only on priority, a situation which introduced some transparency, increased the revenue tally, stopped misappropriation of funds and enabled recovery of some of the outstanding sums due to CBN and GenCos.

I propose the following to increase liquidity in the distribution system:

First, the debt of about N202 billion said to be owed the DisCos by the MDAs should be verified and netted off what the DisCos owe the CBN, and the liability for the N202 billion transferred to the government's Ways and Means account with the CBN.

Second, the remaining sum owed CBN by the DisCos should be converted to equity as a way of reducing the stakes of the present capital-deficient core investors. This should give the government an opportunity to bring in additional investors into each DisCo.

Third, the minimum additional capital requirements for each DisCo should be worked out and apportioned based on current shareholding, and deadlines fixed for recapitalization.

Fourth, government should conduct a proper process to sell equities realized in lieu of DisCos' debt to CBN, to coincide with the recapitalization schedule.

Fifth, 40% stake originally held by government in each DisCo should be sold down to infuse more cash in the DisCos.

Sixth, except for government security and communication installations, DisCos should be allowed to cut power after a grace period if payment default by any government establishment persists.

Seventh, failure by any DisCo to meet the capitalization requirement should constitute a breach of contract and result in the revocation of contract and forfeiture of shares in the DisCo.

e) Transmission costs, liquidity crisis and commercialization of TCN.

The transmission system evacuation average stands at 4,000 MW of electricity, which is why Nigeria, a nation in dire need of electricity, sells upwards of 3,000 MW generated but unutilized (un-evacuated) electricity to some West African countries through the North Core transmission line. The existing transmission infrastructure requires a major revampment and expansion. From June 2017 to December 2020, there were over 45 systems collapses resulting in partial or total blackouts.

Currently, the national electricity needs hover at about 28,000 MW and growing, so the transmission capacities require a corresponding expansion, and revamping of existing structures, including lines, substations, sky wires, procuring adequate spinning reserves and creating protection schedules for transmission – distribution interfaces. There is also an urgent need to build and equip digital control centers with Electricity Management System (EMS), Supervisory Control and Data Acquisition (SCADA), etc, to enable real-time monitoring and quick repair.

The government has raised around \$2.1 billion for Transmission Rehabilitation and Expansion Program (TREP I and TREP II), of which about \$500 million is donor funded while \$1.6 billion was borrowed.

Yet the borrowed sum is not self-paying since transmission facilities do not earn any direct income. Without a direct income, the transmission system is unable to attract investment and will continue to experience liquidity problems, making its midstream linkages and contribution to power supply unsustainable.

The NERC should work with critical stakeholders to approve a tariff for transmission and system operations. This would herald the arrival of investments in transmission subsector and broaden the critical space for transmission and retail distribution investment linkages.

The Transmission Company of Nigeria should then conduct a valuation of its assets and issue shares to public, provided the government retains 49% of the total shareholding. TCN would transmute to TCN PLC, a profit oriented public limited company. Along with new capital, would come non-government board members, at once shedding a permanent state of illiquidity, inefficiencies of public ownership and management, while acquiring the financial and business savvy to expand capacities in a sustainable way. New investors in transmission business lured by returns on investment would drive growth in transmission footprint.

The Managing Director, Nigeria Bulk Electricity Trading, Dr. Nnaemeka Ewelukwa, was quoted as saying:

"There is a massive gap between the generation capacity in the country and what is currently supplied to the citizens, so the generating capacity is under 13,000 to 14,000 Megawatts. But if you look at what is available, it is about 6,000 to 7,000 Megawatts, according to data from TCN. But on a given day, what comes to the citizens is about 4,500 Megawatts."

f) Generation, more privatization. Shortage, especially gas. Non-cost reflective inputs.

The US Energy Information Administration's *International Energy Statistics* states that global electricity consumption is rising faster than population growth.

Research Features, in its research report on how population growth affects energy consumption, states: "In this study, variation in population size corresponded to variation in energy consumption at double the rate. That is, for a 20% increase in population size, energy consumption increased by 43.6%; conversely, for a 20% decrease in population size, demand for energy decreased by 44.6%."

Nigeria's population growth rate is about 3% per annum and by 2050 when the nation is projected to become the 3rd most populous country in the world with a population of 400 million people, the electricity needs would be around 100,000 - 120,000MW. A gentle reminder: Today, Nigeria's electricity requirements range between 28,000 to 30,000MW, but we are only able to produce about 7,000MW and only able to dispatch or evacuate between 4,000 - 5,000MW.

To close the present production gap of about 23,000MW, and keep up with the disproportionate population-induced rise in consumption, the production process must be firing from all cylinders. More publicly owned generation assets should be privatized in order to discard the inefficiencies of public ownership and management, and leverage the acumen of private sector towards growing supply.

Post privatization, generation capacity rose from 3,427.5 MW on Nov. 1, 2013, to 7,793 MW on Dec. 1, 2020, an increase of 127%. The move to

privatize the generation assets of the publicly owned Nigerian Integrated Power Project is, therefore, an effort in the right direction.

Whatever may be the ambition, Nigeria's long term energy mix will continue to be dominated by gas fired plants, which should rise from the present position of 80% to 92%. Apart from the 3,000 MW Mambila Hydropower Project now being reactivated and the 750 MW Zungeru hydro plant being completed, it is highly unlikely that any hydrostatic project of those sizes would be undertaken in the near future, if ever at all.

The mood of the nation and potential investors, domestic and foreign, is gas powered. Endowed with 206 trillion cubic feet (TCF) of gas and a potential reserve of 600 TCF, ranking 9th in the world, there is a general consensus that gas represents the nation's greatest promise to economic development. 2020 was a national year of gas. 2021 – 2030 were recently inaugurated as the decade of gas, with the ambition of having the economy wholly powered by gas by 2030.

Gas investment costs are, however, very expensive. For context, NLNG, in its Train 7 project, is investing \$10 billion to increase capacity to produce an additional 8 million tons of gas per annum. This investment is being made in anticipation of selling gas at international rates. As at November 24, 2021, the spot price of gas at Henry Hub benchmark was about \$5 per Million British Thermal Units (MMBtu), but in Nigeria, the government recently lowered the already relatively low price of gas-for-electricity from \$2.50 to \$2.18 per MMBtu. This further discount was given for power production in consonance with the National Domestic Gas Supply and Pricing Policy (NDGSPP), and was given after negotiations with the labor union. Of course, the government and the labor unions acted with good intentions and good faith, and ostensibly in the best interest of the nation in pursuit of affordable electricity tariffs.

NDGSPP and its regulations sought to strike a delicate balance between the not so easily aligned pull of higher export prices and domestic supply necessary for industrialization and economic growth, to ensure all at once “timely availability, affordability and commerciality” of gas supply. To this

end, the profile of domestic demand was segmented into three groups recognizing the varying strategic benefits to the economy and the bearing capacity of each group to price increase. These groups include the strategic domestic sector with strong multiplier effect on the economy such as the Power sector; strategic industrial sector wherein gas based industries utilize gas as feedstock for production of value added goods for export and domestic use; and commercial sectors using gas as fuel, e.g. Cement manufacturers. The Power sector had the least threshold and tolerance for upward gas price adjustments, which was why the government dropped the price of gas to power to less than 50% of the spot market prices.

However, despite the best intentions of government, imposed affordability came into a violent conflict with commerciality, and produced a chronically unrestrained unavailability of gas, leading to much lower generation of electricity.

The Niger Delta Power Holding Company (NDPHC), Nigeria's largest electricity generating company, with a total installed capacity of 4,000MW, representing about 35% of Nigeria's installed generating capacity, requires 1 bcf (billion cubic feet) of gas for optimal power generation, but has a reliable supply of less than 200 mmscf (million standard cubic feet) of gas.

The scarcity or unavailability of gas pervades the entire gas powered generating subsector. With a pricing policy that puts the price of gas below the cost of production in order to ensure affordability, needed investments in gas production froze, and most proposed projects could not advance to Final Investment Decisions (FID).

Meanwhile, Nigeria's domestic demand for gas continues to grow exponentially, which NNPC has estimated would be about 23 bcf by year 2030. All the worse, the decarbonization frenzy is shutting down investment resource channels and making the situation more precarious for Nigeria.

After 20 years of inordinate delay, the Petroleum Industry Act (PIA) was finally enacted in 2021, establishing a legal, fiscal and regulatory framework for Nigeria oil and gas industry.

NNPC's projection is that with the enactment of PIA, the nation stands to attract about \$48.04 billion or 24.8 per cent of an estimated \$194 billion total oil and gas investment coming to Africa over the next seven years.

PWC estimates that economic activities stimulated by domestic utilization of Nigeria's gas abundance can potentially produce gross value added (GVA) of \$18 billion to the economy and 6.5 million direct jobs yearly.

Gas investors under the aegis of Nigeria Gas Association, however, have sought further clarification on PIA as to time-bound triggers for transitioning from a regulated to a full market driven (willing-buyer-willing-seller) pricing framework; licensing requirements; regulatory overlap between NUPRC and NMDPRA; Industry representation on Gas Infrastructure Fund; etc.

Notwithstanding, PIA has already activated a noticeably heightened investor interest in the gas sub sector. In furtherance to the provisions of PIA, the Nigeria Midstream and Downstream Petroleum Regulatory Authority (NMDPRA), in November 2021, issued a Domestic Base Price framework that would generate market reflective prices and achieve export prices parity comparable to prices in other emerging economies with considerable gas resources.

But spot market price of gas does not equate to domestic production cost. While spot price at Henry Hub benchmark is about \$5, average production cost including delivery is about \$3 per cubic foot. So less transportation costs and lower labor costs, domestic production, cost should be lower. Price of gas or any product or service must not be below the cost of production (except through a targeted subsidy), otherwise sustainability is dead.

Surely, the PIA price framework should spur new investment, drive considerable production increases, plug gas availability deficit across all sectors and together with cost reflective tariffs, propel a target-hitting electricity generation. A stout political will, is however, necessary.

There is no doubt that cost reflective tariffs encompassing generation cost, transmission cost and distribution cost, would be higher than the current

tariffs. However there is no other pathway to regular electricity production and supply. But come what may, the tariff adjustment for guaranteed regular supply will definitely be far cheaper in all ramifications, than the \$14 billion Nigerians spend every year on generators, diesel and PMO for self-generation, also considering the associated environmental and fire hazards.

In addition to the market responsive input prices and reflective tariffs attracting significant investment and entrants into the production space, the forces of demand and supply would kick in to drive down prices and tariffs. Nevertheless, there should be in the interim a subsidy scheme targeted at the poor and lower middle class. Under the cost responsive prices and tariffs structure, the government would make a lot of money from royalties in gas production, dividends in joint ventures and generally from taxes. The government is, therefore, at liberty to plow back all or a portion of these revenues into subsidy payments. Simply put, we should achieve sustainability of timely availability of gas and regular supply of electricity, as well as affordability through market-induced price reduction, plus a targeted subsidy scheme for the poor and lower middle class.

g) Cost reflective inputs and tariffs necessitate targeted subsidy.

It is agreed that to drive investment across the value chain, aggregated electricity tariff should be reflective of costs of generation and gas input, transmission and distribution (Transmission cost could be phased in as market forces kick in to lower prices), but to cushion the impact on the vulnerable populations, targeted electricity subsidy should be dispensed to the poor and the lower middle class. And this should be effected by keeping electricity bills of the poor fixed to the current levels and allowing slight adjustment for the lower middle class. Stratification of poor, lower middle class etc., should be determined by average consumption over a given period of time to be determined by NERC.

h) More decentralization.

There is no doubt that the Electricity Power Sector Reform Act (EPSRA) which set in motion, processes leading to the unbundling and privatization of generation and distribution subsectors, is yet to usher in the era of uninterrupted power supply, wider and deeper access to electricity. This is

partly because of the factors outlined above. But it is also because the decentralization of the sector has not gone far enough, especially as regards our brothers and sisters without access to electricity.

With about 80 million Nigerians suffering lack of energy access, it has become urgent to embark on a vigorous decentralization of energy sources by laying equal emphasis on smaller off-grid/mini grid solutions, small scale hydropower and coal power plants and taking those closer to end users. The current monopoly of vertically integrated centralized power system where power is produced by big generation plants established far away from the customers and dispatched through transmission lines unto the national grid for distribution, is laborious, financially tedious and inefficient, especially with respect to the remote and sparsely populated areas. It has become prudent to diversify by decentralizing.

Smaller off-grid/mini grid plants have shown more efficiency, particularly in service delivery. A case in point is the Nigeria Electricity Supply Corporation Limited (NESCO), the first licensed private energy company in Nigeria, established in 1929 for generation and distribution of electricity.

NESCO operates hydroelectric plants with an installed capacity of about 30MW. It supplied all the power used in mining operations in Benue-Plateau area back in the days. With the downturn in mining in 1962, NESCO redirected its energies to towns and communities. About this time, Mr. Baron de Kretser became the Managing Director and would hold the position proficiently and selflessly for 60 years, dying peacefully on Saturday, 21st March, 2020. May God rest his gentle and kind soul, amen!

Many communities in Plateau State have been enjoying access to 24/7 power supply from NESCO for almost 90 years.

i) Small scale hydro and coal power plants.

As the investment mood in Power sector consolidates in the gas enabled power generation, interest in new big hydropower plants will begin to ebb, more so when smaller irrigation projects seem more practicable, necessitating smaller dams. The medium to large coal fired power plants

planned by the government are now challenged by investor changing mood trends, contemporary yearnings for cleaner energy and accompanying financing difficulties.

The way to go, therefore, would be small scale hydropower facilities and even smaller coal fired plants, which are anyway easier to fund, build and maintain. It needs to be vouched that Nigeria coal has low sulfur content and, therefore, not too bad for the environment.

j) Eligible Customer Program

Another way of cutting to the chase is the Eligible Customer program under Section 27 of EPSRA, where those categories of consumers declared eligible by the Minister may purchase power directly from the generation companies. This program should be promoted and expanded. The requirement of a minimum consumption of 2MW should be relaxed to accommodate customers with consumption rate of 1MW in order to deepen the program. However, it is the Rural Electrification Agency that should carry the torch on diversification and decentralization of energy away from the national grid to millions of unserved and underserved in remote and rural areas.

k) Rural Electrification Agency

Of the 80 million Nigerians who do not have access to quality electricity power, 51 million are tied to the grid, while some 32 million, mostly in the rural areas, are off grid, and with a power need averaging 1KW per day.

Nigerian Rural Electrification Agency (REA) was established by EPSRA to promote rural electrification, coordinate all rural electrification projects and initiatives and to manage and channel the rural electrification fund towards development of off-grid energy sources and provision of electricity in the rural and peri-urban areas.

REA was mandated to move away from grid extension pursuits and concentrate on off-grid power solutions, which have since dominated its activities.

However, it is striking that a visitor to the website of REA is not immediately welcomed with REA's *raison d'etre* – an illustrative map of Nigeria showing communities suffering lack of electricity access including progress, constraints and hopes. Such an interactive map with descriptive literature would be a key driver of international donor interest. Apart from the illustrative map, there should be a detailed mapping and charting of the undeserved areas of the country that should induce a methodical approach to the rural electrification program.

Another key driver of donor interest would be the composition of the Board of REA. The members of the board should include persons experienced in rural electrification nominated by our development finance partners, and experienced Nigerians at home and in diaspora. The board should then conduct a human resources hunt and shortlist 3 persons to enable the President appoint one as the Director General.

REA should seek out joint venture partners like NESCO to build very many off-grid hydropower, renewable energy and gas fired plants, wherein REA's equity should not exceed 49% so as not to afflict any project with the curse of public management.

I) Power and Steel Fund

I propose that there should be enacted, the Power and Steel Fund Act, establishing a for-profit private sector owned and managed Fund that would pool resources to invest in Nigeria's power sector and steel development and derivatives, including such a strategic asset as Aluminum Smelter Company of Nigeria (ALSCON), to turn it around. Power and steel sectors are the two main industrial constraints and bottlenecks to Nigeria's economic development and diversification. If we have declared war against poverty (which has foisted upon us social tension and insecurity threatening the very existence of the nation), then every capable person must participate. It should be compulsory for all taxable Nigerians, resident aliens and businesses operating within Nigeria's economic space to invest in the Power and Steel Fund PLC.

Compulsion should be achieved under the tax powers of government and since it would also be applicable to individuals, the States Government would be encouraged to pass a model legislation compelling the individuals within the respective states to invest, except the poor.

The modalities of the proposed investment should be worked out by the Fund, Ministry of Finance, Securities and Exchange Commission, Nigeria Stock Exchange and the Attorney General of the Federation.

The first Board of Directors of the Fund should be the fifteen alter egos of the first fifteen Nigerian companies by capitalization on the Nigeria Exchange. The Fund should be registered and operated as a public limited company, with shares issued relative to investment and profits shared by way of dividends.

The proposed cost reflective regime of the power value chain should create an investment friendly environment for the Fund. It is unlikely that the core investors of DisCos would meet their capital requirements, so the Fund would be well positioned to buy up their interests and should also be able to invest in any part of the power sector value chain.

I will have more remarks about the Fund in relation to steel development in the next few pages.

Chapter 16

Steel Development Sector.

Non-existent.

Possible Solutions.

a) Imperatives of Steel

No nation can industrialize or diversify her economy without a successful steel sector.

One of the main indexes used to measure the level of industrialization of a country is per capita consumption of steel. According to World Steel Association, Nigeria's per capita consumption of finished steel products stands at 8 kilograms (kg) as against the world average of 214.5kg. Nigeria lags behind South Africa (112kg), Egypt (42kg), Algeria (38kg) and Zimbabwe (25kg), etc. It is important for context to mention that China's per capita consumption of steel products is 600 kg.

Steel is an alloy of iron and carbon, with iron as the base metal. Iron and steel are widely used in the making or manufacturing of necessary equipment for all infrastructure of whatever category, be it human, soft and physical infrastructure.

Without steel development, Nigeria cannot achieve a large scale mechanized agricultural system and, therefore, cannot achieve food sufficiency.

Despite the massive agricultural credit and development finance interventions of over N2 trillion by the CBN, such as the Anchor Borrowers Program, the Targeted Credit Facility (TCF), Agricultural Credit Guarantee Scheme (ACGS), Commercial Agriculture Credit Scheme (CACs), Agriculture Credit Support Scheme, (ACSS), Nigeria Incentive Based Risk Sharing System Agricultural Lending (NIRSAL), among others, the agricultural sector continues to underperform and grew by an average of 2.2% in the last ten quarters ending December 2021. Apart from value-for-money deficit in these programs, and insecurity ravaging some parts of the country, absence of mechanization is the biggest roadblock to exponential growth of agricultural output in Nigeria.

Motorized machines must replace the current primitive manual farming techniques in order to deliver the necessary output and keep hunger and

mass poverty at bay. Importation of these machines are frightfully expensive and so we must begin the processes of mass manufacturing of agricultural equipment in Nigeria, an impossibility without steel development. Obviously, I do not argue that our present technological and productive capacity can deliver today's cutting edge agricultural motorized equipment, but I do submit that with steel development, Nigeria's available technical know-how, with a little assist, can produce 20th century level agricultural tractors and other mechanized equipment that consist of mainly steel frames and basic operating systems, the mass production and mass utilization of which could increase output 1,500%.

Without steel development, Nigeria cannot successfully develop her transportation infrastructure. Presently, there are no transportation vehicles fully manufactured in Nigeria; no bicycles, motorcycles, tricycles, cars, trucks and buses. None! The current automobile landscape comprises mostly semi knocked-down assembly plants striving to mature into complete knocked-down outfits, miles away from integrative manufacturing.

The absence of a developed steel sector is a major challenge to the development of our automotive sector. The weight of a typical passenger car is made up of about 65% steel and iron, and 70% for trucks. An adequately developed steel sector with associated foundries, plus adequate power supply, together with a responsive automotive policy, would certainly attract significant foreign and domestic investment into the auto industry, due to a potentially huge domestic demand and the African Continental demand prospects. Africa posts a 1.3% global vehicle population against 17.5% world's human population, and records, therefore, a very low motorization rate at about 40 vehicles per 1,000 people, compared to the global average of 185 vehicles. More so, African Continental Free Trade Area is the largest trading bloc in the whole world, with prospects of being the biggest working age population in the world by 2034. By 2050, Africa's population will hit 2.5 billion, a quarter of world's population, with Nigeria coming in with a population of 400 million people and becoming the 3rd most populous country in world.

However, the nation's current automotive policy, Nigeria Automotive Industry Development Plan (NAIDP), which acquiesces in the importation

and sales of used vehicles as a viable and convenient alternative to assembly/manufacturing of new vehicles, is clearly not the way to attract investment from Original Equipment Manufacturers (OEM).

Used vehicles constitute over 80% of Nigeria's total stock of vehicles. In fact, Nigeria, with a population of over 200 million people, has just about a market of about 9,000 new vehicles per annum.

In the short run, used vehicles seem cheaper and more affordable, but without warranties, after sales support, certified spare parts and high incidences of fraudulent misrepresentation, used vehicles are really more expensive in the long run. Nevertheless, because of immediate affordability and relief that come with purchase of used vehicles, it would be foolhardy to ban or place tight restrictions on them until relatively affordable new vehicles are brought into the market.

Producing vehicles locally is fundamental to transitioning Nigerians from used cars to new vehicles because almost all the necessary raw materials are available in commercial quantities in Nigeria and other parts of Africa, whether it is iron ore for steel (65% of car systems); rubber for tires; copper for wirings; cobalt for batteries; tannery for upholstery; etc. Deploying these locally available raw materials should ultimately make new cars affordable. Also, locally manufactured vehicles do not attract import duties. Critical homologation would be taken into consideration in local manufacturing of vehicles for domestic use, meaning that vehicles are made for the severity of our roads and adapted to the type and quality of available fuel, e.g. Compressed Natural Gas (CNG), ensuring durability and cost effectiveness.

However, to mobilize and channel domestic demand for new vehicles, we must solve the key challenge of lack of access to asset finance and affordable rates. In other words, there must be established a Universal Vehicle Purchase Credit Scheme (VPCS) with its own legal and regulatory framework based on single digit interest rates. This scheme should be available only to new vehicles manufactured in Nigeria with a minimum percentage local content qualification.

The CBN should immediately advise government on the necessary legislation and commence the processes of setting up the enabling fund. The repayment enforcement regime on VPCS would be better secured because of the prospective purchasers' counterpart deposit, and with the vehicle mounted with a tracker, serving as collateral security to be easily repossessed in case of default.

Nigeria is the giant of Africa but South Africa seems to be the giant of structured economic planning, compared to Nigeria. South Africa's automotive sector is much more developed, employing 1.5 million people directly and indirectly, and contributing an average 7% yearly to the GDP in the past 4 years ending December 2021, and earning an average \$13 billion through exports.

I entertain a dream/ambition for the nation, whereby with a developed steel sector, we would design and mass produce a basic car that is readily affordable to our poor and underserved brothers and sisters. I have allowed myself the liberty to choose the name *NAIJA*. We would then work with our development finance partners such as International Development Association (IDA) - the part of the World Bank that helps the world's poorest - to set up a social asset finance fund that would provide interest free loans to finance the purchase of *NAIJA*. God help us!

Without steel development, most Nigerian roads may never be paved, not in 150 years. 80% of all Nigerian roads are unpaved, and most of the paved ones are in terrible disrepair requiring substantial maintenance or reconstruction.

Imported road and building construction equipment including bulldozers, pay loaders, graders, excavators, pavers, cranes, mixers, scaffolding, etc., are prohibitively costly and unaffordable, and must be manufactured in Nigeria in order to pave the roads in our lifetime. Without steel, the equipment cannot be manufactured in Nigeria. I will make a few more remarks on this further down under the sub topic, *Roads*.

Without steel development, we cannot build an adequate country-wide

railway system that connects all the hinterlands to the cities and ports. Nigeria needs a minimum of 25,000km of laid tracks with rolling stock estimated to cost \$85 billion. Of these, less than 10% has been achieved through refurbishment of old tracks and laying of new ones.

It is obviously impossible that Nigeria can generate upwards of \$75 billion for a meaningful expansion of her rail network, given our economic situation. However, with a developed steel sector, the nation can manufacture in Nigeria, rail tracks, steel rails and guard rails, rail joints, rail fasteners like clips, railroad tie plates, turnouts, rail sleepers, track ballasts, rail wagons etc., thereby slashing the cost by 80%.

Without steel development, Nigeria cannot manufacture her defense and security equipment including tanks, Armored Personnel Carrier (APC), artillery equipment, guns, munitions, armored vests, etc.

Without steel development, Nigeria cannot produce hot-rolled steel plates for the manufacture of ship structures and build ships both naval and merchant ships. We cannot effectively develop a shipbuilding sector and a maritime shipping sector, without steel development.

Without steel development, the local content aspirations and mandate of the Nigeria Oil and Gas Industry Content Development Act (NOGICD) will not be realized. Apart from human capabilities i.e. knowledge intensity, skill, know-how, steel is the most consequential element in oil and gas development because it is the most important metal used in every part of the oil and gas industry starting with production, to processing, and to the distribution of refined products. For context, think of petroleum and gas pipelines, including the AKK pipeline, all are made of steel.

Without steel development, Nigeria cannot tackle the life and death problem of the near non-existence of pipe borne water, a problem that is challenging the well-being of the nation.

Lack of safe drinking water is one of the important indicators of extreme poverty and misery. About 160 million Nigerians struggle to access safe drinking water because of the collapse and/or abandonment of pipe borne water reticulation. I do not seem to remember any State Government flagging off or commissioning a pipe borne water project. Over 85% of Nigerian cities wholly or partly do not have functional water reticulation, while 99% of the towns and rural areas have no functional reticulation. That's not to say the situation was always like this. I remember vividly the Water Works (a water facility) at Amuko in Nnewi, my home town, with a reservoir that seemed very big to a teenager like me. It also had a reticulation network that served water to the environs. But our dear Water Works is no more, just as many others like it across all parts of this nation.

Reticulation of water to all needing parts of Nigeria will consume tens of millions of linear meters of steel water pipes which will be financially impossible without steel development.

Without steel development, Nigeria cannot produce the necessary structural steel skeletons that support complex projects like skyscrapers, stadiums, bridges and airports.

Nor can the nation leverage the advantage of speedy erection that comes with structural steel framing of skyscrapers. The Empire State Building, 102 storeys high, which was built in New York 90 years ago, was completed in one year. Such a building in Nigeria today, built with concrete and rebar, would take about 12 years to complete. Same goes for Chrysler and Bank of Manhattan buildings, also built over 90 years ago.

Without steel development, Nigeria cannot manufacture high voltage transmission line stanchions, industrial machinery, heavy equipment, mining equipment, machine tools, major appliances, white goods, etc.

Everyone may see from the forgoing that Nigeria has over the years lost more than \$300 billion by direct and multiplier effect of not developing her steel sector. We have, by this failure, sponsored and sustained the employment of millions of workers in foreign countries while millions are out of work in Nigeria.

The would-be demand for hundreds of millions of metric tons of iron ore, coal, limestone/dolomite, clay/silica sand, etc.(raw materials for steel making) was lost and with it, the associated jobs, leaving the mining sector's contribution to GDP still at 0.3%.

Together with a deficit of know-how and inadequate power supply, non-development of the steel sector has left the economy un-diversified and un-industrialized.

Nigeria's demand or requirement for steel is much higher than has been captured. According to the National Bureau of Statistics (NBS), the nation spends about \$3.3 billion on importation of different steel products yearly. Other write-ups put our demand for steel at about 7 million metric tons per annum. The reality is much more. The Egina Floating Production Storage and Off-loading vessel, weighing 220,000 tons, alone cost the nation over \$4 billion. With steel components of over 70%, that single project saw an importation of steel of \$2.8 billion.

The AKK pipeline project of \$2.8 billion, with steel component of 70%, would see an importation of steel of about \$2 billion. The NLNG Train 7 expansion involves steel importation of over \$5 billion. In fact, the oil and gas industry alone imports steel products and components of over \$6.5 billion yearly. Yet, none of all that steel is made in Nigeria. The Executive Secretary of Nigeria Content Development and Monitoring Board (NCDMB) was quoted by Tribune Online as saying: "Ninety-five percent of our construction in the oil industry is steel, yet we do not have a steel mill in Nigeria."

If we added up all the steel necessary for the endeavors I set out above which Nigeria cannot accomplish cost-effectively without steel development, we would be landing at a minimum of around 20 million metric tons of steel required by Nigeria annually. If, however, we used the world average consumption of 214.5kg per capita to determine Nigeria's minimum steel requirement, we would arrive at 42.9 million metric tons.

Whichever may be the right figure, Nigeria today produces less than 100 (hundred) tons of steel per annum, and only from scrap metal. The steel

sector presently consists of importation of iron billets and rolling them into iron rods.

Nigeria's quest for steel development has been of missteps and mismanagement. In 1971, the Federal Government established the National Steel Development Authority, charged with planning the development of Steel together with the construction and operation of steel plants.

Tiaj Promo Export (TPE) of Russia, Soviet Union, was engaged in 1973, and did prepare a preliminary project report on iron and steel industry in Nigeria which was submitted and accepted. About the same period, iron ore of acceptable quality was discovered in Itakpe, Ajaokuta and Oshokoshoko.

TPE was then commissioned, and did provide a detailed project report, with the assistance of Sofresid of France as consultants. In 1979, the government signed a contract with TPE for the construction of an integrated steel plant at Ajaokuta.

Later in 1979, the government promulgated the National Steel Council Decree dissolving National Steel Development Authority and formally establishing 6 companies: Associated Ores and Mining Co, now National Iron Ore Mining Company (NIOMCO) at Itakpe; Ajaokuta Steel Company (ASC); Delta Steel Company, Aladja (DSC); Jos Steel Rolling Mill (JSRM); Oshogbo Steel Rolling Mill (OSRM) and Katsina Steel Rolling Mill (KSRM).

b) National Iron Ore Mining Company (NIOMCO)

The nation is blessed with iron ore reserves estimated at 2.6 billion metric tons with an average quality of 36% iron content, an inadequate iron concentrate necessitating beneficiation to meet the required standard for steel production. The National Iron Ore Mining Company (NIOMCO) was established to mine, beneficiate and supply iron ore to Ajaokuta Steel Company and Aladja steel company as a captive mine.

NIOMCO later specified its mandate to be the production and supply of:

63-64% Iron Ore Concentrates for ASC

67-68% Iron Ore Concentrates for DSC

Picoat for coating oil pipelines in deep waters

Aggregates for construction work

Tailings for road construction.

Due to mismanagement, NIOMCO fell into misfortunes but things would go from bad to worse when in 2005, it was concessioned to an Indian Company, Global Infrastructure Holdings Limited (GIHL)/Global Infrastructure Nigeria Limited (GINL), alongside ASC and DSC.

The GIHL/GINL did not exhibit competence and capacity in the first of the concessions and was indeed accused of asset stripping. And so, the Yar'Adua administration terminated the concessions in 2008. This led to litigation/arbitration that lasted to 2016 when a modified concession agreement was executed between the government and the concessionaire. The main plank of the modified agreement was for the government to take back ASC and DSC but allow the concessionaire to run NIOMCO for further 7 years.

Many people are betting that the concessionaire would not keep to the terms of the modified agreement. I am inclined to join the bet. Such people are used to getting their way in Nigeria because they know they can bribe us at will.

So government should get ready to look at the books and the assets, any fraud or asset stripping should be met with a criminal prosecution, as well as termination of the concession. Future arbitration proceedings would run side by side with the criminal proceedings where a crime has been disclosed.

NIOMCO is a critical part of steel development. Processes to revitalize it and expand production capacity post concession should commence. Ultimately, NIOMCO should be privatized but in a manner befitting a national strategic asset.

c) Ajaokuta Steel Company (ASC)

Ajaokuta integrated steel plant was established in 1979 to provide a base for Nigeria's industrialization. Following technical advice from TPE, the project was designed to use conventional Blast Furnace (BF) route for iron making and Basic Oxygen Furnace (BOF) for steel making.

The first phase was designed to produce 1.3 million tons (MT) of liquid steel per annum, with inbuilt facilities to expand to 2.6 million tons of liquid steel per annum in the second phase and to 5.2 million tons per annum in the third and final phase.

However, the project delivery was mismanaged.

ASC has 43 units, out of which 40 have been completed, which is why the common refrain is that the project is 98% completed. However, in terms of value, the remaining three components — the blast furnace, including the oxygen plant, the coke oven and the steel making shop, account for much more.

Moreover, years of abandonment mean that a significant number of the units at the plant may have become old and obsolete.

After three botched privatization deals on ASC, which involved protestations on asset stripping, the government was said to have regained possession of ASC in 2016.

In 2019, President Muhammadu Buhari led a delegation to Sochi in Russia to attend the Russia-Africa Economic Forum that took place between 23rd and 25th of October. It was widely reported in news media that President Buhari met with President Vladimir Putin of Russia and that an understanding for rehabilitation and completion of Ajaokuta Steel Project was reached.

The Minister for Mines and Solid Minerals Development was quoted as saying: "We agreed with the Russian government. Hopefully, by the end of this month, the MoU will be signed. It was agreed between President Muhammadu Buhari and President Putin that we would complete Ajaokuta

on a government-to-government basis. The funding will come from Afreximbank and the Russian Export Centre. Jointly, they will fund the resuscitation of Ajaokuta and the payback will come from Ajaokuta itself. Once Ajaokuta starts operation, the experts that will come from Russia will run it; of course, the terms will be agreed. Afreximbank is bringing \$1 billion to the table and the Russian Export Centre is bringing \$460 million. It is a debt, not equity; and it is coming at the rate of five per cent."

In order to provide an enabling infrastructure to aid steel manufacturing, the contract for the construction of Nigeria's first standard gauge railway was awarded in 1987 to connect the iron mines at Itakpe to the steel mill at Ajaokuta and continuing to the Atlantic Ocean at Warri. The railway was finally inaugurated by President Buhari in September 2020.

Apart from the 110 MW captive power plant at the project site, there exists a 414 MW power plant, which supplies its unused energy to the national grid. There are also two existing electricity feeder substations of 132KVA and 330KVA. A natural gas pipeline was built from Warri to Ajaokuta to supply natural gas to the cluster.

I will make a few more remarks on ASC regarding the way forward in the next couple of pages.

d) Delta Steel Company (DSC)

Delta Steel Company, Aladja, a Steel Plant with a capacity of 1 million tons per annum based on direct reduction and electric arc furnace, was completed in 1982 and produced steel till 1999.

Built at the cost of about \$1.9 billion, the steel plant is an integrated facility comprising beneficiating and pelletizing plant, Direct Reduction (DR) plant made up of two modules; the steel melting shop and the continuous casting shop, the air separation plant, the foundry, and the general maintenance shop with feeder units in various process departments.

DSC was producing over 200,000 metric tons of liquid steel and was also producing large quantities of iron billets and supplying the rolling mills to Osogbo, Jos and Katsina, including the rolling mills Ajaokuta Steel Plant.

Due to mismanagement and corruption, DSC collapsed. By 1999, production of liquid steel and billets all but stopped. The foundry unit, which used to produce spare parts for Peugeot Automobile Nigeria in Kaduna, closed down. Without billets and afflicted also by mismanagement, all the mills went under.

In 2005, Global Infrastructure Nigeria Limited (GINL) was hand-picked out of other bidders and awarded DSC. GINL proceeded to procure vast sums in loans from Nigerian banks which it could not repay. AMCON bought the loans and took over the collateral security – DSC, and later sold the Company to Premium Steel, another Indian Company, which has yet to add any meaningful value. The host community is now accusing Premium Steel of asset stripping, gross incompetence and of not making any positive contribution towards the rehabilitation of DSC. The situation surely calls for action.

e) Jos, Oshogbo and Katsina Steel Rolling Mills (JSRM, OSRM, KSRM).

The mills were established to produce rods of between 6mm to 40mm. However, mismanagement, embezzlement and lack of supply of billets drove them into the ground, and they failed.

The three rolling mills have now been privatized but only Katsina Steel Rolling Mills, now known as Dana Steel, seems to be chugging back to life but producing way below capacity utilization. Jos and Oshogbo mills are unproductive.

f) Way Forward for Steel Development

One of the greatest failures of public administration in Nigeria, from Independence till date, is the failure to develop the zeal for steel development. It took 11 years after independence to establish the National Steel Development Authority, the agency to plan steel development. It took about 20 years after independence to lay the foundation stone for Ajaokuta Steel Plant, and 43 years after that stone was laid, the plant is yet to be completed. And no concerted effort was made to save Delta Steel Plant and the Rolling Mills from failure. It is as if we have been under some form of progress mitigating spell blinding us from the realization that without steel

development, we can neither diversify nor industrialize and so cannot generate jobs for our teeming youths which is one of the main reasons for the prevalence of massive and widespread insecurity threatening our national existence and survival.

The immediate step forward is imbibing the sense of extreme urgency for steel development in the nation's economic revival and to develop the abiding zeal for steel.

In the early 70s when steel development was conceptualized, Nigeria's population was slightly below 60 million people, while the planned gross production capacity of ASC and DSC was 6.2 million metric tons of steel. Nigeria's population now exceeds 200 million people, a commensurate increase in steel requirement will move it up to about 22.3 million metric tons.

To pursue such a target, we must borrow General Eisenhower's broad front strategy at the Western Front. The nation should pursue the three enabling fronts of the steel effort together and simultaneously.

Every exertion should be made to conclude all agreements protocols and technical audit to commence rehabilitation of ASC. And as much as technically practicable, the time frame between three phases should be abridged in order to reach production capacity of 5.2 million metric tons sooner than later. Meanwhile, DSC, whereon Premium Steel would have breached conditions of engagement, should be retrieved and put through a rehabilitation process. So also the NIOMCO, JSRM and OSRM. KRSM should be watched to see if the revitalization endures.

ASC, DSC, NIOMCO, JSRM, OSRM and Aluminum Smelter Company of Nigeria, ASCON, are strategic assets. They should be sold together to the proposed Power and Steel Fund, which should handle the rehabilitation of each of them.

Due to the urgent need for steel development to commence in earnest and to ramp up production soonest, even while the ASC and the others are

undergoing rehabilitation, the Fund should commence the processes of building 8 additional smaller steel plants that would be easier and faster to build. These new plants should be located in Ajaokuta to take advantage of existing infrastructure and the benefit of synergies. In consideration of this arrangement, the payment for the purchase of ASC and the others by the Fund should be deferred by a number of years.

The government should build out all necessary infrastructure in Ajaokuta – Itakpe axis in order to turn the area into a steel manufacturing hub with a view to attracting investment and steel companies.

Steel derivatives, part of what the Power and Steel Fund should invest in, include the manufacturing of any product in which the percentage of steel as a component exceeds 30% and which the Federal Government by Law or Executive Order declares strategic. All the manufacturers set out above requiring steel as a necessary component are easily in the steel derivatives category.

Chapter 17

Roads Sector.

Unpaved.

Possible Solutions.

a) Overview

The nation's road network accounts for about 95% of domestic traffic flow, yet the roads trail behind all expectations, and behind regional rivals across all critical indicators. Nigeria, with a bigger economy and a population almost four times that of South Africa, has a road network of about 200,000km while South Africa has about 750,000km. Of Nigeria's 200,000km network, 160,000 (80%) are unpaved. Of the paved 40,000km, about 70% of the roads are in "terrible disrepair", according to a National Planning Commission report. The World Health Organization report states that Nigeria has the least-safe roads in Africa, accounting for 25% of all road accidents and deaths in Africa.

b) Corrupt free processes

Nigeria's 200,000km road networks made up of 33,000km Federal Highways, 50,000km State Highways and 117,000km Local Government feeder roads, are severely challenged, as are other infrastructural projects, by corruption through embezzlement/diversion of funds that ordinarily would fund road projects, corrupt procurement processes, corrupt project management systems, non-development of domestic know-how for complex road and bridge projects, and non-manufacturing/production of equipment and some necessary inputs in Nigeria. These have kept the nation dependent on terribly expensive foreign human capital, as well as imported equipment and inputs such as bitumen. The present fiscal problems of the nation are also major challenges to road construction.

I have laid out a 'we-are-all-bad' strict anti-corruption plan that would hold all of us in public service accountable without exception, stem embezzlement, diversion, mismanagement and misapplication of public resources. It should also address corruption in project management whereby performance/progress certificates are corruptly issued; leading to payment for work not done.

I have laid out a simplified procurement process that shuns discretion by which self-dealing public officials across the tiers of government rig the process.

c) Human capacities and capabilities.

I have sounded the alarm about the non-development of human capital and highlighted the tools we must use to develop technical know-how including early vocationalization; educational bias towards TVET; science, technology, engineering and mathematics; pursuit of local content primarily as know-how and knowledge intensity and secondarily as quantum of contracts awarded to Nigerians and local materials; and using immense procurement powers of government to impose strictly monitored on-and-off the job training programs.

d) Local manufacturing of construction equipment and exploitation of locally available bitumen and other natural resources.

I have shown how we should urgently pursue steel development, without which Nigeria cannot manufacture road construction equipment, and therefore, would not be able to pave the unpaved 80% of the nation's road network, nor would Nigeria ever be able to expand the network to 750,000km to match at least South Africa's current network.

I must add that despite having proven reserves of 17 billion barrels of bitumen and 42 billion barrels of tar sands, the nation spends about \$600 million importing bitumen yearly. It is therefore highly improbable that Nigeria can pave the unpaved roads and expand the road network in significant ways. We must exploit the bitumen resources to ensure cost effectiveness and ready availability.

e) Public Private Partnerships (PPP)

The paucity of funds of the Federal Government and the inefficiencies of public ownership and management which have contributed to keeping our roads in terrible disrepair, require public private collaboration on federal roads.

To move forward with PPP, the Infrastructure Concession Regulatory Commission (ICRC) should be strengthened in terms of personnel capacity and capability. The ICRC Act should then detail the processes and procedures for outright concessions, and for PPP in development, financing, maintenance, management, improvement of roads, and for return on

investment through generation of revenues by tolls, wayleave rights, advertising, erection of masts, etc.

Though outright concession should be provided for, it should be rare and with more stringent conditions. PPP should be preferable with the government acquiring a minority stake in the Special Purpose Vehicle (SPV) through an incorporated joint venture and have a seat on the board of directors. This is to provide stability and monitoring. Where the stake of the private partners is given up because of nonperformance or for any other breach in conditions, it should be easy to find another willing private partner without disruption and vacuum.

It should also be easy for the private partner to sell its stake to another private partner, subject to conditions. Because of the capital intensive nature of road construction, payment for government stake should lessen the burden of capital inflow on the private partners and with government on the board, doing business should be easier in terms of permits, approvals and liaisons. So bidders for PPPs would actually be tendering for majority stakes with respect to particular roads and/or bridges.

In order to avoid the mistakes of some earlier privatization deals, the bidders must provide clear and liquid evidence of financial capacity, while government must put up its financial contribution before takeoff.

In its regulation of tolls and other non-vehicular revenue generation, ICRC should balance return of investment and the interest of the general public.

f) Feeder roads

Feeder roads, geographically rural, generally connote those smaller roads that feed traffic to larger roads. But to me, for Nigeria, feeder roads have acquired a literal meaning – feeding the nation.

90% of all agriculture in Nigeria is dominated by small holder farmers, 98% of whom with their farms are in rural areas and totally dependent on feeder roads for access to their farms, to inputs, to markets and to income.

Whatever little food security the nation has today is made possible by food production from the rural areas. Yet, over 90% of Nigeria's 117,000km feeder road network is unpaved. During the rainy season, many people are cut off from their community's social and economic life. People are unable to market their goods, and they cannot time share machines for their farms when they are made available to their farm collectives.

With transport opportunities come the needed boost in productivity, resulting not only in more food, but more income. Higher rural incomes help to drive development in other sectors – education, healthcare, housing and so on.

And unless rural incomes rise, easy recruitment of our youth into terrorism, banditry, insurrectionist agitation and serious crime would continue and indeed increase. And migration to the urban areas, including hazardous illegal migration to the first world, would accelerate.

The Federal Government appreciates the pivotal role of feeder roads in agricultural output and socioeconomic development of rural Nigeria.

The Minister of State for Budget and National Planning, Prince Clem Agba, announced sometime ago that a total of N34 billion was set aside by the Federal Government for the development of rural roads, with an additional N17 billion added to it, under the sustainability planning.

The Minister also stated that the above figures, added to the sum of N8 billion earmarked in the 2021 budget for rural development, takes the total to N59 billion.

Whichever statistics we look at, since the 1981 recession, youth unemployment and under-employment have continued to grow faster than that in other key demographics. With over 36 million of our youth now unemployed or underemployed, the traditional measures of government over the same period have fallen short in combating the raging youth joblessness. This is why I have proposed Infrastructure Youth Corps program (IYC), a state based federally run and funded program where the energies of our unemployed youth are channeled to providing various infrastructure.

I have included construction and rehabilitation of feeder roads as one of the key infrastructure projects under IYC program. This would provide a systematic approach to feeder road development across the nation, whereby a labor intensive construction design is adopted and priced per kilometer and establishing the number of kilometers expected from a sum of money.

The labour intensive design should entail building the drainage system with manual labour and using locally made graders and compactors to prepare the roads to receive sub-base, base course and bitumen, all achieved with manual labour. We must remember that the first great Roman roads (Via Appia) were built in 312 bce during the reign of Appius Claudius Caecus with bare hands. And the roads stood the test of time. In any event, traffic on feeder roads are lighter.

In this way, all the states would benefit from feeder roads development and youth employment at the same time. The IYC program was discussed in greater detail in earlier pages.

*“We are all now connected
by Internet, like neurons
in a giant brain”*

Stephen Hawking

Chapter 18

Digital Infrastructure Sector.

Weak.

Possible Solutions.

a) Overview

The internet and cellular telephony have become an integral part of the daily lives of millions of Nigerians and indeed billions of people all over the world, assuming an outsized role at home, at work, at school and everywhere else, and significantly shrinking the world into a global village.

The problem is that Nigeria's place in that global village and the socioeconomic benefits accruable to the nation and her citizens are challenged by erratic and terribly slow internet services plus poor quality telecommunications services brought on by poor Call Setup Success Rate (CSSR), high Drop Call Rate (DCR) and perennial Traffic Channel Congestion (TCH CONG).

Broadband is the backbone of a digital economy. It is estimated that a 10 per cent increase in broadband penetration will increase the gross domestic product of an economy by 1.6 to 1.8%.

In a 2021 survey on broadband connection speeds conducted by Surfshark, an Amsterdam-based cyber security firm, Nigeria was reported to have one of the slowest broadband connection speeds globally (13.45 Mbps against Egypt's 32 Mbps), ranking 82nd among 110 countries. Nigeria's average mobile speed is 17.9 Mbps against South Africa's 38.07 Mbps.

According to the June 2021 Cable.co.uk survey report on broadband download speeds of 224 countries, Nigeria was ranked 143 with a download speed of 8.68 Mbps. It takes Nigeria one hour, 18 minutes, and 30 seconds to download a 5G movie, while it takes South Africa, with mean speed of 19.94Mbps, 34 minutes 15 seconds to download a 5G movie. It takes Kenya with 11.27Mbps, one hour 34 seconds to download a 5G movie.

We are all too alive to our struggles with the internet to complete simple errands, failures of which whip us with tremendous human, material, social and economic costs. It is evident by the young job applicant who had gone

through the various stages of a foreign employment process and onto the last stage of a virtual interview, but lost the opportunity because the internet was too slow or packed up; the field journalist who could not file his breaking news story in real time because of internet problems; those who are regularly frustrated because they are unable to recharge their internet data or electricity credit or withdraw money at ATMs; failed Point of Sale (PoS) transactions; banks unable to tend to customers; the family who missed their flight for Christmas holiday in Nigeria because some family members couldn't complete NCDC forms due to internet glitches and couldn't get seats on other flights till after the New Year, etc.

Most of the problems in our digital environment are the direct results of the underlying weak digital infrastructure.

Getting a sense of what could have been and the magnitude of possibilities, is in realizing that despite the nation's weak digital infrastructure, Nigeria has a thriving digital environment with about 102 million people in 2021 using their smartphones for streaming and financial transactions, a figure projected to grow to 130 million people by 2026. According to the Central Bank, N783.2 trillion worth of e-payments were completed from over five billion transactions in the first eight months of 2020.

In November 2021, the current cash in circulation was N4.5 trillion, which was only 10% of the total money supply of N45 trillion. All other payments were e-payments.

Banks and telecommunication companies (Telcos) are moving deeper into electronic payment services. Airtel and MTN have obtained approval in principle AIPs, granted by the CBN, to operate their respective Payment Service Banks (PSBs).

You could hardly see a Nigerian tech startup raising \$5 million eight years ago. But in 2021, some fintech unicorns are beating tier 1 banks in valuation. Flutterwave valuation just hit \$3 billion. OPay is valued at \$2 billion while Interswitch is valued at \$1 billion. No other African country has as many Unicorns as Nigeria. In 2021, ICT sector's contribution to GDP averaged 15%.

The encouraging performance of the sector against all odds provides a binding impetus to urgently fix our digital infrastructure.

b) Fibre Optics and Towers

Agneska Sablovskaja, the head of research team at Surfshark, holds the view that the type of cabling (copper or fibre-optic) and their age, the proximity and connection to submarine cables and the size of a country are some of the three most usual causes of bad internet connectivity. Ms Sablovskaja advises that Nigeria should upgrade her cabling to fibre-optics to significantly improve internet speeds, in addition to installing more mobile internet service towers.

Fibre broadband is defined as a broadband connection delivered over fibre optic cables. Unlike copper cables, fibre has a glass core, which enables information to be transmitted using light rather than electrical signals. Fibre optic cables can deliver data thousands of times faster than copper cables.

Nigeria has five international submarine cables, whereas there are now 16 submarine cable systems connecting Egypt, while South Africa relies on massive undersea cables like those of EASSy, a 10,000km submarine fibre-optic cable system laid along the east and south coast of Africa, which generates good fibre broadband speeds. EASSy runs from Mtunzini in South Africa to Port Sudan in Sudan, with landing points in nine countries and is connected to at least ten landlocked countries — which will no longer have to rely on satellite internet access to carry voice and data services.

About two years ago, Nigeria's internet snafu was blamed on cuts on West African Cable System (WACS), a fibre optic submarine cable belonging to MTN, connecting 14 countries over two continents.

However, Nigerians had been experiencing very slow and unsteady internet and terrible telecommunications connectivity before the cuts on WACS, and have continued to experience same after the repair of the cuts.

Whatever may be the case, it is the job of the Nigeria Communications Commission (NCC) to corral the Internet Service Providers (ISPs) and Mobile

Network Operators (MNOs) into making the investments on digital infrastructure necessary to ensure a sustainably smooth service delivery. To this end, NCC has in its tools box, the power of collocation and infrastructure sharing which should allow for pool of resources among ISPs and MNOs.

MainOne, a West African data center and connectivity solutions provider with a presence in Nigeria, Ghana and the Ivory Coast, is being acquired for \$320 million by Equinix, an internet company headquartered in Redwood City, California, that provides data center services for companies, businesses and organizations.

MainOne has a 7,000km cable spanning Portugal to West Africa with landing in Accra, Ghana; Dakar, Senegal; Abidjan, Ivory Coast and Lagos, Nigeria, and 1,200km of terrestrial fiber network across southern Nigeria in Lagos, Edo and Ogun states. MainOne's connectivity to terrestrial sites extends across 65 PoPs (points of presence) in cities across Portugal, Nigeria, Ghana and the Ivory Coast.

Facebook and Google, US tech companies, are sponsoring extensive cabling projects meant to give them a firm landing in Africa's digital markets, but which would improve the quantity and speed of African internet access, and with lower connectivity costs. Facebook is financing the 37,000km 2Africa Pearls cable, which will connect 26 countries in Africa with Asia and Europe. The cable is touted to be the longest subsea cable system in the world when completed. Google, on the other hand, is backing the Equiano cable, which will run from Portugal through Nigeria, Namibia, South Africa and St. Helena. The first phase of Equiano is scheduled to be ready in the second half of 2022. These investments are against the backdrop of 780 million people, out of Africa's population of 1.2 billion, who do not have access to the internet.

Inland, Nigeria Galaxy Backbone (GBB), a government owned ICT infrastructure platform and services provider, is expanding the national fibre infrastructure across the country under the National Information Communications and Technology Infrastructure Backbone (NICTIB). Phase 1 covering the southern States was announced by GBB as completed while phase 2 covering the northern states is ongoing. GBB has, in collaboration

with Interra Networks, rolled out an internet services provider named STORM.ng to benefit south east and south south states.

In order to optimize GBB's service delivery and contribution to sectoral output, generate revenues and profits to pay down outstanding debt of over \$300 million that was said to finance the national fibre infrastructure as well as avoid the pitfalls of public ownership and management, GBB should be privatized by selling 51% of shares, with proceeds applied to defray debt. Its national fibre infrastructure should allow GBB to move into other digital infrastructural services.

Elsewhere, there is increased small-to-medium scale investment activity on digital infrastructure in Africa. An example is AIRTEL Africa's recent announcement of the sale of its telecommunications tower assets in Tanzania for \$176.1 million, to a joint venture made up of SBA Communications Corporation, an independent owner and operator of wireless communications infrastructure, and Paradigm Infrastructure Limited, a UK company focused on developing, owning and operating shared passive wireless infrastructure in selected growth markets.

There is also noticeable heightened activity on the continent on internet backbone, fixed broadband, data centers, cloud computing, API and integration, applications, systems, user devices, platforms, IoT, etc.

The tech arm of Nigeria Investment Promotion Council should move earnestly and energetically to attract these digital infrastructural companies to Nigeria.

Solutions to the challenges of power disruptions, insecurity and lack of ease of doing business are discussed at various pages of this book.

c) Broadband Penetration.

Broadband penetration, basically the number of subscriptions to fixed and mobile broadband services, stagnated to around 40% towards the end of 2021. Compulsory integration of National Identification Numbers (NIN) to Subscriber Identification Modules (SIM) obviously played a significant role in

deactivation of SIMs and slowing of SIM sales. Those who did not have NINs had their SIMs deactivated and could not purchase SIMs.

The SIM is the main gateway to broadband since the mobile broadband services account for more than 90% of all internet connectivity per device.

So without NIN, no SIM, and without SIM, no mobile internet. Portable Wi-Fi modems, smart boxes and routers also have SIMs.

About 70 million Nigerians are illiterate and, therefore, cannot use the most basic smartphone nor perform the most basic digital tasks like sending and receiving text messages or making any online payment.

With the existing rates of extreme poverty, over 100 million Nigerians cannot afford the cheapest internet enabled smartphone in Nigeria.

Therefore, to rapidly increase broadband penetration, we have to pursue NIN penetration, pursue mass non-formal, adult elementary-read-and-write education and work with end user devices producers to design and mass produce basic, very-easy-to-use and very cheap smartphones with a price range of N8,000 to N10,000 each.

Under the proposed Infrastructure Youth Corps program (IYC), I laid out a plan to use our educated and unemployed youths to fan out across the near and remote reaches of the nation to handle registration of NIN and to teach in adult and non formal elementary-read-and-write education, and the simplest forms of vertical diversification – moving from a lower value to a higher value of the same commodity or enterprise, including basic use of smart phones and performance of basic tasks with internet.

d) Horizontal diversification and manufacturing of complex goods.

Yes, we talk of diversification and manufacturing but by these we oftentimes think of processes such as processing cassava into starch or milk into dairy products or tomatoes into tomato paste and tomato products. Not bad, given that our present state of know-how and technological base are still slightly below these simplest forms of vertical diversification. Our agriculture is still in

the rain fed, smallholder, hoe and machete, unprocessed, storage deficient and no-roads-to-the-market era. In fact, if we could increase basic mechanization and primary product processing to the next-stage products by 15% per annum, food security would increase by 25% every corresponding year, moving millions of Nigerians out of poverty and GDP growth rate ahead of population growth. So we should pursue our simple forms of vertical diversification fervently and aggressively.

However, we must, in a mutually inclusive manner, and with equal zeal and zest, chase horizontal diversification (adding new complex products or services that are often technologically or commercially unrelated to current products) which would drive us out of our comfort zone of basic processing into advanced technology based innovation and value addition, within and across various sectors. This would require knowledge intense skills and much higher capital formation. Horizontal diversification could be in the manufacturing of complex goods like semiconductors, electronics, nanotechnology, microchips, operating systems, deep technologies – Industry Revolution 4.0, IoT, AI, ML Big Data, low latency apps, robotics, autonomous vehicles, etc.

We must take up the challenge!

e) Deep Technologies Industrial Park. Complex Goods Manufacturing Fund.

The government must spare no effort or cost to establish a special Deep Technologies Industrial Park, which should be equipped with all the necessary infrastructure – security, power plant and backup supply, good access road and network, helicopter landing facility, etc.

A campaign to attract deep technology companies should proceed one on one, with the President leading the effort and throwing in the weight of the office, including lobbying counterparts to weigh in where possible. Attracting such companies would be difficult because of our basic skill levels. But that is precisely why we are chasing the deep tech and complex goods manufacturing firms in the first place – to develop and elevate our skill levels.

Meanwhile, a Complex Goods Manufacturing Fund should be set up to fund acquisition of a catalyzing minority stake of up to 30% in such new deep tech-goods companies.

Chapter 19

Agricultural Sector.

Hobbled.

Very Difficult Export Processes.

Possible Solutions.

a) Import dependent

One of the main strategic and tragic failures in our national development is the abandonment of the agricultural sector, following the discovery of oil in commercial quantities in Nigeria. Consequently, the sector's contribution to the GDP suffered a decline from 70% in the 60s, to 25% in 2021, all the while keeping the ancient farming system and practices largely unchanged till date.

Alarmingly, over this period, while agriculture and food production declined, Nigeria's population grew by 150 million people. The result is mass poverty, hunger and national food insecurity. The agricultural sector employs about 38% of Nigeria's labor force, 88% of whom are small holder farmers collectively accounting for 90% of all agricultural produce.

Most of the small holder farmers cultivate small sized farms averaging about half a hectare, and are engaged in seasonal rain fed subsistence farming, selling on the average, only 26% of their produce and do not see themselves as entrepreneurs. They are hampered by a lack of training on good agronomy practices and farm management, poor seed varieties, inadequate fertilizers, costly inputs, outdated manual farming techniques, lack of access to credit and agricultural extension services, frustratingly decrepit infrastructure, especially rural roads, poor land tenure system, absence of post-harvest storage facilities, weak soil fertility, etc. And in recent times, insecurity, herder-farmer clashes, banditry, kidnappings, etc., have devastated the already blighted situation of the farmers and the general public.

These handicaps work together to expose small-holder farmers to a continually recurring low farm yield and high post-harvest losses from their meager yields, inexorably condemning the farmers to abject poverty and the nation to food insecurity. For context, Nigeria's average tomato yield per hectare is 7.2mt, as against South Africa's 84mt, UK's 417mt, Netherland's 508mt and Belgium's 505mt.

The low yield results in the total production of only about 2.3 million tons of tomato in Nigeria yearly. And there is the post-harvest losses of about 45% encountered along the value chain, mostly due to the non development of the necessary cold chain storage facilities, poor packaging materials and containers and terrible transportation infrastructure. Subjected to these harsh conditions and treatment, tomatoes, which are very delicate in nature, wither quickly.

Nigeria consumes about 2.28 million metric tons of tomato yearly. Therefore, the post-harvest losses of about 1 million metric tons impose the need to import tomato paste to make up the shortfall. The nation spends over \$360 million annually in importation of tomato paste and concentrates. The potential for at least \$1 billion in export is also lost.

Various tomato processing plants were shut down because of unavailability of necessary quantities and quality of locally produced raw materials. Dangote Tomato Processing Plant, a 1,200 ton plant located on the outskirts of Kano, has reopened but is operating at a very minimal capacity due to a lack of fresh tomatoes. Terrible, given the raging unemployment and biting scarcity of foreign exchange.

Increased tariffs and levies on tomato importation have yet to stem imports and spur much growth in domestic production, leading to some calls for outright ban on importation or disqualifying tomato importation from access to foreign exchange.

In rice production, government programs have been sturdier in the quest to increase domestic production towards self-sufficiency. The effort started in earnest when an import tariff of 110% was placed on rice, in addition to other levies. Further afield in 2015, the CBN included rice as one of the items not valid to access foreign exchange, and stopped processing Form M for imports in 2018, effectively prohibiting importation of rice. Cheaper loans to the outgrowers were organized by the CBN through the anchor borrower program.

Yet, though domestic production has ticked up to about 4 million metric tons in a year, it falls short of the 7 million metric tons needed for national consumption. Also, it fails to meet the quality requirements, mostly in the parboiled long grain category. Yields average only 2 tons per hectare. The smallholder farmers produce 86% of total output. Poor inputs, lack of mechanization and high operating costs result in poor quality and insufficient produce, leading to smuggling of over 2.7 million metric tons of long grain parboiled rice into Nigeria through the ever present porous borders, and costing the nation over \$3.2 billion per annum.

Not even in maize production, with 11 million tons per annum, has Nigeria been able to satisfy the domestic demand. There is still a deficit of about 1.5 million tons. The production gap in maize is a major problem for the poultry subsector because an upwards of 50% of poultry feed is made with maize.

Despite Nigeria's exponential growth in population over the past 40 years, sugarcane production literally declined in the same period. The nation produced 41,500 tons of raw sugar in 1990, while 38,600 tons were produced 2019. Consumption of refined sugar and its derivatives grew from about 290,000 tons to 1.6 million tons over the same period.

It was to avert such disaster and to pursue self-sufficiency in sugar production, and to become a major exporter of domestically produced sugar, that the government established the National Sugar Development Council (NSDC) in 1993. NSDC's establishment Act was amended in 2015 to provide legal backing for the National Sugar Master Plan (NSMP), which was developed in 2012 as a strategic roadmap to the attainment of self-sufficiency in domestic production of raw sugar 10 years from thence.

Alas, the 10 years are up and rather than self-sufficiency, we have a dwindled production, whereon Nigeria produces less than 3% of the domestic demand and spends about \$600 million yearly on importation of raw sugar.

Under NSMP, the NSDC was supposed to facilitate the production of 40% of all domestic demand by the outgrowers by dealing with their challenges, including access to funding piped from the sugar levy fund. Rather,

production and acreage of the outgrowers have shrunk, constrained by the lack of good varieties, high cost of inputs, dependence on rain fed cultivation and manual production, lack of technology, poor access to credit facilities and insecurity in the sugar belt.

The NSMP introduced the Backward Integration Program (BIP) whereby only three companies - Dangote, Bua and Flour Mills - are given concessions which today include monopoly on sugar importation and access to foreign exchange at the official rate, in exchange for substantial investment in domestic raw sugar production and supply chains, with a view to achieving 100% national self-sufficiency. The fact that three companies are squabbling over adherence to the terms of BIP, shows that the program is a failure. There has been no substantial increase in domestic production of sugar. Rather, it is the refining capacity that has increased from 2.75 million tons in 2019 to 3.4 million tons in 2020.

National production deficits are also experienced in millet, sorghum/Guinea corn, soybeans, beans/cowpeas, but it is in wheat production that Nigeria seems to have waved the white flag of surrender. It produced an infinitesimal 55,000 tons, just 1% of the 5.5 million tons needed for national consumption in 2020/2021, costing the nation the sum of \$2.1 billion. The milling capacity, however, keeps growing for milling imported wheat and stands at about 8.5 million today.

Output in Nigeria's cash crops – cocoa, oil palm, cotton, groundnuts, rubber, sesame, cashew nuts, ginger, tea, herbs, tobacco, coffee, etc. – have been in decline relative to population and labor growth. South East Asians who obtained oil palm seedlings from Nigeria in the 60s are the world's highest producers of oil palm, while Nigeria's production is in decline.

Nigeria is blessed with a coastline of 853km and over 15 million hectares of inland waters; consisting of coastal waters, rivers, lagoons, creeks, flood plains, lakes, etc, in addition to about 50,000 hectares of swamp, altogether covering about 26% of the nation's land mass. Apart from these natural resources, there are 260 small, medium and large dams with a combined 30 billion cubic meters of water. Notwithstanding the abundance of these

resources tailored for fish and aquaculture production, the total fisheries production in Nigeria in 2020 was in the range of 1.5 million tons, against the domestic requirement of 3.2 million tons. The deficit was satisfied with importation at the cost of about \$1.4 billion.

Over 85% of the nation's domestic production is done by artisanal small scale fishermen, and with marine catches accounting for 33%, inland water catches, 31% and aquaculture, 33%.

The assiduous development of aquaculture represents the sure pathway to Nigeria's fish food self-sufficiency and robust export of fisheries. Presently, the key constraints to Nigeria's aquaculture development include scarce public information as to prospects and potentialities, low human capacity, lack of cage and pen culture training, expensive extruded feed, costly fingerlings, low management skill levels, lack of expertise for disease management, difficult access to credit, lack of storage facilities, absence of processing capacity, etc.

The national consumption of poultry products has increased rapidly over the years. Nigeria consumes about 1.5 million tons of chicken but produces only 30% of the demand. The deficit is supplied through smuggling, as importation of birds, including frozen poultry, is banned. Smuggling and importation, cost the nation over \$1.3 billion yearly.

Nigeria's poultry industry has about 180 million birds, of which about 44% - 80 million birds are raised in a free range, small scale and subsistence oriented system, mainly for consumption and few sales, and with low egg productivity. About 33% - 60 million birds – are raised in a semi intensive subsistence and market oriented system with a medium flock size of 50 to 3,000 birds, while about 21% - 40 million birds – are raised in large commercial and integrated farms of exotic breeds and high productivity, with flock size ranging from 3,000 birds upwards.

Smuggling thrives because domestic production costs are so high that Nigerian poultry farmers are disadvantaged to compete with the smuggled cheaper poultry products, despite the health risks associated with the long,

arduous and poor storage conditions of the imported chicken. Being smuggled, neither the National Agency for Food and Drugs Administration and Control (NAFDAC), nor other regulatory agencies conduct any inspection or evaluation necessary to certify the imported chicken fit for consumption or otherwise.

Domestic production faces such challenges as dominance of subsistence farming, high input costs as to feed (due to inadequate production of maize, soybeans), chicks, veterinary services and medicines, transportation, etc. Other challenges include lack of know-how and training, weak extension services, poor market access, lack of credit and financing, dearth of infrastructure, scourge of diseases and pests, inadequate technological application, etc.

The nation presently has about 22 million cattle which include about 2.5 million dairy cows, and consumes about 1.7 million tons dairy products in a year. However, we produce only 15% of that consumption. The gap is filled with importation, at the annual cost of about \$1.4 billion. Meat production also does not satisfy the domestic demand of 360,000 tons, resulting in importation from neighboring countries - Niger, Chad, Cameroon, etc.

Pastoralists account for more than 95% of raw milk and beef produced in Nigeria. This is an extensive system where cattle are moved from location to location, oftentimes involving long distances ranging hundreds of kilometers for grazing, without prior grown pasture or supply of feed. This traditional system provides low yield in meat and milk because it makes the cattle lose weight and milk. They also experience delayed maturity.

99% of cattle in Nigeria are of indigenous breed and unlike exotic breeds, are not suitable for more intensive, specialized dairy systems which yield more.

Other hindrances to optimal domestic production of beef and milk in Nigeria include low literacy levels, weak extension services and training, weak biosecurity and health management systems, lack of processing capacity and scant storage facilities.

Security is another major handicap to local production of beef and milk in Nigeria. The traditional pastoral system of cattle grazing has led to incessant and fatal herder-crop farmer conflicts, resulting in thousands of deaths, destruction of property and displacement of people from their homes. In order to stop the clashes, establish a more modern and sedentary system of husbandry and drastically increase domestic production through better yields, the government inaugurated the National Livestock Transformation Plan (NTLP), essentially introducing ranching as a better alternative to open grazing. Implementation is slow, perhaps, because various stakeholders still have reservation with certain aspects of the plan. Proper implementation would require adequate funds, stakeholders buy-in and training.

The CBN, in February 2020, imposed foreign exchange restrictions on importation of milk and dairy products, but exempted six Nigerian companies with investments in the backward integration program for boosting local production of milk and milk derivatives.

b) Foreign currency losses, unemployment and hunger.

The nation expends more than \$12 billion of her scarce foreign exchange for the importation of food and agricultural produce yearly, due to lack of self-sufficiency in food and agricultural production. This is more like saying that Nigeria underwrites the employment of millions of workers in other countries while the teeming millions of her youth remain unemployed in Nigeria. We also lose at least \$20 billion yearly in exports that should have been made, had we been able to exploit and process our abundant agricultural endowments.

Moreso, Nigeria's huge production deficits in food and agricultural products, coupled with her fast growing populations, make her more and more import dependent, in a self-perpetuating cauldron of severe scarcity of foreign exchange that drives food inflation now raging at 25% - 30%. This keeps food unaffordable to a significant portion of the population, thus pushing tens of millions of Nigerians into poverty and hunger. 75% of our brothers and sisters in Nigeria are unable to purchase a diet with sufficient nutrition. Presently, the nation ranks 92 out of 104 countries on the Global Food Security Index.

c) Way forward.

The agricultural sector must be recalibrated to vigorously and simultaneously organize and pursue as the case demands:

c. 1 National Agriculture Task Force

c. 2 Employment generation and poverty reduction by:

i- Attracting 5 million first time youth farmers and agribusiness persons into the value chain over the next 5 years (from preparation to cropping to processing to the markets and everything in between), under the proposed Youth Agricultural Program (YAP).

ii- Strengthening the existing smallholders in the value chain.

c. 3 Food sufficiency through large scale commercial farming and processing.

c. 4 Exponential increase in agricultural exports.

c. 1 National Agriculture Task Force

To achieve the above in the shortest possible time, there should be appointed by the President, an international task force to be known as the National Agriculture Task Force (NATF), comprising 12 persons, 6 of whom should be resident and diaspora Nigerian agricultural and agribusiness experts, and the remaining 6 persons to be nominated by the United Nations' Food and Agriculture Organization. NATF should coordinate the efforts of all other agencies whose functions and responsibilities relate to the objectives.

c. 2.i) Youth Agricultural Program - YAP

I propose that there should be established, the Youth Agricultural Program (YAP), a youth cooperative farming and agribusiness program under NATF, which should be a partnership between the Federal Government and the States, involving the production of certain strategic agricultural items, and the provision of some agribusiness services selected by the Federal Ministry of Agriculture in collaboration with NATF and the respective states. It should be given the widest campaign-style publicity so as to generate interest.

YAP, in collaboration with IYC, should design and operationalize the program whereon interested youths would register either online or in-person at their

respective local government headquarters. The program would be state based and so, residents of a state should register therein, and only those with National Identification Numbers qualify to participate.

The State Government, in consultation of with NATF, should set up centers, one in each senatorial zone, for training, which would commence after registration.

Training would be handled by YAP trainers, agronomists, agriculturists, experts and mostly local and international volunteers.

Training would be for 4 to 6 months, as would be determined by YAP, and split into classes for cultivators, feed makers, storage, transporters, etc.

Those who successfully complete the training exercise would be issued with YAP certificates and then form cooperatives with minimum membership of 10 persons of like minds, friends, relations, village and town folks, etc.

The cooperatives would be registered as limited liability companies (in order to be legally qualified to be allocated land), at Corporate Affairs Commission registration desks set up at various senatorial headquarters of the States. Registration should be free, simplified (forms filling only) and handled by appointed State Government officials from the state public service and who would also act as interpreters during the training.

Upon incorporation, the State Government would allocate land to the cooperatives with Certificates of Occupancy issued immediately (in a matter of weeks, no red tape).

The Certificates of Occupancy would be the collateral security for the single-digit-interest agricultural loan organized for the cooperatives.

The State Government would appoint a capable person from the public service of the state as moderator and account officer for each cooperative. The cooperative moderator would continue to receive his or her salary from the State Government.

Money for the supply of subsidized hybrid seed varieties, fertilizers, other direct inputs and agricultural insurance premiums would be deducted at source.

In selecting the strategic crops to be produced in each state under YAP, regard should be had for off-taking by processing companies and therefore, should align with the planning of the proposed Special Agro-Industrial Processing Zones.

Cooperatives wishing to take up processing, storage services, manufacture of feed, fisheries and aquaculture, poultry, livestock and dairy should have members who possess a minimum qualification of OND.

The State Government should set up tools and mechanisms for mediating disputes in cooperatives.

c. 2 ii Strengthening the existing smallholder farmers

Any benefits to the existing smallholder farmers would also benefit the participants in YAP. The small holders should be aided by strengthening the following initiatives:

c. 2 ii a. Registration in the farmers and agribusiness database.

Not much assistance can be rendered to the smallholder farmer if the system does not know of his or her existence, location or farm/ agribusiness type.

There are over 60 million smallholder farmers in Nigeria, with less than 10% fully registered on the national database with their National Identification Numbers.

The absence of proper and easily verifiable registration allows ghost schemes and bogus claims of training, interventions and other extension services to the farmers.

As I stated earlier, establishing a functional database of Nigerians under National Identification Number (NIN) is a key infrastructural project, and of such necessity that a multitude of our unemployed graduates of tertiary

institutions should be engaged and trained, under the proposed Infrastructure Youth Corps (IYC) program, to fan out to the near and far ends of Nigeria to handle NIN registration of Nigerians and simultaneously register farmers into the national agriculture database, as well as teaching in mass literacy classes. The farmer registration aspect should be monitored by NATF.

c. 2 ii b. Extension services - Training, advisory, inputs, access to markets.

In Nigeria, where governmental institutions are weak and racketeering rife, and where over 100 million citizens are extremely poor (mostly illiterate and low skilled farmers living in rural areas), agricultural extension assumes an existential importance.

The current state of haphazard, weak, irregular, profiteering and racketeering influenced Nigeria's public agricultural extension services is one of the key factors driving low output by small holder farmers, and perpetuating them in poverty.

The disparate and uncoordinated public advisory services are dominated by the almost moribund Agricultural Development Programs in each State and an additional body of about 7,000 inactive extension agents. These were funded by the World Bank in the 80s but are largely inoperative today. The thousands of youths hired for extension work under NPower social program have also been demobilized. Consequently, advisory services to smallholder rural farmers are today almost unavailable. Not even the direct pipeline connecting agriculture to the research institutes survived. The Research-Extension-Farmer-Input-Linkage- System (REFILS) became dormant a long time ago.

There is already a misunderstanding on the proper intendment of the recent amendment of the Agricultural Research Council of Nigeria Act (ARCN), empowering the various agricultural Research Institutes, after consultations with the Minister, to incorporate spin-off companies for the purpose of commercializing, privatizing and marketing the Institutes' scientific, agricultural and technological discoveries, innovations and research findings.

The Executive Secretary of ARCN was reported by *Tribune Online*, as saying,

among other things, that the amended Act allows the various Research Institutes to establish spinoff companies that will take over the marketing and sales of technologies.

Nowhere in the report did the Executive Secretary mention that the dispensation was only possible after consultations with the Minister of Agriculture.

Of course, no competent Minister saddled with an agricultural sector as backward as ours, would be rushing to sell scientific discoveries and technological innovations to the poor and mostly illiterate smallholder farmers.

Rather, there is indeed an urgent need to mass produce technological innovations which would be subsidized and distributed to the farmers, in addition to reviving the extension agencies, rehabilitating the idled agents and training at least a hundred thousand agents, who would in turn train the farmers on the use of innovations, and on good agricultural practices, and traceability of their produce, especially the export bound produce. Some of the redundant staff in the Federal and State public service may fit the bill and should be retrained as extension agents.

Racketeering is most rampant by volume and cost in the provision of subsidized inputs such as fertilizer and enhanced seeds to the rural smallholder farmers. Of course, subsidy of any kind breeds fraud and mafia style rackets. It is estimated that the nation has overall lost over N600 billion to fertilizers distribution fraud, including outright diversion, adulteration, passing off underweight bags and low quality fertilizers, etc.

However, Dr. Akinwunmi Adesina, Nigeria's former Minister of Agriculture (currently the President of Africa Development Bank), under the Growth Enhancement Support Scheme, devised a brilliant method of using technology to cut out middle men and distribute subsidized fertilizer and seedlings directly to the rural crop farmers who could, hence, use their cell phones to access fertilizer through the electronic wallet (E-wallet).

All the farmer needed to qualify was own a cell phone with as little credit as N50, be at least 18 years old and have his or her bio-data captured by the government.

With the e-wallet system, the government could track the fertilizer, the purchaser, time of purchase and the purchase price.

The use of e-wallet for fertilizer distribution was suspended 6 years ago. It should not only be reactivated, it should be expanded to all aspects of public extension services to curtail exaggerated accomplishments and downright fraud. It should make it easy to track all inputs, trainings, advisory services, veterinary services, etc.

The agencies of government involved in agricultural extension services, no matter their present hosts, prime movers, etc., should be placed under the National Agricultural Task Force (NATF), for ease of coordination.

Advisory services to farmers should include adapting alternative energy sources and minimizing transportation costs by leveraging economy of scale through storage.

c. 2 ii c. Post-harvest losses and small scale storage facilities.

Every year, Nigeria loses millions of tons of food and agricultural produce due to a lack of storage facilities. It is estimated that 47% of all farmers have zero storage equipment of any kind.

The size and complexity of storage facilities needed, increases with the productive capacity of the farmer. For individual self-storage, the smallholder farmers who make up 80% of all farmers (but with the least financial capacity to acquire storage equipment), require small to lower medium sized facilities and mostly of the basic kind.

I have, for some time, followed with keen interest, the effort and innovations of Nigerian Stored Products Research Institute (NSPRI) in this regard.

NSPRI has designed and produced some simple-to-use storage facilities driven by the principle of effectiveness, cost-efficiency and availability. These include: Iced-fish box that can preserve freshly harvested fish for 48 hours; fish-smoking kiln that uniformly dries fish and in a visually appealing manner devoid of smoke and soot residues; parabolic-shaped solar drier that speedily and hygienically dries various products – vegetables, yams, grains, cassava chips, etc; hermetic steel drums for storage of grains and legumes; inert atmosphere silos that store beans and other products without preservatives for 3 years without losing food quality; stackable fruits and vegetables baskets and boxes designed in such a way to safely and securely convey fruits and vegetables from farms to markets with minimal damage, etc. Other innovative storage equipment are at various stages of design or production including solar powered freeze-driers, refrigerators, etc.

The designs of these storage facilities should be made available to desiring private sector manufacturers for mass production. The government should then subsidize and distribute the equipment to the farmers via e-wallet system.

c. 2 ii d. Small Scale Processing

Processing of any kind leads to value addition. However, Nigeria's processing landscape is best illustrated by the fact that we are the world's biggest producers of cassava, yet we import 96% of our cassava starch requirements. Or that we are in a volatile foreign exchange crises because principally, we expend 40% of the nation's total foreign currency earnings for the importation of refined fuels despite holding the 10th largest reserves of crude oil. Our indolent "finished product" mindset must change to achieve economic development.

The International Institute of Tropical Agriculture has researched, designed and developed some simple and cost-effective processing technologies adapted to Nigerian conditions including grains de-stoner and cassava processing machine, but more must be done to develop processing technologies covering the entire spectrum of Nigerian agricultural produce. Meanwhile, the government must work with private sector manufacturers for mass production. Initially, these machines should be subsidized and distributed through e-wallet to achieve penetration.

Mechanical processing in and of itself advances ability to imbibe technology and innovations and builds human capacity.

The proposed National Agricultural Task Force should collaborate with the Ministry of Agriculture to draw up a list of strategic small scale processing equipment not yet produced and organize a design competition, leveraging local materials for onward mass production.

c. 2 ii e. Small scale feed milling.

There exists an opportunity for small scale feed millers to service cottage scale animal farms in rural and semi urban areas, since large scale feed millers are concentrated in urban areas. Also, most of the feed's raw material inputs are more available in the rural areas.

Formulated feeds account for up to 80% of total production costs in semi – intensive and intensive pig and poultry industry. More research is needed to enable the design and manufacture of Nigerian – adapted-easy-to-use and relatively inexpensive feed milling equipment for small scale feed production.

c. 2 ii f. Small scale irrigation.

Crop farming constitutes 90% of small holder agricultural activity and food production. The key staples; rice, wheat, beans, millet, maize, sorghum, etc., key cash produce; cocoa, cotton, tobacco sesame etc., and nuts all involve land cultivation, which require a lot of water. The smallholder farmers essentially rely on rains to provide almost all the water but the seasonal nature of rains and climate-change induced droughts are constant constraints. These keep farmers idle during the dry seasons and occasional drought, and keep agricultural produce very low. This is the basis of rain-fed subsistence farming and why most small holders do not think or see themselves as entrepreneurs.

As at now, only 1% of all arable land in Nigeria is irrigated, almost all of which is irrigated by large dams and national irrigation systems that are presently either non-performing or having maintenance problems.

Developing small scale irrigation schemes which have proven to be more cost effective, flexible, nimble and maintainable, would accelerate agricultural production. Easily achievable small scale irrigation schemes covering a total of 500,000 hectares would generate over \$700 million of income yearly from dry season cultivation for the smallholder farmers and would also provide drinking water, including water for livestock.

For sustainability, the small irrigation should be developed in collaboration with the various farm groups – cooperatives, associations, villages, settlements, etc. and with financial contribution from each group, no matter how little, to limit moral hazard.

Upon completion, the farm group would assume responsibility for maintenance.

c. 2 ii g. Access to credit and sustainability of financing.

Over 40 million smallholder farmers do not have financial inclusion, no bank accounts and not captured anywhere in the financial system. In fact, no bank exists in the remote areas where they live.

Without bank accounts, these farmers cannot access small agricultural credits. And apart from bank accounts, most do not have collateral security for loans. Indeed, most farmers think that loans are not debt to be paid back but government giveaway. That is why there are high default rates. Many loans given under the Anchor Borrower program have neither been paid back, nor recovered.

Unless the loans are secured and ultimately paid back, the scheme would be unsustainable.

The respective States Government must step up and apply to the CBN to establish micro finance banks with branches in remote but secure parts of the state. These banks should be affiliated with commercial banks of choice.

The States Government should also endeavor to survey and issue Certificates of Occupancy covering the farm plots of the small holders to be used as collateral security when they so wish.

c. 2 ii h. Mechanization

PWC estimates that crop production is the largest segment of the agricultural value chain and that it accounts for about 87.6% of the sector's total output. This is followed by livestock, fishing and forestry at 8.1%, 3.2% and 1.1% respectively. Agriculture remains the largest sector in Nigeria, contributing an average of 24% to the nation's GDP over the past seven years (2013 – 2019). In addition, the sector employs more than 38% of the country's labor force, a feat which ranks the sector as the largest employer of labor in the country.

In the 21st century wherein some countries are already in their fifth industrial revolution, 95% of Nigeria's crop farmers are still using Iron Age pre-industrial revolution tools such as hoe and cutlass. Production levels are, no doubt, very low, commensurate and similar to ancient times. Nigeria will never be able attain sufficiency and food security with its present system of manual farming. It takes 25 days to manually cultivate a hectare of cassava but less than 40 minutes with a machine. The Food and Agriculture Organization (FAO), estimates that Nigeria employs less than 0.2HP of motorized machines per hectare, against the recommended minimum 1.5HP per hectare. Nigeria's story of primitive tools runs through the value chain; preparation – production – processing.

The National Center for Agricultural Mechanization (NCAM) was established in 1990 to develop and promote agricultural mechanization and to encourage and engage in adaptive and innovative research towards the development of indigenous machines for farming and processing techniques and to design and develop simple and low-cost equipment which can be manufactured with local materials skills and facilities. So far, NCAM does not have much to show by way of locally made agricultural machines.

The Federal Government intermittently imports tractors and recently signed an MOU with John Deere of America for the supply of 10,000 farm tractors over a period of 5 years. FGN also launched the Green Imperative Program, in partnership with the Brazilian Government, to support Nigerian farmers with mechanization by supplying 10,000 tractors. It is to be financed by a Brazilian Government loan of \$1.1 billion. Implementation of these initiatives are yet to take off.

c. 2 iil. Naija Tractors

The only way to deliver an exponential increase in food production and ensure food security in Nigeria is through the mechanization of agricultural production, especially crop farming. But the only sustainable way to successfully mechanize Nigeria's agricultural production is the design and mass manufacturing of tractors and other agricultural equipment adapted to our agro-ecological conditions. There is no other way.

I have put forward a plan for the creation of the Power and Steel Fund PLC. With the mobilized funds, the Fund would invest in power, Aluminum Smelter Company of Nigeria (ALSCON), steel development and derivatives of steel, of which manufacturing of tractors would be a priority. Government's steel plants, including the iron ore mining company, would be sold to the Fund for rehabilitation and production. But the urgency for manufacturing tractors necessitates that without waiting for the completion of rehabilitation of the steel plants, the Fund should cause to be built, 8 smaller steel plants which should be completed in 12 months.

Simultaneously, the Fund should collaborate with the Nigeria Center for Agricultural Mechanization (NCAM), to advertise a solicitation for conceptual design entries for a basic tractor to be manufactured in Nigeria, using as much local materials as possible. The entries should include conceptual design of the component parts including engine, clutch, transmission gears, differential unit, final drive, rear wheels, front wheels, steering mechanism, hydraulic control and hitch system, brakes, power take-off unit, tractor pulley, control panel, etc. Easy to build designs should be chosen. It is expected that there would be as many factories as there would be components and, perhaps, sub components. We should do it. The government's purchase order of one million tractors to be supplied over a number of years justifies the effort and makes the arrangement bankable. The tractors, basic in nature and with economy of scale of numbers, would roll off the factory floor relatively inexpensive.

Meanwhile, smallholder farmers would be able to buy the *Naija Tractor* using the Social Asset Finance Fund on installment payment basis.

c.3 i) Large scale commercial farming and processing, livestock feed production - Nigeria Agriculture Catalyst Fund.

There should be set up a for-profit, Public Private Partnership (PPP) Nigerian Agriculture Catalyst Fund (NACF).

A mutual fund type, NACF would invest only in new companies engaged in commercial and large scale farming, and commercial and large scale processing. The Fund may hold a maximum of 49% stake in any company. NACF should seek out and solicit partners in various parts of value chain in agricultural sector that are most investment deficient, and may invest in as many companies of similar production as it deems expedient, to promote competitiveness.

The Fund would be highly profitable because of the immense domestic demand and the awesome prospects of AFCFTA, and would suffer not much bottlenecks, especially with the government as a major investor in the fund.

With NACF, Large scale commercial farming, processing and mechanization would get the liquidity tank that had hitherto been missing.

c.3 ii) Sustainability of Concessions and incentives for large scale commercial farming.

The well-meaning effort of the government to stimulate massive large scale commercial farming through concessions and incentives would be unsuccessful if the conditions precedent are not fulfilled.

The CBN placed importation of raw sugar, dairy products, maize and a host of other agricultural and food items on a list disqualified from access to foreign exchange. Notwithstanding, a few companies were given exemption on the condition of investing heavily in large farming of sugarcane and local production of raw milk. No parameters were put in place to verify such massive investments in local production, nor were heavy sanctions stipulated prior to the grant of exemption. The result is that these companies access hundreds of millions of dollars on the foreign exchange window at the official rate with which they import millions of metric tons of raw sugar and milk,

without doing much to increase local production of these raw materials. The same scenario played out recently when a few companies were licensed to import maize which is under an import restriction. No meaningful conditions and verification procedures were imposed.

There are so many of such unsustainable and self-defeating concessions and exemptions in the economic environment estimated to have cost the nation almost N1 trillion over a couple of years.

The fault is, however, not that of the businessman or company, but that of the regulator.

c.3. iii) River basin development, large scale irrigation, dams and inland waterways.

The river basin authorities were established over 40 years ago to develop the above surface and underground water resources for multipurpose use, including irrigation, flood and erosion control, development of dams for irrigation and hydropower, etc.

Despite huge natural resources available in the river basins, the overall impact of the river basin development authorities has been minimal. Less than 1% of all Nigeria's arable land has been irrigated and most of the installed irrigation systems are in disrepair. Flooding is usually out of control during the rainy season when water level rises. Very many dams are in disuse and lying fallow like Ikere Gorge Dam in Oyo State and Goronyo Dam in Sokoto State, thereby foreclosing their economic uses such as irrigation, power generation, holding the body of the water for drinking and farming, fish business, recreational activities and navigation. Optimization of Nigeria's river basins has the potential to revolutionize the nation's agricultural production, while contributing immensely to power generation. Canada derives about 65% of her energy needs from hydropower.

Our river basins have quite a lot in common with our inland waterways. They are both mismanaged, grossly underperform and deny the nation the fruits of her national resources endowment. The responsibilities intersect and in some cases, overlap. Their ownership and mandates overlap with the States

government, leading sometimes to discordant and conflicting claims between the Federal and State governments.

In order to achieve a handsome economy of scale, ensure close coordination in strategies and development, reduce waste and quicken service delivery, I propose the repeal of Nigeria Inland Waterways Authority Act and River Basin Development Authorities Act and merging of the entities into the River Basins and Inland Waterways Development Authority (RBIWDA) under an Act of the National Assembly which would also stipulate the powers, responsibilities and functions of RBIWDA, in line with the outcomes of a prior amicable negotiation with the states as to respective powers and obligations.

RBIWDA should have a Board of Directors comprising three Nigerian independent directors, each versed and accomplished either in agriculture or power or water resources, appointed by the President, one representative for each of the Ministries of Agriculture, Power and Water Resources, three persons nominated by FAO-UN and two persons nominated by UNDP.

The board should then head hunt and nominate the Managing Director (MD) who would be appointed as such by the President. The MD is automatically a member of the Board.

There should be a department of River Basins and a department of Inland Waterways, each to be headed by a General Manager. The departments would be subdivided into administrative units, each headed by a manager. The Board of Directors should have the power to hire and fire any staff.

Some of the performance targets of RBIWDA in the first four years would include irrigation of 4 million hectares of farm land, generation of 2,000MW of hydropower, increasing navigability of inland waterways from 3,000 to 5,000km, and 200km of canal works towards connecting States without water links.

c. 4) Exponential increase in agricultural and agro allied exports.

If ever there was a time Nigeria needed desperately to own an economy long diversified away from oil, it was now. But we didn't diversify because for over

50 years, we have been stuck on oil, and reciprocally, oil has been stuck on our collective foresight, resulting in us carrying all our eggs in one basket. Now the basket is torn, with an ever increasing detachment at the seams, threatening to spill all the eggs in one fell swoop; a scary situation with national existential ramifications.

The oil curse, a curse of indolence upon us, ravages on, wrecking the economy as we watch in self-defeat.

The OPEC reports that Nigeria, the country with the 10th largest reserves, exported \$27.73 billion worth of crude petroleum and gas in 2020, but imported \$71.285 billion worth of refined petroleum products over the same period, indicating that Nigeria's refined petroleum imports exceeded its exports by \$43.56 billion. Imagine the pressure on our external balances piled on by such outward transfers of \$71.2 billion for just one year's worth of refined products. Naira is in a free fall with raging inflation and near collapse of purchasing power of the poor, all because the oil curse prevented us from keeping our refineries maintained.

And then, the curse would not even let us pump the damn thing out of our hallowed and endowed grounds. Nigeria has a maximum production capacity of 2.5 mb/day but could only produce the average of 1.23 mb/day in August 2021, much below our OPEC quota of 1.54 mb/day. Yes, the reasons for the dismal production rates - shutdowns, vandalism, oil theft, insecurity, etc are all embedded in the curse.

Even the reserves are dwindling. The British Petroleum's Statistical Review of World Energy 2021, showed that Nigeria's reserves decreased from 37.2 billion barrels in 2010 to 36.9 billion barrels in 2020. The BP Review, however, indicates that despite continuous wars, Libya has increased her oil reserves from 47.1 billion barrels in 2010, to 48.4 billion barrels as of 2020, while Iraq also increased hers from 115 billion barrels in 2010 to 145 billion barrels in 2020. And that despite debilitating American sanctions, Iran increased her oil reserves from 151.2 billion in 2010 to 157.8 billion in 2020. Nigeria's reserves are decreasing, while other countries are increasing theirs.

Yet, as if these statistics were not enervating enough, Nigerians are these days constantly inundated with the cacophonous drumbeats of *decarbonization, net zero, carbon neutrality, energy transition, zero financing on fossil fuel investments from 2030, renewable, IOCs selling down, IOCs leaving Nigeria, etc.*

Enough of the lamentations! We now know, assuming we didn't know before, that our situation is wobbly and precarious. What should we do? What must we do?

We must diversify away from oil. We must achieve an exponential increase in non-oil exports in the shortest possible period. Our natural and comparative advantage is in agricultural and agro allied exports because we are a nation with a population of over 200 million people, 75 % of whom are young. And we are blessed with about 84 million hectares of arable land, huge inland waterway resources and year round good temperature for work. The growth potential is huge, since agro-allied exports make up only about 2% as a share of Nigeria's total export. We merely earned \$1 billion from the sub sector in 2020, compared to Ghana's \$3.6 billion, Ivory Coast's \$8.4 billion and Kenya's \$3.6 billion. Agro-allied exports continue to be the bedrock of most industrialized nations, emerging markets and developing economies. Nigeria is certainly among the very few countries in the world lagging and underperforming in this area.

d) Way forward on agro-allied exports

The following issues should be tackled to make progress:

i) Strengthening the human capacity at Nigeria Export Promotion Council (NEPC).

Going by the fact that agro-allied exports as share of Nigeria's total export averaged 2% in the past 10 years, NEPC, the government institution charged by law since 1976 with the promotion, development and diversification of Nigeria's export trade, could be adjudged a failure in that aspect of its mandate.

NEPC's much touted 2016 Zero Oil Plan meant to generate 40– 50% of Nigeria's earnings from non-oil within a period 4 years also missed its target.

The targeted increase in the contribution of non-oil exports to the nation's Gross Domestic Product by 20 per cent missed it by a wide mark. Nigeria managed to earn N6.5 trillion from non-oil exports in the years 2017 to 2020, approximately 10% of the total sum of N63.8 trillion generated from exports. Part of the constraints is deficient human capacity in the management board.

Ten years after Nigeria established NEPC, India, in 1985, created the Agricultural and Processed Foods Export Development Authority (APEDA) by an Act of parliament mandated it with the task of export promotion and development of key cash crops. APEDA has since led India in tripling, in some cases, quintuplicating her volume of agro allied exports across key crops. An example is the non-basmati rice which has grown in world market share from 5% in 1985 to almost 50% in 2022, despite having to feed her population of 1.4 billion people.

What NEPC requires is an international Board of Directors composed by Nigerians and expatriate professionals versed in export trade development and an executive team shortlisted strictly through a recruitment process handled by one of the internationally recognized consulting firms to enable the President to make an informed choice.

Upon inauguration, the board should review the personnel for suitability or otherwise and deal accordingly.

ii) Awareness campaign, registration, training, Good Agricultural Practices and Traceability.

Most Nigerians are unaware of the existence of NEPC and its responsibility of assisting desiring Nigerians to learn export prospects and procedures. And so, Nigerians generally view export trade as difficult and prohibitive.

A repositioned NEPC must, therefore, go on a massive publicity campaign (online and traditional media), selling the huge potentialities of small, medium and large scale export trade, particularly in agricultural and agro allied value chain, in the era of Africa Continental Free Trade Area (AFCFTA).

The youth, especially those with functional education, should be targeted, so also the new entrants under the proposed Youth Agricultural Program (YAP).

The campaign would not only generate interest but would see accompanying multitude registrations with NEPC.

NEPC should plan and execute elaborate training programs, starting by first training the trainers. Those adjudged redundant in the Federal and States public service should be recruited to become trainers after successfully undergoing their own training.

Prospective and existing farmers including agro exporters should receive rigorous training in Nigerian and international standards, especially those of the destination countries. They should be trained on Good Agricultural Practices, Good Manufacturing Practices, Traceability and other regulatory requirements of target countries, in addition to the attendant certifications.

Nigeria's Quality Competent Authorities (QCA), agencies authorized to verify products and issue export certificates, should be strengthened in terms of human capacity. The government should hire some very qualified persons from the most strict of the target countries as inspectors to QCAs to ensure at all times that QCAs' processes comply with international certification standards so as to minimize rejection of Nigeria's exports.

Some of the National QCAs are: Nigeria Agricultural Quarantine Service (NAQS) Department of Veterinary and Pest Control Services (DVPCS), National Agency for Food and Drug Administration and Control (NAFDAC), Department of Fisheries, Standard Organization of Nigeria (SON).

iii) Prospective large scale export-specific farming, value addition and processing, storage facilities.

The proposed Nigeria Agriculture Catalyst Fund (NACF) should aggressively pursue export specific partnerships, investments and large scale players in agriculture and agro-allied value chain, from farming to processing, all the way to exports. These companies should, as much as practicable, be encouraged to establish in the vicinity of Special Agro-Industrial Processing Zones.

The activities of the companies should be designed, prepared, laid out and oriented to comply with the standards and specifications and stipulations of the export destination countries. Traceability and tracking factors must be carefully installed. Large scale storage facilities with the right temperature and humidity conditions make for big business but are currently neglected and so should be incentivized.

AFCFTA remains a veritable basket of opportunities and unrealized potentials.

International Trade Center (INTRACEN) estimates that cotton has 97% unrealized potential in sub-Sahara Africa, while ginger has 71%, cashew nuts 100%, sesame 96%, dry hides 100% and so on. Nigeria has so much to gain by making the critical investment and commitment in agriculture from the stand point of food and exports.

However, the prevalence of insecurity in various parts of country discourages investment. NEPC, working with security agencies, should produce a survey chart of safe areas and possible agricultural activities.

iv) Aggressive marketing and road shows.

The President should personally lead the effort to attract large scale farmers, agro-allied industries, storage facility companies, etc. The weight and prestige of the Presidency must be deployed in this quest. That should also scare up some measure of ease of doing business from government officials.

v) Logistics challenges at the ports and very high shipping costs, multiple taxes and fees, multiple extortions.

It really breaks the heart that in Nigeria, whose agricultural and agro-allied products export accounts for less than 2% of the total export, large quantities of export bound agro-allied goods are either rendered uncompetitive by high transportation costs, multiple charges, fees and extortions or are rejected because of loss of shelf life due to inordinate delays brought on by avoidable incompetence and port congestion.

Our exporters, more or less, experience similar frustrations at the seaports and airports, making the appointment of an export czar necessary.

vi) Seaports

I discussed the congestion at Apapa and Tinian Island ports earlier. Both ports currently handle 70% of inbound and outbound cargo. I should restate here for ease of reading that the solution to the gridlock and congestion crises should involve the following happening simultaneously: Professionalize the management of Nigerian Ports Authority by appointing a professional Board of Directors that would earn the respect and confidence of domestic and international business communities. Once inaugurated, the board should work with an internationally rated consulting firm in an open process to shortlist three qualified persons to enable the President appoint one as the Managing Director. Nationality should not matter, only competency should.

The board should raise funds and commence the full automation of both ports on as much PPP model as practicable.

In the meantime, while waiting for the expected completion of the Apapa Port rail link of Lagos-Ibadan railway (which starts from the Mobolaji Johnson Station, Ebute Meta, Yaba to Apapa Port), the construction of the rail link from Apapa Port to Tinian Island port should commence forthwith. This link is as important as the Yaba to Apapa Port link and may be financed at the temporary expense of any other ongoing rail works.

The rail link to Apapa and Tinian Island ports should ease evacuation of cargo containers, and with that, congestion and gridlock, but would not solve all the logistic problems. No, not until the nation understands what should be the primary function of the ports in relation to non-oil export.

The primary role of the ports in the urgent national effort to diversify our economy away from oil, is to facilitate non-oil export trade and NOT collection of revenue. Many government agencies pile up multiple taxes, charges, levies, etc, on exporters directly, in addition to high airline freight fees caused by high charges levied on the carriers which are passed to the

exporters, all these drive up the prices of export bound goods and make them uncompetitive. These multiple and exorbitant charges in turn breed graft and extortions, with exporters succumbing to paying bribes to reduce the costs.

Yet, the government seeks to encourage exports by giving subsidy/incentive to the exporters through Export Expansion Grant-EEG, ranging from 5% to 15% of export value. My take is that like all big money subsidies, EEG is being abused. (Remember petroleum subsidy, foreign exchange rate differential subsidies for Backward Integration Programs, etc.) The prudent thing is to merge and reduce those direct and indirect export charges at the ports to the barest minimum and offset whatever loss of revenue by proportionately trimming the EEG. It is estimated that the nation loses \$16 billion in export earnings because of the imbroglio at the ports.

vii) Airports

The importance of unconstrained export of perishable agricultural produce by the airports is more compelling because of the shorter shelf life of the goods.

Air cargo export is more nimble and quicker, and has the potential to achieve a critical mass of export tonnage through a properly developed system of numerous cargo flights taking off every day, not just from Lagos but from other cargo airports in Nigeria.

Air agro-produce export is not necessarily capital intensive due to the variable cargo sizes an exporter may trade on, depending his or her financial capacity. Of the 36 million unemployed or underemployed youths in Nigeria, about 6 million received tertiary education and so can easily absorb training on export procedures and documentation. Under the proposed Youth Agricultural Program (YAP), many more youths working in cooperatives should be brought into air agro export. This has the potential to become a sustainable industry unto itself, which would create wealth and employment, generate foreign exchange while redressing air cargo import – export imbalance currently at 90 – 10%, against Nigeria.

Despite the fundamental importance of exports to the nation's economic survival, they are impossible to facilitate with the bottlenecks, multiple charges and extortions at Nigeria's airports today.

There are at least 16 sundry charges piled up against agro exports at Lagos Airport and 15 at Abuja Airport. 11 out of these charges are illegal, and this tally does include the extortions.

The following agencies collect charges and fees at the airports : The Nigerian Civil Aviation Authority (NCAA); Federal Airport Authority of Nigeria (FAAN); Nigeria Customs Service (NCS); Plant Quarantine Service; Federal Operations Unit of NCS; Anti Bomb Squad of the Nigeria Police Force; National Agency for Food, Drug Administration and Control (NAFDAC); Standard Organization of Nigeria (SON) and the National Drug Law Enforcement Agency (NDLEA). Also payable are association dues, ground handling charges and freight charges.

Shipping agro-export cargo out of Nigeria by air is about 400 to 1000% more expensive compared to Sierra Leone, Ghana, Kenya, etc. Therefore, most airlines deliver imports to Nigeria and leave empty to fly and pick up agro-produce cargo from other African countries.

Let it be said once again that with respect to agro allied exports, the primary function of the ports is facilitation and not revenue drive.

In order to scale up rapid increase in air agro-produce exports and build out the subsector into an industry generating billions of dollars for the nation, it should be the policy of government that with the exception of ground handling charges and freight charges, no charges should be imposed or collected on the air agro exports, provided the foreign currency proceeds are remitted back to Nigeria.

It should also be the policy of government to establish export aggregation warehouses at international and cargo airports as central clearing houses for pre-export checks and certifications, to ensure timely evacuation of goods. There are many international and cargo airports spread across the six geopolitical zones of the country. The government should facilitate

scheduled cargo flights to pick up agro products cargo for export. This would make it easy to export from various parts of the nation, build enthusiasm of local people for agro-export, as well as rescue the redundant airports from disuse, decay, disrepair and decommissioning.

viii) Export czar.

In the light of many frustrating issues challenging the processes of non-oil export, including multiple charges, fees and taxes; misconduct, tardiness, incompetence and extortion by officials of government; policy issues, overlap of responsibilities; etc., there is need for a presidential appointment of a well-grounded, energetic and hands-on export czar who would report directly to the President. The czar should chase down and solve these problems and bottlenecks, and should brief the President at least weekly.

Chapter 20

An Unsustainably High Public Debt.

High Cost Of Government And Private Sector Domestic Borrowing.

Bloated Recurrent Expenditure.

Possible Solutions.

a) Overview

Nigeria's gross public debt stock was N39.6 trillion in November 2021 and in the 11-month period, debt servicing gulped N4.2 trillion, representing 76.2% of the N5.51 trillion gross revenue generated during the period.

The International Monetary Fund (IMF), in its October 2021 Fiscal Monitor Report, projected that Nigeria's government gross debt to GDP ratio would increase from 35.7% in 2021 to 36.9% in 2022, 37.7% in 2023, 39.1% in 2024, 40.6% in 2025 and 42% in 2026.

The IMF report indicated that the gross debt includes overdrafts from the Central Bank of Nigeria and liabilities of the Asset Management Corporation of Nigeria (AMCON).

The IMF also projected that the Nigerian government's debt to revenue ratio will increase from about 76.2% in 2021 to 92% in 2022. Augusto and Co, a credit ratings firm, estimates the ratio to be around 90%. These do not factor in a fork out of about N3 trillion for additional fuel subsidy payments in 2022 due to rising oil prices.

If these projections hold up, it would be the most any country has paid as a percentage of gross revenue to service debt.

According to the World Bank, Nigeria was by 2019 spending the highest as a percentage of revenue by any country repaying debt.

The Debt Management Office (DMO) reports that, as at the end of June 2021, the Federal Government's portion of total debt stock was about 83.07%, while the states held about 16.93%. Domestic debt, made up of mostly Treasury Bills and FGN Bonds, and Treasury Bonds, FGN Savings Bonds, FGN Sukuk and FGN Green Bonds, was 61.34% of the total debt stock, while

external debt, made up of multilateral, bilateral, and commercial loans, was 38.66 per cent.

The budget deficit in 2021 fiscal year and 2022 budget provisions exceeded the 3% of GDP threshold, against the dictates of the Fiscal Responsibility Act.

Likewise, the 5% of the previous-year-revenue threshold for temporary advances to the Federal Government by the CBN was also exceeded, contrary to the provisions of the CBN Act, perhaps due to the residual effects of Covid-19 disruptions and large security expenditure. As at 2021, the CBN limit was exceeded by approximately 70%.

Rising domestic debt in Nigeria, a country with weak productive capacity, low productivity rates and a shallow private savings reservoir, necessarily spews inflation and drives high interest rates, consequently crowding out private sector investment since the private sector is forced to compete with the government for scarce domestic private savings and at high interest rates. The CBN Monetary Policy Rate (MPR) has hovered around 12% since 2016, while interest rate on a one-year treasury bill was raised to 9.75% in April 2021. Nigeria's private sector struggles to compete in the world market place with businesses from other countries funded with borrowing costs as little as 2%, against 26% at which Nigerian banks lend to the private sector. The result is dearth of private sector investment, especially in the industrial subsector and death to businesses which venture to take off on such high interest rates.

Mounting debt stock – domestic and external, could lead to a debt overhang, a situation where the accumulated debt levels outgrow the nation's capacity to service or repay the debt. This pushes the national debt to an unsustainable perch, where new borrowings are devoted exclusively to servicing old debt, in other words, a debt trap.

b) Way Forward.

My plan is a mix of initiatives that combines proceeds and savings from anti-corruption measures, disgorging bloated recurrent expenditure and expanding revenue generation.

c) Proceeds and savings from anti-corruption measures.

I have laid out an elaborate anti-corruption plan that anticipates no saints among us and which is, therefore, designed to be all encompassing and truly independent.

Implementation of my anti-corruption plan, in addition to the accompanying disgorgements, should save the nation about N6.5 trillion yearly, directly and indirectly.

d) Smashing the cost of governance by disgorging bloated recurrent expenditure.

The biggest component of the FGN's aggregate expenditure of N17.13 trillion in 2022 budget appropriations was as usual, the recurrent expenditure.

The non-debt recurrent expenditure of N6.92 trillion is made up of personnel costs, pension, overhead expenses etc. With the expected supplementary appropriations for fuel subsidy payments, non-debt recurrent expenditure would add up to N9.92 trillion, while the deficit increases to N9.39 trillion. The aggregate debt stock would shoot up to N43 trillion.

The deficit and non-debt recurrent expenditure would each likely exceed realized gross revenue in 2022. Currently, the budget projects N10.74 trillion as gross revenue for 2022 but some key performance targets are already under severe threat. Oil production was projected at 1.88 million bpd but production levels hover at 1.3 million bpd 3 months into the year.

Recurrent expenditure has perennially been the major driver of budget deficits and debt. Every effort must, in consequence, be committed to drastically reducing it.

e) Rationalizing Ministries, Departments and Agencies (MDAs), and Government Owned Enterprises (GOEs).

Incredibly, there are in existence, 943 MDAs and 541 GOEs in Nigeria. These should be reduced, and as much as practicable, with a target of 50%. Mr. Steve Oronsaye Committee Report, recommending the mergers of departments and agencies with a view to avoiding unnecessary duplication,

should be dusted up for insights. Such rationalization should save the nation over N500 billion yearly.

**f) Cutting overhead costs across the three arms of government.
Good faith negotiations.**

There have been for too long, incessant and vehement criticisms regarding the budget of the National Assembly and that of the Presidency. As the economy worsens, those reprovals sharpen, necessitating action.

On the other hand, as unemployment and under-employment rates gallop, stuffing and packing the public service has become the fire escape and social security system all at once. There even exists a federal racketeering market where employment positions are sold at an average price of N1.5 million each.

The public service personnel rolls across the three arms of the Federal Government are so grossly bloated that some experts estimate that only about 45% of current staff levels are needed to effectively man the public service.

The next president, upon inauguration in 2023, without prejudice to rationalization of MDAs, should immediately summon a meeting of the Presidency, National Assembly and the Nigerian Labour Congress, representing federal public service, to conduct negotiations that should lead to a drastic cut in the bloated overhead cost of running the Presidency, the National Assembly, and the excess personnel load and redundancy in the federal public service. The negotiations should commence with these targets:

- Cutting overhead cost at the Presidency by 60%, including selling off the Presidential Air Fleet.
- Cutting overhead cost at the National Assembly by 60%.
- Carrying out a personnel needs assessment in the public service and if confirmed as suspected that not more than 45% of the current staff levels are required, to determine how to migrate excess labor to other productive uses in other areas of the economy in a way that ensures productivity.
- Reviewing the remuneration and post service pay packets of such

institutions as CBN, NCC, Petroleum Ministry Parastatals, etc., in order to align with the pay realities of other public institutions. It would be good faith negotiations because every discerning adult Nigerian knows that the current financial situation is unsustainable, and that unless urgent steps were taken, the republic may become insolvent.

g) Targeted subsidy, National Identification Number Registration, Bank Verification Number, financial inclusion.

Subsidies by their very nature are necessarily targeted, such as payments made in kind or cash to assist a class of people in the society, the poor, sick, elderly; or such as assistance given to a class or type of businesses or industry or services to thrive or keep price down, etc. (Not to be confused with a socialistic price control to make products or services affordable.)

Also, subsidies are invariably data driven. There must be an information system backed by reliable data up and down the ladder, for verification purposes.

Never was any Nigerian subsidy scheme run on the above conditionalities.

In the Power Sector, the government has spent N1 trillion between 2017 to 2021 on general electricity subsidy (applicable to the very rich and to the very poor) and still doles out N30 billion monthly to plug the difference between the cost reflective tariff and allowable tariff, and these do not include the N1.5 trillion CBN intervention and the cost of gas differential. On petrol – premium motor spirit (PMS), it is estimated that from 1st January, 2006 – 31st December, 2022, subsidy payments would have gulped over N29 trillion.

The electricity and fuel subsidies constitute over 50% of total government revenue which renders the government incapable of fulfilling basic financial responsibilities while piling up more debt by the day.

Yet, because subsidies apply to all Nigerians, the poor and lower middle class who make up 90% of the population only benefit about 10% of the subsidies, the rest go to us, the well to do, the rich and very rich consuming over 90% of

the products, thereby making the poor poorer since the inability of government to carry out its societal functions – provision of security, infrastructure – education, health care, electricity, roads, affordable housing, etc., affect the poor disproportionately. The result is widening inequality and worsening Nigeria's abysmal ranking on Gini index.

These subsidy schemes must, therefore, be reworked and targeted at the poor and lower middle class. Had this been the case, the nation should have saved over N26 trillion in the past 16 years, a gargantuan sum of money that should have funded the much needed infrastructural facilities.

Nevertheless, a good chunk of the N26 trillion consumed by us, the rich and super rich, was wolfed down through fraud, collusion, insider dealing and grand corruption.

Due to the lack of a reliable data base, there has been a steady erosion of trust in subsidy schemes in Nigeria. The welfare subsidy schemes under the National Social Investment Program (NSIP), including N-Power; Conditional Cash Transfer Program (CCT); Government Enterprise and Empowerment Program (GEEP); Home Grown School Feeding Program (HGSF), which are marshalled towards moving 100 million Nigerians out of poverty, were some of the most popular programs of this administration, and so were the Covid relief subsidy schemes. However, popularity and support ebbed because implementation was not backed by a well-developed database and information systems that should have made popular verification very easy. The lack of a readily available data based information system may also have hurt international donor buy-in and engagement and weakened the sustainability of the program.

The programs should have been implemented strictly on the basis of National Identification Numbers (NIN), combined with Bank Verification Numbers (BVN), without both of which a potential recipient should not qualify, and without exemption. This requirement is expressly contemplated by Section 27 of National Identity Management Commission Act 2007.

Granted that the NIN and BVN penetration was very low in 2015 when NSIP took off, qualification for any of the welfare benefits of NSIP should have been used to drive registration. Most Nigerians with knowledge of those welfare benefits would have done anything in their power to obtain NIN, BVN and bank accounts in order to access the welfare subsidies. By now, more than 140 million Nigerians would have been captured in the national database, with an additional 30 million gaining financial inclusion by opening bank accounts in their quest to receive welfare subsidy benefits.

If N10, 000 was due to each poor Nigerian, then each person would receive his or hers with NIN and BVN, for every year the subsidy was active. If, for example, a person registered in 2017, the information technological system would recognize that he or she had not received for 2015, 2016 and 2017, and so would credit the account accordingly. All entries would then be published with names and particulars of all the recipients, including the last four digits of NIN for ease of verification by any person in the world by a mere punch of some keys.

NSIP implementation processes would have been more verifiable and with it, trust. There would have been much deeper penetration of NIN registration and wider financial inclusion.

Removal of general fuel subsidy while paying targeted subsidies to the poor, would have been easily operationalized. All that fraud and waste occasioned by general fuel subsidy would have been avoided. The government would have saved about N26 trillion in 16 years. Lest I forget, the Aig Imoukhuede report on subsidy fraud has hardly been mentioned ever since. The Jonathan administration commissioned the investigation, recieved the report in 2012 and never did anything with the report.

h) Expanding revenue to GDP ratio.

In its 2021 performance update, the FIRS reported that it collected the sum of N4.396 trillion as non-oil taxes, compared to N2, 507 trillion collected in 2017. It said: "This feat was made possible due to the adoption of the in-house built TaxPro Max Solution and other strategic reforms implemented by the Service."

Despite FIRS' performance, Nigeria's revenue to GDP ratio which ranged between 7-8% in 2021 is very low. Lower than Haiti's. Indeed, the lowest in the world.

With the current trends, IMF estimates that the general government revenue-to-GDP ratio would decrease from 7.2 per cent in 2021 to 6.5 per cent in 2026.

The impact of low revenue is much heavier on the economy due to fuel subsidy payments. Since the government has adjudged it impracticable to remove fuel subsidy now, the trade off for fiscal stability should be an upward adjustment in VAT. Presently, Nigeria's VAT rate at 7.5% is low, and on the average, it is below 50% of the VAT rates of key comparator countries in Africa and beyond; Kenya – 16%, South Africa – 15%, Egypt – 14%, Morocco – 20%, UK – 20%.

i) Market influenced foreign currency policy.

The recent announcement that banks would no longer have access to foreign exchange from CBN symbolizes the permanent state of flux, confusion and denialism that ever guided and attended the nation's foreign exchange management policy from 1960 till date.

The point here is not the merit or otherwise of the new CBN policy. It is the dizzying number of policy somersaults that have been churned out at such a frantic and frenetic pace on a financial matter that of necessity requires stability and predictability

The online financial newspaper, *Nairametrics*, has published a tracker collating a timeline of CBN's "significant deluges of policy pronouncements and flip-flops on the management of Nigeria's foreign currency.....decisions and denials that have occurred since March 2020." I counted 55 of those.

While CBN issued its frenzied but ineffectual staccato chains of orders and directives, it neglected to use the one tool it had to stabilize the currency markets, which was, orchestrating a gradual convergence of the official and parallel currency markets.

Due to the nation's weak economic fundamentals, the staggeringly huge sums of foreign exchange deployed by CBN to defend or shore up the Naira went down the ocean of futility.

Tribune Online reports that CBN spent about \$130 billion in 6 years defending the Naira. It says: "Nigerian Tribune findings revealed that between 2016 and the first quarter of the current year (2021), the apex bank sold as much as \$130.6 billion to foreign exchange market operators in its various interventions just as it had come up with tens of policies to salvage the sagging national currency. According to documents and reports accessed on the CBN website, between January and December 2016, the CBN defended the naira with about \$11.7 billion. The figure rose to N15.8 billion in 2017, was N36.6 billion in 2018, hit N34.3 billion in 2019 and came down to \$27.84 billion in 2020. In the first quarter of 2021, the CBN spent N4.37 billion to defend the Naira."

Our economy is ever susceptible to external shocks, terms of trade shocks, and particularly to the volatility in oil prices, our dear mono export product, supplying more than 90% of the nation's foreign exchange earnings and about 65% of government revenue.

By 2015, America's self-sufficiency through shale production had cut the demand for Nigerian oil from 2.29 million bpd to 2.05 million bpd. This weakness in demand turned to a glut following the lifting of the hitherto existing embargo on Iranian oil, which crashed oil prices from \$114.49 per barrel in December 2012 to \$27.82 per barrel in January 2016.

Boom! Recession.

In 2020, the modest recovery in oil prices was snuffed out by Covid-19 disruptions, pushing the prices down from an average of \$60 per barrel to \$18 per barrel in September 2020. Production levels also took a hit and dropped to 1.4 million barrels per day, following a drastic fall in demand. Aggregate foreign currency receipts dwindled, upsetting our balance of payments and severely straining capacities to withstand Nigeria's outsized import propelled demand for foreign exchange.

Another Recession.

Meanwhile, Nigeria's internal economic conditions made a bad situation terrible. Reduced government revenue from oil, and the crushing burden of oil subsidy payments, together with Keynesian drive to shake off the two recessions meant huge deficit spending and upward movement in national debt, over 60% of which was domestic debt, with a sizable portion being Ways and Means advances from CBN.

Then there were the various cash pipeline interventions by CBN across many sectors running into trillions of Naira, which coupled with Ways and Means advances to government, kept money supply ticking up. Naira was, therefore, under a sustained pressure.

It was common knowledge in the market place that CBN did not have enough supply of foreign exchange to intervene effectively. As a result, speculation and shorting naira acquired a new urgency and intensity. The gap between the parallel and official markets widened and with it, the attendant corruption, insider dealing, sharp practices, round tripping, etc., by Nigerian businesses, Bureau de Change operators, banks, Lebanese, Indians, Chinese, you name them.

While the Naira is tottering and falling rapidly against the US dollars, Nigerian banks are making it big from foreign exchange markets. The banks piled in N224.58 billion in forex arbitrage from January to September of 2021.

The only arrow in CBN's quiver that could arrest the situation, increase the foreign reserve, stabilize the balance of payments and attract foreign direct investment, is the gradual convergence of parallel and official markets.

But the Nigerian foreign exchange policy has always been more government control, with its economic distortions, lured speculations, corruption, and less market impulses. In the 60s, it was a fixed regime, which grossly over-valued Nigeria's currency and created the culture of import - dependency that is still with us today. It went from fixed to pegging system in the 70s up to 1986. With the introduction of Structural Adjustment Programme (SAP), the managed floating system was introduced, from which came Autonomous Foreign Exchange Market (AFEM) in 1995, Inter-Bank Foreign Exchange

Market (IFEM) in 1999, Dutch Auction System (DAS) in 2002. Others include CBN's foreign exchange policy or policies upto 2021.

The common feature of all the policies is the depletion of Nigeria's foreign reserves and, thereby, the inability to acquire the necessary critical mass to withstand internal and external shocks. The policies also tended to deny the CBN ability to build up a robust reserve base of say, \$200 billion, which would have propelled the exchange rate to trend downwards organically. I estimate that had Nigeria eschewed tactical impulses and fleeting political convenience, and pursued market influenced foreign exchange policy from the early 80s go-go days of Import License foreign exchange racketeering till December 2021, the nation's foreign reserve would have been about \$350 billion.

**j) The Asset Management Corporation of Nigeria (AMCON).
Now a boondoggle.**

The liabilities of AMCON are a significant portion of the gross national debt, servicing of which contributes to government's bloated recurrent expenditure. These liabilities arose by the government borrowing money to finance AMCON's purchase of non-performing loans from banks in order to stave off financial distress from the banking sector.

I remain privileged to have participated in passing the AMCON Bill in the Senate which was signed into law in 2010. But I am sad about the boondoggle it turned into right from the inauguration of the first Management Board.

AMCON was established as a vehicle to purchase the delinquent loans, to recover the loans and to repay the debt government incurred in financing AMCON's purchase of bad loans and wind up in 10 years. AMCON ought to have achieved its mandate and wound up by December 2020.

Instead, AMCON became a derailed octopus mired in waste and corruption. AMCON announced that as at 2020, it had injected N375 billion in Arik Air, an airline it took over through receivership in 2017. Perhaps the injection may have gone up to N500 billion as at February 2022. Can you imagine the nonsense? Without a scintilla of experience, AMCON became an operator of an airline. All that money is lost because Arik Air, with its assets minus

liabilities, does not amount to much. Oh, lest I forget, AMCON has recently announced the floating of another airline called NG Eagle Air, another conduit pipe for waste and corruption. None of these is remotely associated with its mandate.

The media was awash with the news that the Managing Director of AMCON was recently arrested by EFCC, reportedly accused of under selling foreclosed assets running into tens of billions of Naira, meaning that the difference between market value of the assets and the under-sold value also running into billions of Naira may have been stolen.

AMCON'S yearly budget reportedly runs in tens of billions of naira. With such a large budget, how much would be left to pay off the outstanding liabilities, including the principal sum and interest element?

AMCON urgently needs a forensic audit right from inception till date, downsizing, leadership change, a professional Board of Directors hired through a strict human resources recruitment process and a new time schedule to fulfill its mandate and wind up. The waste and insider dealing should stop.

k) International best practices recruitment at government owned enterprises and major revenue earning agencies.

Nobody can query the fact that there would be a significant increase in revenue generation, collections, tallies and retention by government owned enterprises and agencies, especially the major revenue earners, if the government adopted open and best practices recruitment processes in hiring the management boards and executives of the enterprises and agencies. There should also be infused internal checks and balances, for example doing away with such positions as *Executive Chairman*. Furthermore, foreign external directors with cognate experience in the relevant field should be appointed to the boards for a wider aggregation of experience, best practices and due processes. I have proposed the appointment of quite a number of these foreign external directors to be nominated by our multilateral organization associates and our development finance partners for the same objectives.

But not to worry, not a kobo of government money would be used to meet their expenses and token allowances. A Good Cause Fund would be set up to receive domestic and international donations to meet the expenses. Usually, such funds are invested to grow the pot with additional earnings.

I should also point out that Nigeria would enter into enabling treaties with the multilateral organizations for those nominations to proceed.

In any event, even if any of these nominations failed to materialize, I have shown the caliber of foreign external directors Nigeria needs to appoint to the respective Commissions, Bureaus, Boards, Committees and Taskforces, all of whom should be exempt from Senate confirmation. The enabling laws should be amended accordingly.

*“A successful society is characterized
by a rising living standards by
it's population, increasing investment
in factories and infrastructure,
and the generation of additional
surplus which is invested in generating
new discoveries in science
and technology”*

Robert Trout

Chapter 21

Timid Investment Promotion Effort.

Possible Solutions.

a) Overview

Nobody is in doubt that the optics of Nigeria's investment climate are bad and substantively inclement, challenged by a myriad of problems of low skill levels and human capabilities, infrastructure deficit, corruption, insecurity, lack of ease of doing business, etc.

Nonetheless, over 200 million Nigerian consumers with a median age of 18 years should be a point of attraction for investment, especially where there exists a potential for handsome profit. There must, however, be a vigorous investment marketing effort.

The Nigerian Investment Promotion Commission (NIPC), set up by the Nigerian Investment Promotion Act 2004 and vested with the responsibility, power and tools to lead this effort, has been rather timid and laid back in its marketing approach. In fact, I was a bit disappointed that the outgoing Executive Secretary of NIPC, in her valedictory press interview, seemed to measure her accomplishments in terms of generating the average of 2 billion Naira per year from 2016 to 2021 as internally generated revenue, reviewing of bilateral treaties and strengthening of NIPC's internal processes. The primary measure of success should have been the quantum of domestic and foreign direct investment her administration attracted.

According to the National Bureau of Statistics, foreign direct investment to Nigeria crashed precipitously in the first half of 2021, declining from \$7.15 billion in the first half of 2020 to \$2.78 billion in the first half of 2021, representing a 61% drop, while the second quarter of 2021 saw an FDI of \$875 million, a five year low since first quarter of 2016 when Nigeria barreled into recession.

And with the real unemployment and under-employment rates together standing at around 50%, the primary measure of success of NPIC therefore, must be to drill down and tabulate the number of manufacturing concerns and infrastructural project investments attracted.

b) Nigeria's international investment desk.

NIPC must move beyond mere publication of Nigeria's potentialities and the administration of pioneer status and other incentives to become more creative and vigorous in its promotion effort. Routinely suffering from bad press, image problems and chronic ease-of-doing-business troubles, NIPC should engage the world with a much more familiar and friendly face. There should be set up, a go-to/ask-me international investment desk made up of Nigerians and expatriates, comprising say, two home based Nigerians, two diaspora – Nigerians, an American, a Chinese, a European, a Middle Eastern, an Indian and another Asian. These should be painstakingly hired, salaried and trained on Nigeria's potentialities and quick procedures to start up and with a direct access to the highest echelon of Nigeria's public officials given to them.

Turnaround time should be such that if in 4 days an appropriate response has not been gotten on a particular matter, the ambassador should be able to report the failure to a dedicated special adviser to the president, and should the problem go unsolved after 30 days, the ambassador should be able to report directly to president through a short text to a dedicated telephone line.

In order to quicken the pace of industrialization, investors should be solicited with the prospect of enjoying government power of eminent domain or other facilitation, possibility of partnering with the government, state or federal, in any industrial endeavor (manufacturing, utilities, mining and infrastructural development), provided that any government stake must not exceed 49%, to avoid the inefficiency of public management. And government stake should be sold down to Nigerian private sector in a couple of years after the successful take-off of the venture.

NIPC should partner with the states in the development of industrial parks. It is likely that in a particular state there would be more than one park, one which may already have been cited in the commercial city. However, it would be necessary to have an additional park located in such a manner as to reduce apprehension over the current security situation in the country. Except in Lagos State, these should as much as possible be positioned near the airports

in a specially designed security zone for ease of travel by foreigners.

The security zoned park should be sizable enough to contain a residential area, schools and social amenities with a healthy distance from the factories.

c) Labor intensive.

One of the immediate pursuits of NIPC should be such endeavors in the labor intensive category, to generate as many employment opportunities as possible, such as: manufacture of footwear, pottery, china and earthenware, furniture and fixtures, textiles, wood and cork products, fabricated metal products, leather and products of leather, leather substitutes, etc.; Agriculture and food production industry; Steel production and automotive industry, etc.

d) Promotion of venture capital investments

In 2021, Nigerian startups raised \$1.37 billion from foreign venture capital firms amounting to 35% of the \$4 billion raised by African startups. So far, the inflows into the startups are dominated by Fintech by over 90% but the horizon across other sectors is wide open. NIPC, in collaboration with SMEDAN, should harness the latent tech know-how and talent in the youth populations by organizing incubation sessions in the geopolitical zones.

There are so many really talented young men wasting their skills in scams – *yahoo yahoo*, these skills and talents should be channeled to productive uses and purposes.

e) Information technology enabled services (Business process outsourcing – call centers).

Information Technology Enabled Services (ITES), otherwise referred to as Business Process Outsourcing (BPO), involves the act of outsourcing of business services to other companies, onshore or offshore, through telecommunication technology and internet. The most common form of ITES is the call center.

Many major companies in America, Canada and Europe outsource services to ITES providers in lower income countries, mainly because of large college-educated English speaking populations and low labor costs, thus saving huge amounts of money. The ITES providers reap the benefits of foreign exchange

income flow and thousands of jobs created in their countries with a sizable contribution to GDP.

ITES-BPO has blossomed into an international industry. India, the call center pioneer, earns over \$30 billion yearly with millions employed.

Philippines, with aggressive government promotion, grew her market share and is gunning to capture a good slice of the more specialized and more lucrative outsourcing markets such as transcription, medical, gaming, accounting, etc., where India commands a lopsided dominance.

Nigeria should do well in the industry with our millions of tech savvy neutral-accented-English-speaking tertiary education graduates and with one of the lowest labor costs in the world, thanks to the extreme weakness of Naira. Nigeria's broadband speed compares fairly well with the ITES provider countries—India, Philippines, Bangladesh, Pakistan, etc.

NIPC should work with Nigeria Communications Commission to get the telecommunications companies to provide some fixed phone lines in Lagos, Abuja and some other cities that may be found convenient to locate ITES. It may engage an international consultant and lobbyist for advice and outreach. K Street in Washington DC may be a good starting point.

f) Abuse of expatriate quota policy and sabotage of Nigeria's industrialization strategy.

Nigeria allows the employment of highly skilled foreigners by companies operating mainly within the industrial spectrum of the economy through expatriate quota approvals. The approvals which are given by the Federal Ministry of Interior upon successful applications, equip the companies with the necessary human capabilities to operationalize their businesses and contribute to the nation's productive capacity, while transferring the skills to Nigerian understudies over a prescribed period of time.

However, the quota regime has been grossly abused by many foreigners mostly the Lebanese, Indians and Chinese, in a direct sabotage of the nation's industrialization strategy. This is, of course, in collusion with some Nigerians, and made worse by weak regulatory oversight.

Firstly, the quota approvals are granted mainly for positions where Nigerian skilled talent is unavailable, obviously not for mere buying and selling which Nigerians can handle very well. So these unscrupulous foreigners present bogus applications and obtain quota approvals for foreign skilled manpower in manufacturing and other industrial concerns, and contrary to the approvals, they simply go into ordinary importation and selling of the same products they had obtained quota approvals to manufacture.

That is to say, no manufacturing, no contribution to the national productive capacity, no transfer of technical skills and technology to Nigerians, thereby keeping the economy perpetually import dependent and with constant pressure on our foreign currency treasury and balance of payments. In further sabotage to the economy, these carpetbaggers have overtime accessed billions of dollars at official foreign exchange rates for the importation and selling of products they had obtained quota approvals to manufacture. Some even obtain all manner of waivers, including import duty waivers.

Take for example, the Lebanese company that has handled over \$5 billion in mere importation and sales of diesel generators, with expatriate quota approvals and often times accessing foreign currency at official rates with no corresponding effect on selling price, and above all, without a single basic part of the generator manufactured in Nigeria in over 30 years of existence in the country.

Another example is the Vaswani Brothers' pillage of Nigeria's economy through swanky waivers, easy access to foreign exchange at official rates, easy and unsupervised use of expatriate quota approvals for mere importation and selling, running into billions of dollars.

There are many of these companies in Nigeria's economic space, unfettered, unchecked and unsupervised by regulatory oversight. Some of the genuine would-be manufacturing investors take a look at the likes of these companies and toe the same easy-money path.

Secondly, some expatriate quotas are filled with unqualified expatriates who have no skills to transfer, all the while occupying positions that could easily be filled by Nigerians and worsening the unemployment crises.

An audit of expatriate quota grants and usage has become necessary, to be handled not by government officials but an outside consulting firm with international reputation and good ranking.

Chapter 22

Health Sector.

A Very Sick Healthcare System.

Possible Solutions.

a) Overview

The US State Department reportedly issued an advisory to American citizens in Nigeria that went beyond the usual concerns about security. The advisory was to the effect that fake medicines were prevalent in Nigeria and that fake drugs symbolized the state of the nation's healthcare services. The advisory, therefore, informed American citizens that their best bet was to head for US, Europe or South Africa if they needed good healthcare.

The unfortunate fate of my friend, the late John Barnett, an American, speaks to the veracity of that advisory. John, a kind heart, if ever there was one, loved Nigeria from the bottom of his kind heart. God bless his soul! He felt intuitively that his roots were here. He even chose a state of origin, loved the food and dressed the part. He picked up malaria, the cerebral and very deadly type but luckily, he had just arrived Washington as the symptoms started manifesting. It got so bad that he was placed in an induced coma for two weeks. None of us was left with any hope that he would make it. But he did. Upon his cure, he still had to undergo sessions of dialysis and physiotherapy to regain the full functions of his body.

John came back from the dead only to die in Nigeria, two years after, this time, from medical incompetence, a mishandling of an ailment.

We, the Nigerian elite, the top 2%, have been heeding that advisory long before it was issued and published on the State Department website. We have been heeding that advisory for 61 years of our independence, the only change was the addition, in recent years, of Dubai, Israel, India, etc., to the list of our medical tourism spots and beneficiaries.

We spend over \$1 billion every year on medical tourism to these countries, continuously hemorrhaging these huge sums from our meager foreign exchange pot, instead of building a sustainable healthcare system.

The nation's healthcare system is ancient, lacking in health infrastructure and world class medical personnel, terribly weak, and, therefore, inspires no confidence. The maternal and infant mortality rates are among the worst globally. Nigeria is ranked 142 out of 195 countries in Lancet's Healthcare Access and Quality Index.

There is no regular Nigerian hospital that ranks within number 1 to 6,000 on Webometrics World Hospital Ranking. To put it in context, the desirable world ranking is from number 1 to 500 (First class range).

And so, we the top 2% embark on medical tourism, leaving the rest of the people to their own devices and luck. As a result, serious ailments such as heart disease, organ failure, cancer, etc, most times constitute a death sentence for our poor brothers and sisters, (I repeat) due to their inability to afford the very expensive medical and travel costs associated with treatments from the Western, Middle Eastern and Asian countries, that we, the Nigerian elite, obtain in our well-heeled healthcare services.

Of course, the billions of dollars so far expended abroad on medical tourism, together with the economy of scale of the purchasing power of over 200 million Nigerians, could have funded, since independence, at the very least, 30 first class hospitals in Nigeria, which should have treated the generality of Nigerians (at least for serious diseases depending on the plan) funded by market-based health insurance policies, purchased from and issued by adequately capitalized and regulated private sector driven health insurance companies.

Our poor brothers and sisters should have received the same quality of healthcare from the same first class hospitals (at least for serious diseases) by taking the benefit of a properly established social medical insurance scheme, managed not by government officials but by a non-profit Trust.

By so doing, Nigeria would have created a sustainably robust healthcare system with a value chain of critically and rigorously certified HMOs, primary healthcare providers, publicly and privately owned hospitals, pharmacies, nursing and maternity homes, lab centers, etc., with all the providers very

eager to qualify and be certified in order to receive patients, funded by the massive liquidity, unleashed by the market driven and social health insurance systems.

Meanwhile, our first class hospitals would have attracted patients from the rich and poor in Nigeria, West Africa, sub Saharan Africa, and beyond, stem Nigerian medical tourism abroad, and stop the hemorrhage of billions of dollars out of Nigeria. Our first class hospitals would have participated in training Nigerian medical personnel, who would have been properly paid and remunerated, financed by the enhanced liquidity in the composite health insurance systems and finally ending the debilitating brain drain of Nigeria's medical doctors and other health personnel. Our present doctor-patient ratio of 1:5000 (as against the UN recommended 1:600) would have been much better.

Our healthcare sector would have been adding 700,000 jobs to the economy yearly and contributing as much as 11% to the GDP, as against the present average of 3%.

Back to reality, Nigeria's current funding pathway to universal healthcare consists of National Assembly appropriations and National Health Insurance Scheme (NHIS).

In the 2022 Appropriation Act, the sum of N711 billion was allocated to the Health sector out of N19.39 trillion total expenditure, less than 4% of the total budget, and far below the 15% benchmark of health sector budget allocation agreed by the heads of government of African Union (AU) in April 2001 at Abuja. There was, however, an increase of approximately 30% compared to the 2021 health budget.

Even the allocation of the AU's proposed 15% of total expenditure would still have fallen short for a healthcare system of over 200 million people without one standard hospital.

What is required is a new healthcare system.

The government, in the past, tried other funding mechanisms, such as the Beveridge model (full government funded program) before discarding that for an insurance scheme (Bismarck model).

b) The National Health Insurance Scheme (NHIS)

NHIS was established by the NHIS Act 2004, to ensure access to affordable healthcare by all Nigerians and legal residents, irrespective of status. Its target was to achieve universal health care within a period of 10 years.

Those enrolled in the scheme make assessed contributions to the NHIS fund, depending on the package they signed up for. NHIS is both the manager of the fund, as well as the regulator to the scheme. It shapes policy and accredits participating healthcare facilities and providers. It accredits Health Maintenance Organizations (HMO), who are generally tasked with purchasing healthcare services (from the healthcare providers) for the enrollees on behalf of the Scheme.

NHIS makes capitation payments to HMOs – fixed amount paid by the insurer to the medical provider for set services and for set period of time irrespective of frequency of patient visits to the health care provider (Most capitation plans are for primary care). The HMOs in turn pays the healthcare provider based on the number of the insured.

Upon referral to a secondary or tertiary health facility, the HMO pays for services upon receipt of bills. This is called Fee-for-Service payment (FFS).

To ensure enlargement of enrollment and the risk pool, the State Supported Health Insurance Scheme (SSHIS) was introduced for the States of the Federation to enable them establish prepaid health insurance schemes and with the option of joining the national scheme.

It is, however, a huge disappointment that instead of achieving universal health care by 2015, the NHIS, as at 31st of December 2021, achieved enrollment of less than 5% of Nigerians into the scheme. Most of those enrolled are in the formal sector, majority of whom are federal civil servants who do not make any contributions into the scheme. Our healthcare service is, therefore, an out-of-pocket system.

NHIS is plagued by the inefficiencies of public ownership and management, failed enrollment process, lack of awareness by the public, weak administrative and management capacity, delay in reimbursement and

issuance of authorization code for referral, combination of operations and regulatory oversight, low level of trust in government managed institutions, corruption, embezzlement, etc.

It is time we charted a new course.

c) Way Forward: A new healthcare arrangement.

i) Nigeria Health Insurance Regulatory Commission

I propose that there should be established by an Act of the National Assembly, the Nigeria Health Insurance Regulatory Commission (NHIRC), charged with regulating health insurance industry and accrediting health insurance services companies and healthcare facilities and providers.

NHIRC should have two main departments amongst others, the insurance and the medical facilities accreditation departments. The composition of the Board of Directors should be international in nature, with at least 3 nominees from WHO and should reflect the two core competencies, among others. The board should, through an open process, short-list two candidates, irrespective of nationality, from whom the President would appoint one as the Director General. The board should have the power to hire and fire all other staff, and to recommend the removal of the Director General.

There should be created, a special and elaborate ombudsman department, to receive and deal with complaints of the insured against healthcare facilities and providers. NHIRC should have power to impose fines on facilities and providers, to revoke accreditations pursuant to express provisions of NHIRC Act.

NHIRC should have the exclusive power to accredit healthcare facilities and providing companies. The facilities should be classified based on quality attainment, from five star down to zero star. Accredited facilities and their classification should be published as such on the website of NHIRC. Facilities and providers who achieve an upgrade in status should be reclassified accordingly. Inspections and assessment must be rigorous as to ensure that classification outcomes accord with international standards. The integrity of the assessment processes is critical. NHIRC may retain international assessors for inspections and assessment.

The National Health Insurance Scheme Act should be amended to strip NHIS of its regulatory powers and limit its functions simply to provision of social health insurance. It would become one of the many providers of social health insurance services and should apply to receive its Certificate of Accreditation from the NHIRC.

ii) Market based health insurance services

Health insurance companies offering market based insurance schemes and policies should first be registered with NAICOM, before the necessary accreditation by NHIRC.

International health insurance companies should be allowed to participate and to register subsidiaries in Nigeria and obtain license from NAICOM and accreditation from NHIRC before commencing business, provided that their shareholding should not exceed 51% of the share capital.

iii) Social Medical Insurance Corporation of Nigeria (SMICON).

There should be established by an Act of the National Assembly, Social Medical Insurance Corporation of Nigeria (SMICON), a non-profit organization with a principal object of providing social medical insurance to the poor, with premiums adjusted to ensure affordability.

The Board of Directors should consist of seven nominees of reputable international charitable organizations and five Nigerians appointed by the President who should be reputed internationally for commitment to charitable causes and such foundations.

The board can hire and fire its staff without government participation or influence. Future vacancies in the Board of Directors should be filled by two third majority vote and so is removal from the board.

There should also be established in the Act, the SMICON Fund, into which should be paid premiums, accruals, earnings, grants, endowments, appropriations and donations. The Federal Government should appropriate a grant of N100 billion for its takeoff.

It is expected that SMICON would have branches in all the states. The President should use the stature of office to promote the birthing of SMICON and critical stakeholder buy-in.

Religious and cultural organizations with large following should be encouraged to set up their own social health insurance schemes to ensure that their poorest members obtain cover and ready access to healthcare.

Nonprofit organizations involved in the provision of social health insurance services should receive a dispensation from registering with the National Insurance Commission (NAICOM), but must obtain a Certificate of Accreditation from NHIRC.

iv) Compulsory Insurance in all Federal and States Government owned or affiliated hospitals and facilities by 2025.

Insurance is a pool of risk that gives financial protection to the insured by spreading the risk. So that the larger the pool, the lesser the incidence and intensity of risk, and cost of insurance. And having a health insurance policy gingers the insured to seek treatment at the earliest sign of sickness and helps to keep a healthier population.

The present out of pocket system overwhelms patients who ordinarily are capable of paying insurance premiums. As I write this page, a friend of mine is admitted at Nnamdi Azikiwe Teaching Hospital, Nnewi, my home town, for an ailment that requires a surgery, a number of sessions of dialysis and blood transfusions, plus drugs and other medical procedures. Your guess is correct, my friend is financially overwhelmed. Total payments so far exceed N350,000. Imagine dealing with such illness and worrying about medical costs which must be paid before each procedure. Yet, the hospital charges below cost and relies on federal allocation to pay what meager salaries the doctors and other health professionals earn. Of course, the teaching hospital is decrepit and dilapidated, owing to a lack of adequate funding and in some cases, mismanagement.

But my friend would have been able to pay a monthly health insurance premium, if there were proper organization and awareness. Had that been

done, he would have gotten his treatment funded from the insurance pool, without being overwhelmed; suffering two ailments of poor health and financial crisis simultaneously. And the hospital would have charged appropriately, collecting enough revenues to pay the doctors, pharmacists and other medical personnel properly, while being able to rehabilitate and equip the hospital in due course.

Then let's think of all those who for fear of being overwhelmed financially, refuse to seek medical treatment. Millions of our brothers and sisters!

With the religious and cultural organizations now encouraged to establish social health insurance schemes for their members and families, every Nigerian can get a health insurance policy, such as a mixed use policy that covers serious diseases/tertiary care by our oncoming Five Star hospitals, secondary care by the regular hospitals and primary care by the primary healthcare centers.

Our oncoming Five Star hospitals would be for profit hospitals because they must make profit to be able to pay back the financing loans. Therefore, their services cannot be free.

If most people were insured, the pool would be large, and since everyone can hardly get sick at the same time, if at all, those who get sick would get treatment without being ruined financially, while at the same time paying for the services through the insurance pool, which would help to keep the hospitals properly equipped, and our doctors, pharmacists, lab scientists, nurses and other health care personnel paid and remunerated appropriately.

It is therefore, necessary, with agreement of all States Government, that health insurance be compulsory in all Federal and States Government owned or affiliated hospitals and facilities from 2025, two years from the commencement of the next administration in 2023.

The healthcare insurance legal framework proposed here should be enacted within 100 days of the next administration. The President should summon a new healthcare system specific parley of religious, cultural, civil society, labor

leaders and other necessary stakeholders to explain the new system, unveil the oncoming Five Star hospitals, and sign the legal framework bill into law, with the parley as backdrop.

Thereafter, a massive advertisement campaign will ensue, in mosques, churches, markets, on television, radio, social media etc., to create awareness and build support. We must strive to ultimately get 90% of adult Nigerians insured. Such a large pool would make for most people being treated, at the least, for serious illnesses by First Class hospitals.

v) First Class Hospitals.

A revamped healthcare system is impossible without some First Class hospitals. The First Class hospitals would provide anchor and set standards for the rest of the healthcare value chain, treat serious diseases and illnesses, provide tertiary health support, bring world class training to our doctors, galvanize interest and buy-in in health insurance as the principal funding mechanism, and create liquidity to enable proper remuneration for Nigerian doctors, pharmacists, lab scientists, nurses and all medical professionals, stem brain drain and foreign medical tourism. The over \$1 billion we transfer overseas on medical tourism yearly would not stop unless there were hospitals in Nigeria comparable or better than the ones we visit abroad in terms of personnel, know-how, equipment and technology, and real estate.

I do, therefore, propose the development of 26 large scale Five Star hospitals in Nigeria over a period 18 years starting from 2023, each with a price tag ranging in the neighbourhood of \$1 billion.

7 Five Star hospitals 2024 – 2030

7 Five Star hospitals 2030 – 2035

6 Five Star hospitals 2035 - 2039

6 Five Star hospitals 2039 – 2042

The development should entail the establishment of Five Star Hospitals Development Authority by law, to undertake the processes, negotiations, procurement and overseeing development on behalf of Five Star Hospitals PLC, the owning company of which all the shares would initially be held by Federal Ministry of Finance Incorporated. Upon completion and

commencement of operations by the hospitals, privatization commences gradually by phased listing on the stock exchanges, as the case may be. Proceeds from sale of shares would go to paying down the loans. The development authority should be composed with 4 accomplished and reputable resident Nigerians, 4 accomplished and reputable diaspora Nigerians and 8 nominees of our international development partners.

The best arrangement would be a branding and management contract with a Five Star International hospital group. The processes are similar to building an internationally branded hotel such as Marriot or Hilton Hotel.

The management contract, feasibility report, designs and development documents, Bill of Quantities etc., would be submitted to a chosen development finance institution for low interest finance.

The first phase of 7 integrated large scale hospitals should be located one in each the six geopolitical zones and Abuja, and possibly, in the same city as an existing Federal or State University Teaching Hospital for ease of offering medical students clinical and practical education.

The second phase of 7 hospitals, should also to be located one in each of the geopolitical zones and Abuja, sited in a different state of the zone but near another Federal University Teaching Hospital. However, the one in Abuja should be the National Children's Hospital.

The third and fourth phases would follow the pattern of zonal distribution and sited in other states of the zone, but relatively near existing Federal University Teaching Hospitals.

In the meantime, the Federal and States owned or affiliated hospitals would begin to improve structures and standards due to liquidity and increased revenues propelled by health insurance pool. And so would be private health facilities, if they played the long game of insisting on health insurance cards as the best funding instrument for health services.

A periodic quality assurance assessment of health facilities and providers, with the resultant classification of facilities as from Five Stars downwards,

coupled with the publication of such to the world, would set off a race for quality in the industry. Some of the facilities would end up being closed down for failure to meet the necessary standards.

vi) Counterfeit medicines and drugs (Fake drugs)

The greatest failures of quality assurance ever recorded in Nigeria's health care industry are in medicines and drugs.

Nigeria has been overwhelmed by fake drugs crises for many decades.

Fake drugs are directly responsible for the rising number of serious diseases, illnesses and drug resistance in Nigeria.

The World Health Organisation estimates that over 100,000 deaths yearly are linked to fake drugs in Nigeria.

A study by the National Agency for Food and Drugs Administration and Control (NAFDAC) in 2002, revealed that 41% of drugs in Nigeria then were fake, while 70% were unregistered.

Mohammed Yaro Budah, a pharmacist and then president of the Pharmaceutical Society of Nigeria, was quoted as saying that 70% of the drugs in Nigeria were fake.

A compromised drug supply saps the confidence of consumers in medicine and healthcare system.

It is a widely held view that imported fake and substandard drugs in Nigeria come mainly from India, China, Pakistan and Indonesia.

Most of the victims of fake drugs are the vulnerable populations who fall for the cheaper version of needed drugs, which are often fake drugs. They are mostly those that are in high demand such as antimalarials, antibiotics, blood pressure medication, etc. Illicit vendors are usually seen in open markets and patent medicine stores selling drugs at a fraction of the price sold by licensed pharmacies.

The establishment of NAFDAC in 2004 was to quell the fake drugs crises, amongst other mandates, but the inferno of the crises is still raging, perhaps with renewed intensity.

Drivers of prevalence of fake drugs in Nigeria include corruption, illiteracy, ignorance and extreme poverty of most of the victims, lack of adequate human capacity at NAFDAC and other regulatory and enforcement agencies, weak control systems, very low penetration of the health insurance system, weak consumer and patient education and awareness, etc.

vii) Fight against fake drugs.

Some technological tools have been deployed to verify drugs and check fakery.

NAFDAC introduced a Mobile Authentication Service (MAS) which works by scratching the silver panel on the outer part of the drug and sending by SMS, the 10-digit number that appear on the scratched silver panel to 38353. The user would shortly receive an SMS that confirms whether the drug is genuine or fake. However, this service works only on drugs that are MAS-enabled.

A mobile app developed by Lagos-based Chekkit Technologies is said to allow users to check genuineness of drugs, so is Sproxil Africa's app. There is another innovative product, amongst others, called GPHF Minilab with rapid detection kits usable in drug quality authentication.

Though these tools are very important, only very few people are aware of their existence and worse yet, the vulnerable, a clear majority, may not be able to conduct the check on their phones, due to illiteracy. This is another reason why the mass literacy campaign must succeed.

Fake drugs are a function of corruption in the first place by importers, and those who collect bribes and let the bad drugs in; by the local manufacturer, and accessories who aid and abet them; by colluding distributors and public officials who look the other way. The anti-corruption tools I put forth earlier should kick in, especially the identified and anonymous whistle blowers who ought to be made aware that they and their family members could be the next victims.

Wider social health insurance penetration is of profound importance in mitigating the vulnerability to fake drugs. Victimhood and susceptibility to fake drugs are directly proportional by number to poverty and ignorance. The higher the poverty and ignorance, the more a person is likely to fall victim to fake drugs. The poorer a person is, the more he or she is likely to be overwhelmed by out of pocket medical costs and bills. And also the less likely he or she would seek out a doctor or a licensed pharmacy, therefore an easy prey to fake drugs. However, with a social health insurance policy, the poor person would seek a doctor and get his or her drugs from a licensed pharmacy with traceability. That is another reason why the social health insurance card is a must for the vulnerable.

Human capacity at NAFDAC is imperative in this fight. So are adequate material resources. There should be created in NAFDAC, a fake drugs task force under the relevant department with a high capacity personnel hired from wherever, equipped with resources, and working with other enforcement agencies, to mine intelligence locally and elsewhere for the pursuit of maximum disruption and interdiction of importation, local production and distribution of fake drugs and supply chains. The task force should have branches in all the States of the Federation.

The State branches should collaborate with the proposed Infrastructure Youth Corps program (IYC), to train IYC educated youth and thereafter undertake constant random spot checks on pharmacies, drug stores, markets and kiosks, for fake and adulterated drugs in a bid to disrupt flows and supply chains, provided the checks are carried out in an orderly manner so as not to impede ease of doing business.

The extent of the fake drug crisis, the hazardous effect to life and wellbeing, causes, solutions and mitigation and the role of citizens, as matters of public health, require public sensitization.

A carefully designed enlightenment outreach should commence.
Knowledge is power!

viii. Strengthening the Primary Healthcare System.

The fight against fake drugs will benefit the primary health care system (PHC) because of its disproportionate susceptibility to the counterfeit menace.

According to the World Health Organisation (WHO), PHC addresses the majority of a person's health needs throughout their lifetime including, physical, mental and social well-being, and it is best pursued with a whole-of-society approach which includes health promotion, disease prevention, treatment, rehabilitation and palliative care, in a way that addresses the broader determinants of health through multisectoral policy and action; and which empowers individuals, families and communities to take charge of their own health. PHC is therefore the cornerstone to achieving health for all.

In Nigeria, between 1986 to 1990 Prof. Olikoye Ransome-Kuti expanded PHC to all local government areas along the principles of Alma Ata Declaration.

However, the present state of PHC mirrors our current health sector on incapacity to provide proper, adequate and quality health services, dysfunction, dilapidation of PHC centers, lack of health infrastructure, deficit of trained personnel, poor funding, perception of inferiority, weak management systems, etc, all which lead to sparse patronage and usage of PHC centers. The functional collapse of local government administration under which PHC centers largely operate has left PHC without meaningful ownership and supervision.

Rebirth of PHC system should start with revitalizing human capacity at National Primary Health Care Development Agency (NPHCDA). The enabling law should be amended to re-compose the governing board with 6 Nigerians elected each by the prescribed health institutions and organizations such as Nigerian Medical Association etc; 6 nominees of WHO and 3 accomplished Nigerian public health experts from diaspora. Upon inauguration the Board should head hunt and recommend three persons to the President in order to appoint one as the CEO.

The President should facilitate an agreement with the States Government for a monthly contribution between the two tiers of government, which should

be transferred to NPHCDA Fund for the funding and management of PHC. Other donations and appropriations should also be paid into the fund. NPHCDA should stabilize and manage PHC for an agreed number of years.

Each community should set up a PHC center liaison committee to collaborate with NPHCDA for an orderly management of the each PHC center.

Physical refurbishment of PHC centers and construction of new ones should be handled by NPHCDA in collaboration with the Infrastructure Youth Corps program (IYC) as though IYC were the contractors.

PHC should be exempt from mandatory health insurance presentation-before-treatment requirement till the year 2030, however sensitization on the need for insurance coverage must be incessant.

Perhaps, after all said and done, we may yet have a health sector that saves lives, maintains a healthy population, creates jobs, wealth and wellbeing, and contributes upwards of 11% to the GDP per annum as against the current average of 3%.

Long life to everybody! And Prosperity! And Hope!

“Housing is absolutely essential to human flourishing. without stable housing it all falls apart”

Mathew Desmond

Chapter 23

Housing Sector.

Deficits Of Housing And Social Housing Policy. Absence Of Effective Market-based And Social Mortgage Finance Systems.

Possible Solutions.

a) Overview

More than 130 million Nigerians are condemned to poverty by living in squalor, in huts, in rat infested hovels and in slum dwellings, without safe drinking water and sanitation facilities, while their families pay rents of upwards of N15,000 monthly for a unit of an inhabitable shack. This is mainly because of the huge national deficit of 20 million units of low-cost and social housing stock. This situation is brought about by the absence of an effective social housing policy and the non-existence of a social mortgage finance system that could convert that N15,000 monthly rent for a shack into a monthly mortgage payment for, at least, a single studio-unit home with safe drinking water, sanitation facilities and two solar panels for domestic electricity. This would at once transform that tenant of a shack into a proud social mortgage financed owner of a home and lift him or her and their families out of extreme poverty, while also making them stakeholders in the economy.

It should be noted that apart from the deficit of 20 million units of low-cost and social housing, Nigeria has an additional deficit of about 10 million homes for the remaining strata of the citizenry. CBN estimates that home ownership in Nigeria stands at about 10%, as against US at 72% and UK at 76%, and this also is mostly due to the absence of a well-established and operationalized market-based mortgage finance system that ought to provide access to home ownership financing, while creating and channeling liquidity for construction of houses.

Bedeviled by these constraints, the housing sector contributes a dismal average of 6% to the GDP, instead of expected minimum of 15% annually, and further denies the economy a minimum yearly addition of 600,000 jobs that could be created from various aspects of design and construction of houses, mortgage banking, legal documentation, estate and appraisal services, home improvements, manufacturing and trade in building materials, and so forth.

b) Market-Based Mortgage Finance System

Nigeria's market-based mortgage finance system essentially consists of about thirty under-capitalized primary mortgage lenders and the Federal Mortgage Bank of Nigeria (FMBN) which manages the National Housing Fund, and acts as the main secondary mortgage market and operator. FMBN lends to the primary mortgage lenders for onward lending to their customers, the mortgagors.

The CBN had rightly stepped in, in 2013, to promote the establishment of Nigeria Mortgage Refinance Company PLC (NMRC), set up to arrest the scarcity of long term funds in the mortgage market by providing long term refinancing through the purchase of mortgages from primary lenders, to either hold in their portfolio or to repackage and sell as Mortgage Backed Securities (MBSs). The primary lenders would then use the money they realize from selling mortgages to NMRC to originate more loans, thereby bridging the funding cost of residential mortgages and increasing the liquidity in the mortgage market.

NMRC has in turn, through its advocacy, produced and sent to the States, a draft model mortgage and foreclosure bill for enactment. The bill seeks to bring facility and ease to mortgage business and foreclosure procedures to delinquent mortgages.

The CBN also facilitated the incorporation of the Nigeria Mortgage Guarantee Company (NMGC), to deepen the mortgage system and its penetration by enhancing access to mortgage finance through sharing of mortgage risk with the primary mortgage lenders. One of the main objectives of NMGC guarantee is to reduce the equity contribution of a prospective mortgage applicant/taker (mortgagor) or replace it totally, therefore making it possible for an applicant, without any or enough money to pay the required deposit, to still qualify since the NMGC guarantees all or part of the deposit.

However, these CBN initiatives aimed at addressing capital and governance requirements have not had much impact on the mortgage markets. Mortgage originations are yet to show a noticeable uptick. Less than 1% of the housing stock in Nigeria is in formal mortgage, rendering about 99% of home equity/savings in residential developments, inactive assets.

The knowledge of the possibility of home ownership through mortgage finance has not permeated, let alone the culture. The existing set of primary mortgage lenders lack the necessary capacities in number, depth, know-how and capitalization to underwrite the mortgage finance revolution that would be unleashed if there were proper foundations. Most of the states are yet to enact into law, the model mortgage and foreclosure bill that would provide the state a legal framework, as well as setting up the state mortgage board as a one-stop shop for all perfection requirements. Also, land registration systems in most states remain archaic and manual. NMRC and NMGC are yet to gather steam and are themselves under-capitalized to shoulder the expected astronomical growth in primary mortgages.

c) Way forward for the market-based mortgage finance system.

The following steps are necessary to build a strong market-based mortgage finance system:

i) Deploying the Presidential Bully Pulpit.

It was the United States President, Theodore Roosevelt, who coined the phrase "bully pulpit" which symbolized the weight and prestige of the office of the President as the most important instrument and consequential platform with which to advocate for and engender public good.

The housing sector, including mortgage financing, construction, etc., contributes about 20% to America's GDP, with home ownership at 72% and mortgage finance penetration at 80%. Thus, mortgage finance for home ownership is one of the issues that dominates public discourse and adverts on a given day.

Nigeria is on the starting blocks with just 10% home ownership, with less than 1% mortgage finance penetration, and the housing sector contributing just about 6% to the GDP, with less than 2% of the population having proper knowledge of the potentialities of mortgage financing for home ownership. The nation, therefore, needs the presidential bully pulpit to awaken the nation to the awesome possibilities of home ownership through market-based and social mortgage financing, and to mobilize the energies, contribution commitment, resources and powers of the participating sectors, tiers and arms of government.

The President's first use of bully pulpit should be to get the states to enact into law, the model mortgage and foreclosure bill. Kaduna and Lagos States have enacted the law.

The bill should be updated to reflect the communique issued at the end of the World Bank/Central Bank of Nigeria's Two-Day Workshop on Model Mortgage & Foreclosure Draft Bill. The highpoints of which were: (as reported by Koriati & co)

- Decentralization of powers to a registry to be created with a registrar to exercise delegated authority of a State Governor in respect of the mandatory consent and other regulatory approvals for perfection of mortgage transactions.
- Creating a Mortgage Board as a one-stop-shop for all mortgage transactions to take over the roles of registering mortgages by the Land Bureau, and the Corporate Affairs Commission. (Where applicable)
- The need for special legal provisions on priority of rights in the enforcement of rights and obligations in mortgage transactions.
- Creating fast track civil procedure rules for the respective State's high courts to accelerate judicial proceedings in respect of mortgage transactions.
- Creating special conditions for injunction regarding enforcement of mortgage transactions.

The bill should also be updated to provide for the workings of social mortgage finance system in terms of procedures and fees to accommodate the poor in the society.

The second use of bully pulpit should be to rally the states to digitalize their land registration systems, except for those states which did that already.

Documentation in today's mortgage system is elaborate, given that every origination is headed for securitization. A single residential unit built and mortgage financed may require a minimum of 5 recording submissions. These documents are as follows:

- Transfer of unit ownership to the buyer

- Release of sold property as pledged collateral for development financing.
- Mortgage / Deed of Trust
- Mortgagee mortgage transfers to a special purpose vehicle for securitization, (such as NMRC).
- Release of Satisfaction of Lien upon payment in full of the mortgage loan.

The manual title registration system is ancient, outdated and cannot cope with the projected record of submissions as shown above.

Only States that digitalize their title registration systems by converting the manual systems to computerized and electronic systems could avail their indigenes and residents the hassle-free opportunity to buy houses and home units through the new mortgage finance system.

Digitalized systems would create the opportunity for the following:

- Electronic document preparation.
- Fully automated signing, notarization, delivery, recording, payment and return capabilities. Signature embedment.
- Loan closing documents electronically stored or if originated on paper, scanned in the solution and placed in their proper recording order.
- Integration with existing loan servicing, title, escrow, document management and recording applications.

The Federal Government should coordinate with the States for joint procurement so as to leverage the economy of scale in lowering costs. To quicken the process, the Federal Government should provide the initial finance and get reimbursed by installments. The Federal Lands Registry, Lagos, should also be digitalized.

The third use of the bully pulpit by the President should be to make a prime time speech in order to explain in plain and simple language, the benefits and workings of mortgage finance, and how families may use the financing to purchase and own a home, including the credit qualification methods for the self-employed and those in the informal sector. (See below)

The speech would be translated and broadcast to the cities and hinterlands across the country. The Governors should follow suit with their speeches echoing the thrust of the President's speech. Thereafter, a multimedia countrywide enlightenment campaign should commence.

ii) Setting up methods of credit qualification for the self-employed and those in the informal sector.

The small number of Nigerians who have accessed mortgage finance for home ownership are invariably those who are formally employed in public service and in certain recognized "blue-chip" companies or organizations.

The self-employed and those in the informal sector who make up 95% of potential mortgagors are excluded because they cannot show regular pay cheques from which mortgage payments would be deducted, nor their credit history.

This situation is novel in the mortgage finance world. But I should propose that some of the ways to qualify these potential self-employed mortgagors for market-based financing are: First, a large down payment deposit between 20% to 30% and evidence of strong mortgage insurance. A credit history commences with a usable credit score available in 2 years. Second, let to buy, whereby the prospective mortgagor takes the property as tenant for 2 years, which activates a credit history in which promptness or otherwise of rent payments yields a credit score based on which he or she qualifies or otherwise, as the case may be. Third, a 2 year savings program whereby the prospective mortgagor opens a savings account with a primary lender and saves at each month end, an amount approximate to a future monthly mortgage payment. This activates a credit history. The savings should run for 2 years, after which the regularity of the savings would determine the credit score and whether the prospective mortgagor qualifies or otherwise.

Let's note that in all the methods above, the Credit Bureau should be notified at the commencement of each qualifying exercise to enable credit scoring.

In the second and third methods, down payment deposits and mortgage insurance are also necessary but may be lower compared to the first method,

because of the opportunity to observe the payment discipline of the prospective mortgagor.

iii) Up scaling the numbers and capacities of primary mortgage lenders.

The presidential, gubernatorial and multi-media enlightenment campaign showcasing the benefits and workings of mortgage finance as a pathway to home ownership, would open floodgates of interest from the populace. The existing primary lenders would be in no position to handle the surge.

The commercial banks, with their branch networks, capitalization and experience, are the most equipped and suitable to lead the way in birthing the new market-based mortgage finance system. The banks should deal through their mortgage finance subsidiaries to be set up in that regard. Standardization of loan originating procedures by the uniform underwriting standards currently applicable in the industry should make operationalization easy for banks, and in leveraging the branch infrastructure.

CBN should also work out the licensing and governance requirements, and issue regulations accordingly.

The CBN should evaluate the existing primary mortgage lenders with a view to improving their capacities, and issue new regulations accordingly.

iv) Repositioning Nigeria Mortgage Refinance Company (NMRC)

Expanding home ownership in Nigeria and elsewhere depends on financing. Long term financing. This is made possible by NMRC raising long-term funds from the capital market through the issuance of long-term bonds or through the sale of securitized mortgage loans purchased from the primary lenders, who in turn rely on refinancing of their issued mortgage loans with NMRC for their liquidity.

On the other hand, NMGC helps to deepen the mortgage market by guaranteeing all or part of the required down payment deposits, thereby making more mortgage loans possible.

These secondary mortgage operators are, therefore, very important for the robust functioning of the mortgage system. However, it does not seem that they have been primed to discharge the mighty responsibilities for which they were established.

The liquidity available to developers to build homes depends on the number of homes they sell, which depends on the number and quantum of mortgage loans the primary lenders can originate for home buyers based on the extent of liquidity available to primary mortgage lenders. This, in turn, depends on the number and amount of originated mortgages the primary lenders can refinance with NMRC.

NMRC is a liquidity facility entity. The quantum of liquidity it generates for the primary mortgage markets is dependent on the number of mortgages it purchases from the primary lenders, which depends on the depth and size of NMRC's equity capital, the strength of its ability to raise fresh capital through long term bonds, and the rate of turnover on its mortgage backed securities which it sells to the capital market.

NMRC was incorporated in 2013 but commenced business after it was licensed in 2015. It is, therefore, still gathering momentum. Nonetheless, disbursing only a total of N21 billion to refinance mortgages in 5 years is minuscule and so is raising only a total of N29 billion from the capital market in the 5 year period, 2015 – 2020. As at December 2020, its equity capital was low, with its tier 1 capital standing at N13 billion. The net asset base of about N20 billion was also low.

NMRC is modeled against the American Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). But the capitalization and asset base of each, relative to the volume of mortgages in the American mortgage industry are higher than those of NMRC (relative to the volume of mortgages in the Nigerian mortgage industry), by a factor of over 1000. Indeed, Fannie Mae and Freddie Mac rank 21 and 40 on the list of American fortune 500 companies.

As at December 2020, Nigeria's housing deficit stood at about 30 million homes with the deficit growing by at least 1 million homes yearly. With the nation's population doubling to 400 million people by the year 2050, the growth rate of housing deficit unless arrested, would cause a decline of home ownership from today's dismal 10% down to 4%.

A bold action is needed to forestall the looming crises, and to unlock and harvest the windfall that the housing sector promises.

NMRC should be capitalized as follows to be able to provide the primary lenders with the liquidity they require to originate and fund many more loans:

Firstly, to provide operational latitude and a healthy core capital base, the equity capital in NMRC should be N1 trillion. Yes, one trillion Naira paid up over a couple of years. To realize that, all financial institutions in Nigeria's economic space should become automatic shareholders of NMRC. The CBN and other relevant regulators should meet and agree on implementation details, including the amount of shares each category of financial institutions should subscribe to. The Attorney General of the Federation should use the implementation report as a basis to produce a draft bill for presentation to the National Assembly.

Secondly, the limit of Federal Government's guarantee on long-term bonds NMRC can raise from the capital market should be increased from the current sum of N400 billion to N1 trillion, making the bonds cheaper.

Thirdly, the Federal Government's guarantee on long-term bonds should extend to on-time payment to investors of the principal and interest on mortgage-backed securities issued by NMRC, even if homeowners default on the underlying mortgages and the homes are foreclosed upon. This should give comfort to the investors, leading to lower interest costs and ultimately benefiting the mortgagors.

v) Nigeria Mortgage Guarantee Company (NMGC) and Mortgage Insurance

The Nigerian Mortgage Guarantee Company should have its core mandate expanded to include issuing mortgage insurance.

Mortgage insurance pertains to an insurance policy that protects a lender if the borrower defaults on payments, or dies or gets incapacitated and therefore unable to fulfill his or her contractual obligations in the mortgage. There are different types of mortgage insurance but the most common one is the private mortgage insurance which homeowners are required to take out because of inability to make a deposit of up to 20%, under the 80% loan-to-value ratio rule. However, in most cases, borrowers are required to have mortgage insurance as part of the conditions for financing.

Exclusive power of issuing mortgage insurance should be added to NMGC for ease of coordination and as another revenue stream that should aid its capitalization.

vi) Credit Bureau, appraisers, title companies

The primary lender should choose any of the CBN licensed Credit Bureau services that most meets its expectations.

The primary lenders may also set up in-house appraisal departments and title services or may outsource the services to licensed appraisers and to title companies.

d) Social Housing.

The more than 130 million Nigerians who live in unhygienic squalor and slum dwellings suffer high risks of poverty perpetuation. This is so because: Firstly, living in conditions characterized by severe deprivation of basic human needs such as safe drinking water, sanitation facilities, and the accompanying health risks, deny the dwellers mental or physical well-being. And that impacts negatively on the psychological development of the children, making escape from poverty difficult. Secondly, without home ownership, capital formation is impossible for the poor, and without which wealth creation is difficult. Where a poor person is able to own a home simply by converting his

or her monthly rent of N15,000 into a monthly mortgage payment, he engages in capital formation by building up equity on his home. The value of his equity also increases as the property appreciates in value.

So, with the same N15,000 this guy was paying and living in a slum shack, he and his family now live in their own house with safe drinking water and sanitation facilities. He uses the house as an instrument for savings by monthly mortgage payments, with the equity built up growing in value as he repays the mortgage loan, and as the house value rises. Meanwhile, there is wellbeing and minimized health risks, with the kids growing up with better physical and psychological development. A win, win, win situation. That is a family being lifted out poverty. That is Nigeria being lifted out of poverty!

There have been, since independence, over 12 different federal social housing programs meant to assist the low income segment of the population, all of which ended up in failure. The Family Homes Fund and the National Social Housing Program are currently running with little impact.

Direct engagement in construction of the houses by the Federal Government, always narrowed the field and crowded out other suppliers. There being no competition, the inconsistencies and inefficiencies associated with Federal Government's handling of businesses soon created supply rigidities and led to failure.

The most efficient application of administrative resources would have been the Federal Government throwing open the supply space and concentrating on facilitating the establishment of a social funding mechanism to be administered, not by government officials but by an international amalgam of charity trusts, foundations and NGOs.

e) Social Mortgage Corporation of Nigeria (SOMOCON).

I propose that there should be established by an Act of the National Assembly, the Social Mortgage Corporation of Nigeria (SOMOCON), a non-profit organization with the principal objective of providing social mortgage finance to the poor segment of the population.

The mortgage finance should strictly be for persons who wish to physically and continually live in the property that is being financed, and should be one finance slot per family where the mortgagor is married. It should be desirable to include the spouse as a co-mortgagor for ease of continuation in case of demise of a spouse. In order to prevent racketeering, it should be the case that sale of the financed property within 10 years of mortgage should entitle SOMOCON to 20% of appreciated value.

Interest rates on social mortgage loans should range between 1% – 3% per annum as the Board of Directors of SOMOCON may determine. Foreclosure should be through a non judicial process.

The Board of Directors should consist of seven nominees of reputable international charitable organizations and five Nigerians appointed by the President who should be reputed internationally for commitment to charitable causes and knowledge in financial matters.

The board should have power to hire and fire its staff without government's participation or influence. Future vacancies in the Board of Directors should be filled by two third majority vote and so is removal from the Board.

There should also be established in the Act, the SOMOCON Fund, into which should be paid proceeds of the proposed special Social Mortgage Finance Tax, appropriations, Corporate Social Responsibility contributions, proceeds of endowments, accruals and donations, and development finance from Nigeria's development finance partners.

It is expected that SOMOCON would have branches in all the states. The President should use the stature of the office to promote the birthing of SOMOCON and critical stakeholder buy-in.

f) Social housing supply space

The multiplier advantages of jobs and wealth creation in the social housing subsector would best be optimized by throwing open the supply space but with strict specification and appraisal regime. Fraud and sharp practices should be anticipated, but should be surmounted with rigorous appraisal

process and technology. Federal and States government Ministries should be excluded from direct engagement in construction and supply in order not to be distracted from their principal roles of policy formulation and administration. Government housing parastatals, FHA and States Housing Corporations should compete with others for supply. In fact, these parastatals have unique roles to play to fill the gap in the hinterlands and city outskirts, since most private sector suppliers would be more attracted to building in the cities because of higher demand for houses. The Nigerian Building and Road Research Institute (NIBRRI) should accelerate research on local materials to reduce building costs.

We are on the march to the housing sector that would drastically reduce the housing deficits in the various strata of Nigerian populace, especially the poor, that creates 600,000 – 1,000, 000 direct and indirect jobs yearly and that also contributes about 15% to the GDP. About time!

“Digital identity ensures democratised access to services. In other words, it unlocks a range of essential services now available online, be them financial, health related or educational”

FIIN Partners

Chapter 24

Non-existence Of A National Digital Identification Database.

Possible Solutions.

a) Overview

Without fear of sounding repetitive, let me say again that the nation still lacks a functional digital national identification database, and that without such a database, national development would be difficult and lifting the poor out of poverty would also be difficult and so would lifting Nigeria out of poverty.

As at August 2021, only 63 million Nigerians (less than 30%) were registered by the National Identity Management Commission (NIMC) since the digital National Identification Number (NIN) enrolment exercise started in February 2012.

The target for a functional digital identification database is a coverage of 90% of the population.

The World Bank underscored the importance and urgency of digital identification by rendering Nigeria an International Development Association assistance under its illustrative project abbreviation ID4D (Identification for Development).

"The objective of the project is to increase the number of persons with a national identification (ID) number, issued by a robust and inclusive foundational ID system, that facilitates their access to services," the World Bank said.

96% of the citizens yet to obtain NIN are amongst the vulnerable populations. Yet, NIN is required to access social medical insurance services, social mortgage finance, social security benefits, etc. A functional digital identification database is required to properly set up these programs, and to provide our security agencies the foundations for the very necessary intelligence tools to verify or cross reference bio data in order to fight crime, terrorism, insurgency, banditry and other insecurity.

The MGI report estimates that the economy could generate a 5 to 7 percent increase in GDP, equivalent value of about N10 trillion, by a significant increase in NIN penetration and coverage in the next three years, and with most of the benefits accruing to the nano and micro enterprises through formal recognition and access to capital.

Given the rate of population growth, the weak birth registration/NIN, and the slow pace of adult registration, it will take very many years to achieve a functional data base. The nation cannot afford that.

b) Way forward

There are various ways to speed up NIN enrolment.

i) Birth registration.

Birth registration is an indicator in the society advancement index. It helps to measure the overall awareness in and of society as a collective, in relation to its civilization.

Birth registration is among UNICEF's cornerstones of children's rights enforcement. It is also a target of the UN's Sustainable Development Goals. UNICEF defines it as the "*the continuous, permanent and official recording of a child's existence through an administrative process of the state and coordinated by a particular branch of government.*"

The UN Convention on the Rights of the Child (UNCRC), in its Article 7, states that "every child has the right to be registered at birth, without any discrimination."

Birth registration provides the key to accessing basic services and social protection benefits, and equips the nation with the tools to tracking its population and social indicators, especially health and education.

The National Population Commission/ ICF, 2019 report found that in Nigeria, the average registration of children under age 5 was only 43%. The rates in some States are as low as 6%.

NIN and birth registrations are, therefore, two mutually reinforcing tasks that should benefit each other.

Religious and traditional leaders, civil society leaders, district heads, town union leaders, women organizations should be mobilized to spearhead exhortation of the people on the importance of both birth and NIN registrations. These exhortations should then be publicized with localized media campaigns, employing both traditional and modern media tools. Registration centers should abound in rural communities, including primary health centers, schools, premises of churches and mosques, village squares, etc.

Registration certificates of birth and NIN should be set as compulsory identification for services, including health centers, schools, etc.

ii) Engaging mobile network operators

The mobile cellular subscriptions across the networks are on a steady increase and penetrating far across the country. The mobile network operators should, therefore, be engaged to deploy their vast networks and coverage for NIN enrollment.

iii) Using social investment benefits and other social services as incentives.

If the nation had made presentation of NIN mandatory to receiving Nigeria Social Investment Program (NSIP) and Covid-19 stimulus cash transfers, NIN registration would have accelerated significantly.

Pakistan launched Benazir Income Support Program, a cash transfer social initiative that required mandatory ID for females, a planned move to ginger up female identification enrollment. In no time, registration spiked.

The 2022 budgetary allocation for NSIP and other social services should be conditioned upon mandatory presentation of NIN to drive up registration numbers.

iv) Infrastructure Youth Corps Program (IYC)

I stated earlier that some youths, under the proposed IYC, should be trained to fan across Nigeria's hinterlands and rural areas to enroll people with NIN.

v) Population census

The paraphernalia and structures of the oncoming population census should be used to simultaneously conduct the census and register people with NIN.

Chapter 25

75% Of Prison Population Held Without Trial And Conviction.

Possible Solutions.

a) Overview

There are tens and tens of thousands of Nigerian youths held by the Nigerian Prison system simply because of poverty. These our brothers are part of the 75% of the total population of Nigerian prisoners held by the formal prison service or detained at various police or security stations for the crime of "awaiting trial" or the crime of inability to fulfill bail conditions, in most cases, for nonviolent crimes and minor offenses requiring noncustodial sentences such as fines.

Even for custodial offenses, these citizens are oftentimes held past the lengths of prison time they would have served if they had been tried and convicted. What a violent violation of the fundamental human rights of these people!

Yes, most of these our brothers are breadwinners for themselves and their families, and so their forced absence from home and economic activity make both themselves and their families much poorer! And yes, most enter the prison for minor offenses and come out as hardened criminals, with their consequent contribution to high crimes and insecurity further depressing the economy and breeding more poverty.

b) Way forward

Some of the reasons given for the awaiting trial debacle and prison congestion include congested dockets of courts and inefficient prosecution.

For expeditious trial of petty offenses which make up the majority of outstanding cases, the President should work with the Governors to get state law passed, paving the way for the appointment and training of lawyers as lay Magistrates, to hear and determine the delayed cases. The lay Magistrates should be in office for a fixed period of time, say two years, as the situation may warrant.

Funding for the lay Magistrates and other expenses, including personnel costs, should be borne by the Federal Government.

The proposed Directorate of Public Prosecutions should appoint an experienced lawyer per state to coordinate prosecution with the Police prosecutors to avoid delay.

For offenses above petty offenses but below capital offenses within the jurisdiction of the State High Court, the Federal Government should make additional budgetary provisions for 2 – 3 extra Judges per state for the purposes of trying long delayed criminal cases against which accused persons are in detention. The proposed Directorate of Public Prosecutions should supervise prosecutions to avoid delay.

There should be a review of bail conditions where the accused persons were unable to fulfill them and have been in prison for more than 6 months in cases of non violent crime.

Those accused persons/suspects who have overstayed the minimum prison sentence of the alleged crime must be released immediately.

Capital offenses are not covered by the foregoing intervention.

The President should appoint an activist human rights lawyer as Special Assistant on Fundamental Human Rights and Prison Decongestion, to report to the President directly on progress of implementation and on related matters.

Chapter 26

Man-made Environmental Degradation.

Possible Solutions.

a) Overview

There are some parts of the country in which ordinary Nigerians are kept desperately poor due to man-made environmental degradation. This is particularly true of the Niger Delta, where the natural habitat of mankind; land, rivers, coastlines, creeks, and the air, have been so despoiled and polluted by toxic chemicals from oil and gas prospecting, production and flaring, making it impossible for our ordinary brothers and sisters to fall back for survival on our time tested farming, fishing, poultry, husbandry, etc.

The situation has further deteriorated due to oil spills resulting from massive oil theft, in addition to scattered but vast illegal refining going on with crude equipment and crude know how, and spewing billows of dense, acrid and toxic soot into the atmosphere. Very hazardous indeed.

The theft and crude refining are so rampant, that allegations of insider assistance from security personnel have loudly rent the air.

Over time, the government's effort to redress the situation even before the recent deterioration, was haphazard at best because of the weakness and non effectiveness of the government institutions and agencies charged with this onerous task. In fact, the average value for money for government expenditures in the Niger Delta from the period of Oil Minerals Producing Areas Development Commission (OMPADEC) to Niger Delta Development Commission (NDDC) was just about 27%, well below the very low national average of 35%. Just for context, Business Day reported that:

"Experts reviewing a study and the forensic report on the activities of the Niger Delta Development Commission (NDDC) spanning the past 20 years of the commission's existence have revealed why over 12,000 contracts were abandoned. The study found that personnel of the commission compromised and cornered the larger chunk of payments made to contractors who abandoned the jobs. The study was commissioned by the Social Action, in collaboration with MacArthur Foundation."

b) Way Forward

The nation has tried almost all manner of solutions to the problems of insecurity and under development in Niger Delta without success. Nigeria has gone from Niger Delta Development Board in the early 60s, through Niger Delta River Basin Authority to OMPADEC in 1992 to NDDC in 2000 and finally to Ministry of Niger Delta Affairs, without much impact to the suffering of Niger Deltans. There have been military operations and non-military actions without success.

There exists only one weapon that has not been tried, yet it is the most potent weapon to a plethora of challenges. That deadly weapon is value-for-money. The notion that the average value for money for all the monies and material resources spent or meant for the Niger Delta is 27%, explains all the challenges in the region. Frankly, everyone has been in on it. We have all been part of this asphyxiating problem. We the politicians, Senators, Governors, Members of the House of Representatives and States Houses of Assembly, Council Chairmen, the Federal and States bureaucracy, the traditional rulers, eminent persons, the leaders of militant organizations, the government security personnel who aid oil theft and illegal refining, the government environmental inspector who colludes and under reports oil spills, gas flares etc.; we have all worked together to keep the Niger Delta dirt poor and despoiled.

The anti-corruption plan I laid out earlier in this book should alleviate the deficit of value for money in the Niger Delta but only to some extent. It must be complemented by the President painstakingly choosing the right people for environmental remediation and security architecture in the Niger Delta, almost to the last man.

Then, experienced consultants should be hired to map environmental degradation in detail, including pinpointing culpability. The cleanup should include all those responsible. It shouldn't matter that the oil companies wholly or partly responsible have left the country. Litigation would aid holding them accountable. But any kobo that goes for cleanup must receive its value.

May I repeat that Niger Deltans, through localized media campaign, should be encouraged to become active whistleblowers to oil theft and illegal refining because of the direct life and death consequences to their health. These initiatives should complement deterrence.

Degradation in the Niger Delta impinges on abilities to foster the development of human capacities and capabilities, via education. Earlier, I laid out the template for using the import and provisions of the Nigeria Oil and Gas Industry Content Development Act (NOGICD) to equip the kids and youth with education, knowledge, complex knowhow and skills. Forgive my immodesty for reminiscing how humbled I was in participating in the passing of NOGICD Bill in the Senate.

I propose that to lead the effort and superintendent over the environmental remediation and mitigation, the President should appoint an eponymous committee of 12, made up of 6 renowned foreign environmentalists nominated by international oil companies and 6 Nigerians appointed by the President, one each from the States of South South zone but 3 of whom should be from diaspora.

Meanwhile, the NDDC Board should be recomposed to 12, made up 6 expatriate nominees of international oil companies and 6 Nigerians appointed by the President; one each from the States of South South zone but 3 of whom should be from diaspora. The NDDC Act should be amended accordingly. Disbursement of accruals to host communities under Petroleum Industry Act must involve all the critical stakeholders to ensure value for money.

“We need to start identifying the triggers that aggravate mental health issues in our society.... substance abuse.... and we need to speak up about these more and get to the source of the problems”

Sanam Saeed

Chapter 27

Drug Abuse.

Possible Solutions.

a) Overview

Just below the radar, drug abuse has, in a period of 20 years to date, grown astronomically, from 1% of Nigeria's adult population to about 8% over this period. And with the type of abused drugs growing from cocaine, opiates and cannabis to opioids such as tramadol, cough syrups, codeine, rohypnol. Another popular drug is methamphetamine, a potent stimulant to the central nervous system. And then, there are the crude concoctions like dung, lizard parts, sniffing glue, petrol, paints, urine, etc. The makeup of abusers also grew diversely from young adults down to adolescents and up to housewives, working women, fathers, educated and uneducated, liberal and conservative, who in consequence succumb to the hazardous effects of addiction, mental and general health problems, loss of self-control, abdication of responsibility, breakdown in family cohesion, slothfulness and high crimes. Also, those drugs are used to generate Dutch courage by terrorists, insurgents and bandits for their high crimes, all at once creating and increasing poverty.

b) Way forward

Drug abuse and addiction are a personal burden, a family burden, an extended family burden, a community burden, a council area burden, a Local Government Area burden, a State Government burden, a Federal Government burden and a societal burden.

The abuser knows that the illicit drug that gives him (or her) a high is dangerous (perhaps not the extent). He knows it is illegal and disapproved by family and larger society, so he hides the practice and shares it only with his accomplices. He notices the creeping insatiability, needing to increase the dose and frequency, denialism creeps in too. At this time, he is knocking gently on the door of addiction, then he bangs open the door into the waiting hands of addiction. He becomes addicted. His willpower is eviscerated. At this time, the family confirms what a few members had been suspecting.

The addict is now a burden to his family and his community, council, LGA, State but they are helpless as there are no counseling facilities; not even in the hospitals, nor are there rehabilitation centers. The Federal Government is also not much of a help.

Apart from enforcement measures of the Nigeria Drug Law Enforcement Agency (NDLEA), there are two main planks of action the rest of the society should help out with in the fight against the scourge of illicit drug abuse and its destabilizing effects: prevention and treatment.

i) Prevention

Prevention is the most cost effective approach if successful. It includes drug demand reduction and interdiction. Prevention requires the collaborative partnerships of all levels of government in the state, the communities and the families in targeting the at-risk and risk-prone youth with education and enlightenment as to the harmful effects of illicit drug. This may be achieved through the use of family inter-personal communications, media campaigns, stickers, posters, flyers, social media influencers, goodwill ambassadors, etc. Early warning signals reporting through whistle-blowing must be encouraged.

Communities should be mobilized to be vigilant to enable interdiction of illicit drug flows by reporting sightings and suspicions to the local community leaders or directly to the Police. Community vigilante services have been known to apprehend drug dealers and hand them over to the Police.

ii) Treatment

Drug abuse treatment centers in Nigeria are very few and far between. They exist mainly in the few psychiatric hospitals. They should be expanded to teaching hospitals, while general hospitals and federal medical centers should handle outpatients for less severe cases.

In any event, the proposed health insurance based healthcare system would yield liquidity to self-fund some of these expansions but until then, the government should budget provisions for immediate commencement.

Chapter 28

Non-existence of a National Social Security and Financial Risk Protection System, especially for the Poor.

Possible Solutions.

a) Overview

Nigeria does not have a national social security and financial risk protection system organized to provide old age pension and healthcare to our elders, disability assistance and healthcare to disabled persons and unemployment assistance to the unemployed.

Without such a social security system, only about 20% of all our elders who retire from the formal or semi-formal sectors or who are well off, would enjoy any form of pension, while the remaining 80%, mostly from the informal sector, would end up very poor in old age. But most heartbreaking, is the lot of our brothers and sisters living with different disabilities; the blind, the crippled, the mentally disabled, persons with severe birth defects, etc., whom we have abandoned for very many years, leaving them to fend for themselves by begging for handouts at street corners. They engage in begging in an economic environment so harsh that even able bodied men and women have been laid waste by poverty, and who are now made poorer by the additional burden of caring for their elders without pension, their unemployed without benefits and their disabled without a structured assistance, and all without social safety. The lack of financial risk protection for the poor extends to non work-related injury and death.

However, the question is, what kind of social security system is best for Nigeria? Lessons from interplay of the following competing economic perspectives, in part, shaped my views as to the solutions that I put forward against the causes of poverty enumerated in this book, and also in determining the kind of social security system suitable for Nigeria. I should, therefore, give a background to the divergent perspectives.

b) Economic Perspectives

We might as well start with the recommendations of the British economist and liberal reformer, Sir William Beveridge.

Charged with surveying the existing national schemes of social insurance and allied services, including workmen's compensation, Beveridge and his committee, in their report published in 1942 known as the Beveridge Report, proposed far reaching reforms to the system of social welfare which are necessary to fight and defeat poverty. The report identified five evil giants standing in the way to the post-war reconstruction that would usher in a new Britain without poverty. These evil giants were want, disease, ignorance, squalor and idleness.

The Beveridge report was widely accepted and so popular that Winston Churchill of the Tory Party, the super hero and literally, the savior of Britain in the Second World War, was shockingly defeated in the election that took place immediately after the war in 1945, because of his conservative hue and his skeptical comments on the Beveridge report.

Clement Attlee of Labour Party, who won the election, fully implemented the recommendations of the Beveridge report, thereby setting up the British cradle to grave welfare state that nationalized risk, transferring the burden of healthcare, pensions and other social welfare programs to the British state.

Perhaps influenced by Beveridge, the post imperial Japan, in October 1947, heeded the recommendations of her advisory committee on revamping of social security, by also nationalizing risk and providing against every cause of poverty, including guaranteeing every citizen, at least, the minimum acceptable standard of living, aided by national assistance.

The Japanese health insurance systems, however, rejected the flat-rate premium contributions for flat-rate benefits advocated in the Beveridge Report and adopted an earnings-related contributions for benefits scheme.

The post Second World War period also saw Western European and South American nations strengthening their social welfare systems to fight poverty. Prior to the war, America, which was hitherto the only modern industrial economy without a national social security system, rose up to its billing, when on the 14th August, 1935, President Roosevelt signed into law, the Social Security Act. The law established an old-age program funded by payroll taxes

and a program for aid to families headed by single mothers, as well as insurance against unemployment. President Lyndon Johnson's administration amended the law in 1965, to provide for Medicare and Medicaid – social healthcare programs for the aged and the poor respectively.

The overpowering necessity for more muscular social welfare programs, from the slump period of the depression of 1929, to the brutal devastation of Second World War ending in 1945, generated a near universal acceptance of the economic ideas of another liberal British economist, John Maynard Keynes, set forth in his 1936 book, *"The General Theory of Employment, Interest and Money."*

The major thrust of Keynes's theory is the postulation that aggregate demand—measured as the totality of spending by individuals, households, businesses, government, and net exports — is the most important driving force in an economy, driving output, business investment and employment, and that during slumps and downturns, governments should stimulate a weakened aggregate demand, and therefore output, by government expenditures, including deficit spending, reduction of taxes and payment transfers.

Governments, therefore, opened their wallets, spending hugely on infrastructure, investments, services and social programs, which unleashed a sustained economic growth and robust employment figures that lasted until the 70s, leading to rising real incomes and falling poverty and inequality rates.

Unfortunately, at some point in the 70s, the drumbeats of economic growth stalled, showing up an incipient flaw in the makeup of the post-war welfare state, and bearing out the warnings of F. A. Hayek of the Austrian School, with whom Keynes feuded over Business Cycle Theory.

It seemed that along the way, the welfare state, in addition to oversupply of money, removed those incentives without which a market economy cannot churn and produce efficiently. In other words, it removed the reward of

success for enterprise and hard work, and the reward of hardship for dependency and laziness, thus softening up the welfare state and pushing it right up to the edge of the cliff, to be easily pushed over by the oil shock of 1973.

The result was stagflation, low growth and low productivity, which created economic crisis in addition to political crisis in some cases.

The country that epitomized the crises of a welfare state with the resulting economic and political crisis was Chile.

In 1973, faced with collapsing output, hyperinflation, and therefore, the bankruptcy of Chilean social program of universal benefits, President Salvador Allende sought to mount a Soviet style takeover of the whole economy. This precipitated a political crisis that resulted in a successful coup d'état by General Aguste Pinochet, in which Allende lost his life.

Following the usurpation of power, the urgent question for Pinochet became: How would the Chilean tottering economy with a collapsed output and an inflation galloping at an annual rate of 900% be revived?

To Pinochet's rescue came Professor Milton Friedman, an American economist and statistician of Chicago School of Economics, best known for his strong belief in free-market capitalism.

Defying Keynes and most of the academic establishment of the time, Friedman presented evidence to resurrect the quantity theory of money—the idea that price levels depend on money supply. That is, when money levels increase, so do price levels, firmly establishing the direct relationship between a quantity of money per unit of output and the consumer price index.

In his book, *Studies in the Quantity Theory of Money*, published in 1956, Friedman reaffirmed the notion that increased monetary growth increases prices, but does not increase output in the long run.

According to Friedman, inflation, if unchecked, is a very dangerous and fatal disease to the society. He, however, stated that inflation is always and everywhere a monetary phenomenon, in the sense that inflation is only caused by a more rapid increase in the quantity of money than in output, which then leads persistently to rising prices, erosion of purchasing power, lack of investment, recession and unemployment.

In the modern monetary era, Friedman holds the government solely responsible for any rapid increase in money supply because of its sole and exclusive power to print money. He posits that the only cure for inflation is, therefore, reduction in money supply and government spending.

For Friedman, a sustainable economic growth with little inflation, is only achievable by a steady and moderate rate of money supply that grows at the same pace with output.

These foregoing macroeconomic concepts of money supply and monetary mechanisms are known as Monetarism, for which Friedman is popularly recognized.

Back to Chile, following Friedman's advice, the new Chilean president, Pinochet, reduced money supply and government spending by 27%.

In no time, Jose Pinera, a young and bright Chilean economist, one of the famous Chicago boys, Friedman's intellectual foot soldiers, joined Pinochet's administration as Minister of Labour and Social Security, and later as Minister of Mining.

Pinera's economics was equally influenced by F.A. Hayek's intellectual demolition of central planning and command economy, detailed in his book, *The Road To Serfdom*. So for Pinera, the proper steps to recovery were tightening of money supply, balancing of budget, liberalization of trade, reintroduction of risk, privatization of state owned companies and commercialization of state assets, including infrastructural projects. In short, the roll back of the welfare state.

As such, Pinera masterminded four fundamental structural reforms: Firstly, the creation of a new market based pension system, by giving every worker the choice to opt out of the old government run pay-as-you-go system. Instead of payroll taxes, each worker could now put 10% of his or her salary aside, into an individual personal retirement account, to be managed by one of the private competing companies (the AFP system). The idea was to give each worker a sense that the money being put aside was his own property, his own capital.

Secondly, the creation of a market based private health and disability insurance system along the lines of the format of the new pension system.

Thirdly, the redesign of the labor code and reintroduction of labor democracy to align with a free market economic system.

Fourthly, the promulgation of a new constitutional law on mining, which created the legal framework for the subsequent privatization of large state-owned companies, notably in the energy and telecommunications sectors and the commercialization of the infrastructure sector through concession bids and grants for highways, ports, airports, etc.

By the time of return of democracy and exit of Pinochet in 1990, the Chilean economic miracle was under way. Reduction in money supply through cuts in deficits and government spending, together with the structural reforms, had set the stage for stabilization of inflation, increase in output and revival of the economy. The economy grew by a factor of 20, while poverty rate came down from 50% to 15%. The exponential growth in stock market capitalization and the new shining financial district in Santiago, Chile's capital, are testament to the success of the pension reform from the stand point of investment capital.

The conservative economic revolution of the 80s, therefore, did not start with Thatcher's Britain or Reagan's America, it started with Chile.

As for Friedman, he would go on to advise both the Thatcher and Reagan administrations.

In Britain, Prime Minister Margaret Thatcher, elected in May 1979, jammed head-on the malaise of stagflation, budget deficits and industrial unrest. She cut government spending, broke the power of the trade unions, sold off nationalized industry, deregulated the economy on the principles of free market and personal responsibility, including redefining the role of the welfare state. The social programs suffered severe spending squeezes.

After a very rough patch and period, her policies revitalized British business, spurred industrial growth and swelled the middle class.

Across the Atlantic, Ronald Reagan rode the waves of discontent against double digit inflation, high interest rates, stock market decline, low growth and unemployment, to score a landslide victory in the 1980 American presidential elections.

On assumption of office, Reagan immediately tightened the money supply, reduced the growth of domestic spending, reduced domestic regulations and cut Federal income tax and capital gains tax. The top tax rate was ultimately crashed from 70% to 20%.

The Budget Director, David Stockman, warned of a significant increase in deficits due to the scale of tax cuts, coupled with the expected increase in defense spending, but Reagan was convinced that his tax cut would stimulate productivity and ignite an economic boom, the government would then collect enough taxes to balance the budget. This was introduced as the Supply-side economic theory and was promoted by one of Reagan's advisers with his graph known as Arthur Laffer Curve.

To Reagan's credit, his policies ended stagflation, rekindled the American entrepreneurial spirit and stimulated a GDP growth.

However, Reagan's policies increased the national debt by a whopping 186%, adding nearly \$2 trillion to the debt stock. The supply-side economics was not that stellar after all. George Bush Snr. must have been onto something when he derided it as voodoo economics.

While Reagan's tax cuts benefited the wealthy the most, his spending cuts mostly affected the social programs for poor. Speaker Tip O'Neil described it as soaking the poor to subsidize the rich. In fact, Reagan wrote in his diary, "I am trying to undo LBJ's Great Society, it was his war on poverty that led us to this mess." He then proceeded to cut the social programs as follows:

Of all the recipients under the Aide to Families with Dependent Children program - AFDC, nearly all the working poor making up 50% of the program were disqualified and lost eligibility, while 40% had their benefits reduced, leaving only 10% untouched.

One million people were eliminated from the food stamp program for the poor while the federal grant to states on Medicaid, the state-run health care program for the poor, was reduced, allowing the states to require Medicaid recipients to pay for part of the cost of their care. In addition, since AFDC recipients are automatically eligible for Medicaid, many of those eliminated from the AFDC rolls lost their medical benefits as well.

The Work Incentive program – WIN, which provides job search and training assistance for the poor, was cutback, while the Public Service Employment program that provided work for the unemployed in states, local governments and nonprofit agencies, for the purposes of work experience, was abolished.

Fast forward to 1996. Bill Clinton, who campaigned on "ending welfare as we know it," signed into law, *The Personal Responsibility and Work Opportunity Reconciliation Act* - POWORA, a compromise welfare law hatched with the Newt Gingrich-led House of Representatives.

The law replaced the sixty year old *Aid to Families with Dependent Children* (AFDC), with *Temporary Aid to Needy Families* (TANF).

TANF is administered through block grants to states, with substantially increased discretion over some policy choices in the new program, but with tough new requirements on work participation rates and limitations on the period for which families could receive benefits using TANF funds. The maximum period set is five years but could be curtailed by the states.

Individual entitlement to benefits were explicitly abolished under TANF and out of the 13 million people hitherto receiving benefits, there are only about 3 million recipients today.

Free-market capitalism has brought progress throughout history and its resultant economic growth has indeed lifted millions of people out of poverty around the world. The only downside is that some policymakers have oftentimes neglected or cut social programs so deep and so close to the bone, in the pursuit of the ultimate economic growth, with a consequent rise in poverty and inequality, resentment, agitation and political unrest.

The collapse of Chile's social program of universal benefits and the exclusion of non formal workers from the market driven pension, health and disability insurance systems have caused a resurgence of poverty and inequality, resulting in the sustained violent protests and unrest going on intermittently since October 2019, and with many fatalities. In order to restore peace, the current president, Sebastian Pinera, incidentally Jose Pinera's estranged younger brother, struck an agreement to hold a plebiscite on whether to set up an assembly to write a new constitution that would make provisions to address the social grievances and other issues.

In America, President Barack Obama was less than two years in office when the simmering discontent that had built up from the Reagan years onward before his assumption of office, exploded into Occupy Wall Street, a protest movement against inequality and corporate influence in government, took off on September 17, 2011, in Zuccotti Park, located in New York City's Wall Street financial district and transformed into the wider Occupy movement worldwide. Occupy London was only dispersed by a court order in 2012 without snuffing out the discontent against inequality. The protest blasted off, despite signing into law of the Affordable Care Act (Obama Care) by President Obama in March 2010. Obama Care unarguably is the most far reaching expansion of US healthcare coverage since Medicare and Medicaid enactment in 1965, extending coverage to 20 million people in the United States who would have lost coverage, and saving 135 million Americans with preexisting conditions from facing discrimination in accessing health coverage.

President Trump tried unsuccessfully to dismantle Obama Care through Congress and the Courts. But his administration tightened eligibility criteria and cut various social programs deeply.

Most of those restrictions and cuts have now been relaxed by President Biden. Nonetheless, all the social programs in the US, even in a relaxed mode, operate under eligibility criteria compliance. Any sharp practice or fraud is seriously dealt with. And as for Medicaid, the government-run health insurance for poor, it continues to be means tested.

As for Chile, the pendulum swung leftward in the last election. Mr. Gabriel Boric, a left-wing legislator who rose to prominence during anti-government protests, defeated his conservative opponent, Jose Antonio Kast, to become the President of Chile. It seems the free market capitalism of Mr. Pinera went too far, leaving so many people behind and prompting a backlash.

I take the liberty to repeat that the lessons drawn from the foregoing competing economic and social welfare models have shaped my inclinations and views with regard to the challenges addressed in the chapters of this book, and the proposed social security system for Nigeria.

- The cradle to grave welfare state of William Beveridge will not work out well for Nigeria, since all ethnic peoples of the nation are culturally, psychologically and instinctually inclined to elements of reward, risk, individualism and competition, varying only in intensity and gender activity. Beveridge's welfare state is also unsustainable because of Nigeria's weak institutions.
- All the same, unfettered, winner-take-all laissez-faire capitalism will also not work for Nigeria, because we are our brother's keeper, even in our individualism. This is the basis of our traditional social security anchored on immediate and extended family, kindred, village, etc.
- It is by drawing on these lessons, that I have articulated market oriented solutions to various problems, but with equal emphasis for the poor. That is why I have laid out market based health insurance and market based mortgage finance, as well as social medical insurance scheme and social mortgage system for the poor to run concurrently.

- Remember the dream/ambition for the nation, whereby with a developed steel sector, we would design and mass produce a basic car that is readily affordable to our poor and undeserved brothers and sisters, which I have allowed myself the liberty to name *NAIJA*. To achieve this, we should work with our development finance partners such as International Development Association (IDA) to set up a Social Asset Finance Fund that would provide interest free loans to the poor to finance the purchase of *NAIJA car*.

Also, *NAIJA Tractor* is to be purchased by farmers through same Social Asset Finance Fund.

Most importantly, remember the proposed elaborate education reforms and revitalization across all levels, essentially meant to bring quality education to all Nigerians; the poor and the rich alike.

- Keynesian expenditure to boost aggregate demand must be matched with Friedman's output, otherwise inflation would ensue. Simply said, there must be value for money.
- Social welfare must have eligibility criteria and compliance in order to ensure value.
- The society must look out for the forgotten and the left-behind.

c) Including and bringing the poor into the Nigeria social security and financial risk protection system

The Pension Reform Act 2014 consolidated pension reforms which started in 2004, ushering in a private sector managed contributory pension system. Participation and coverage are still very low. There are only about 2.4 million contributors to the pension scheme, out of about 65 million Nigerians of working age, meaning that less than 3.5% of Nigerians are covered, leaving over 96.5% exposed to the vagaries of social insecurity in old age, and constituting a huge burden on their families and the society at large.

There is a mandatory contribution by organizations in both public and private sector with 15 or more employees, and mandatory minimum contribution rates of 10% by the employer and 8% by the employee.

The legislation provides that in the case of private firms with less than 3 employees, participation in the pension scheme would be governed by guidelines issued by the National Pension Commission.

Clearly, the Pension Reform Act does not place much premium on the participation of nano enterprises (businesses in the range of two persons, including employer) in the contributory pension scheme, because these are mostly in the informal sector, likely uneducated, with low and irregular income, bogged down with the struggle to survive today's hardship and, therefore, very reluctant to worry about the tomorrow that may never come. SAD! Still, these our brothers and sisters in nano enterprises make up 80% of Nigerian businesses per capita.

Remember Abubakar, the wheelbarrow pusher in Kano? He has now grown his business into ownership and management of two bikes; and Tunde, the tailor in Ibadan, he now has two machines and the apprentice who joined him as a staff. Ngozi, the fruits and vegetables seller, she now stores more produce with the help of the solar powered storage drum produced by Nigeria Stored Products Research Institute. Even with the modest progress recorded, Abubakar, Tunde and Ngozi would be considered a waste of valuable time by the Pension Fund Administrators. And so, 80% of Nigerian businesses per capita have been excluded in the pension scheme. We must, therefore, create another pension system for the likes of Abubakar, Tunde and Ngozi that should be named Nigeria Social Pension Service (NSPS) and should be administered by the proposed Nigeria Social Security Administration.

d) Nigeria Social Security Administration

The Nigeria Social Insurance Trust Fund Act should be amended and renamed Nigeria Social security Administration (NSSA) Act.

The Management Board should be recomposed by adding seven non-executive directors to be nominated by international charitable organizations and international donor agencies.

Appointment and removal of the Chairman and the Managing Director should be by two third majority vote of the board.

In addition to the Employee Compensation Scheme which is ongoing, the NSSA should be charged with the following functions.

i) Administration of Nigeria Social Pension Service.

The main plank of NSPS is flexibility. The contributory should be free to choose a target and work out his or her contribution rates accordingly. Irregularity in payment should also not be a problem.

ii) Provision of social non-work-related disability and life insurance.

Subject to agreement with the contributory, a tiny amount, such as 500 Naira, should be set aside from the contribution, to provide him or her with a non work related disability and life insurance policy that would reduce the risk of increased poverty or dislocation associated with disability or death of either spouse or a family breadwinner without a disability or life insurance payout.

iii) Administration of Aide to Disabled Persons Fund.

I propose that there should be established, an additional but separate fund to be known as Aide to Disabled Persons Fund into which should be paid appropriations, Corporate Social Responsibility contributions, domestic and international donations. Nigeria Social Security Administration (NSSA) should set up an eligibility criteria, perhaps starting with those with severe cases, who are incapable of living independent life, and conduct a countrywide registration before pay outs. The amount of assistance should depend on plausible projections of inflows and the number of recipients.

iv) Administration of Medical Assistance Fund for the Uninsured.

In the near future when it becomes practicable, to manage the proposed Medical Assistance Fund that would operate as single payer healthcare scheme for the uninsured.

v) Administration of Temporary Assistance to Unemployed Persons Program.

In future when it is practicable, to manage a data driven Temporary Assistance to Unemployed Persons program.

e) Sovereign Insurance Against Natural Disasters

Since Independence, natural disasters especially flood and drought have usually caught the government unawares, and dealt catastrophically with the populace especially the poor, who invariably suffer such calamities disproportionately.

When those disasters strike, humanitarian aid take inexplicably long time to get to the victims, and most times, too little to mitigate loses.

In 2012 African Union launched a risk pooling initiative with a treaty backed with 32 Member State signatories, by establishing the Africa Risk Capacity Ltd, (ARC), private-sector insurance styled company to assist Member States in growing capacities to deal with extreme weather events and natural disasters, towards protecting the vulnerable populations and ensuring food security and well-being. Other international geopolitical zones also have such risk pools such as, the Pacific Risk Pool and the Caribbean Catastrophe Risk Insurance Facility.

ARC operates as orthodox insurance company but uses a *parametric insurance* system in which payouts are triggered only when a predetermined threshold is arrived at, such as determining that a drought exists when rain falls below a certain level or determining existence of flood with the height of water level, etc.

ARC has made various natural disaster insurance payouts including \$34 million payouts to Mauritania, Niger, Senegal and Malawi, etc. Payouts have also been quick, averaging 2 weeks in turnaround time.

The Federal and States Government should set up an insurance premium Fund backed by a contribution agreement, with which to purchase a yearly sovereign natural disasters insurance cover from ARC.

The distribution of insurance payouts to victims should be handled jointly between the proposed National Social Security Administration (NSSA) and the National Emergency Management Agency (NEMA) .

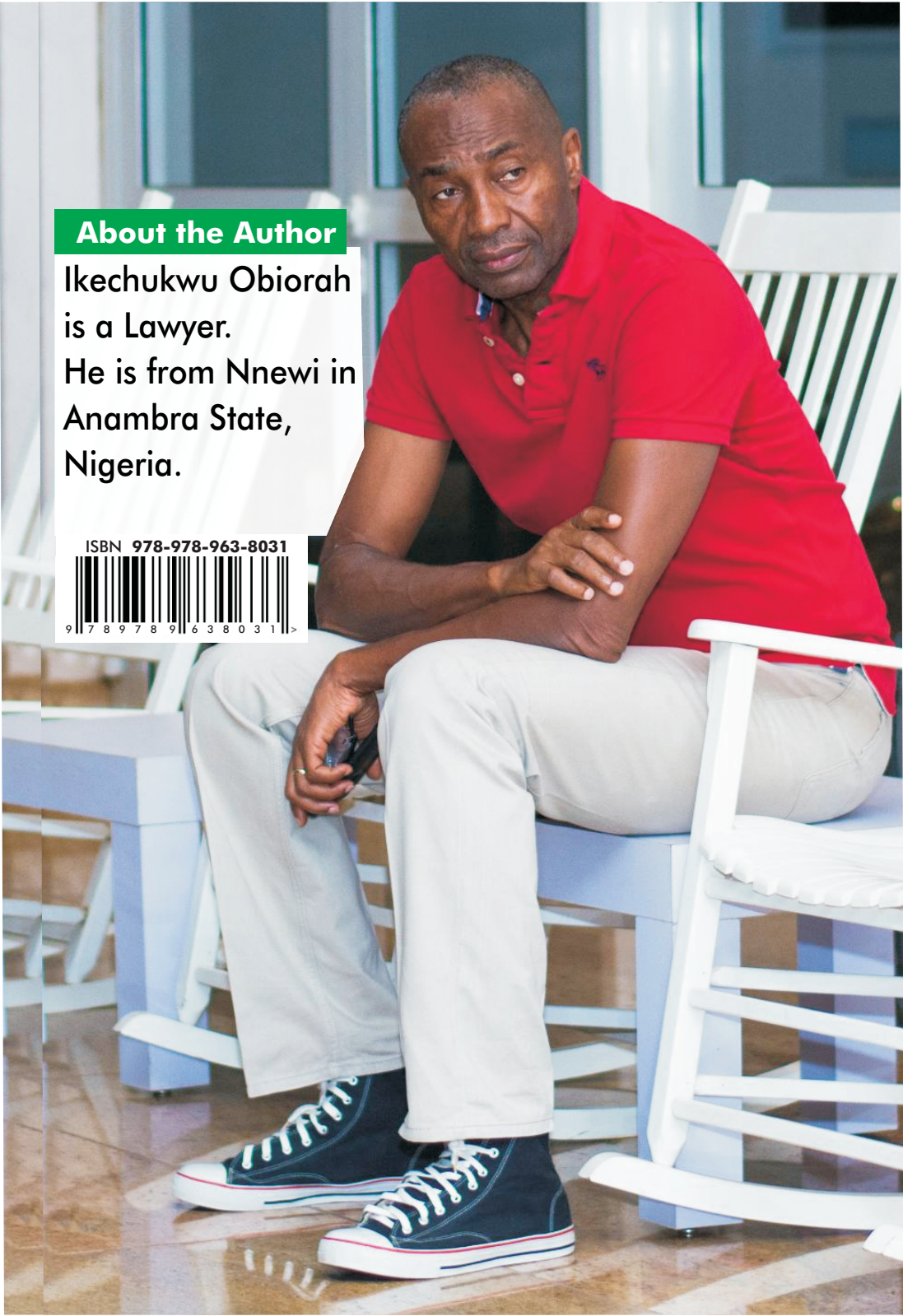
The NEMA act should be amended to provide legal backing for the foregoing.

CONCLUSION

In this book, I have listed and discussed some of the main causes of poverty in Nigeria. I have also laid out some possible solutions and mitigation to these challenges. I have proffered these solutions with an avid eye on the poor, convinced that lifting our poor brothers and sisters out of poverty is the only way to lift Nigeria out of poverty. I have done so, alarmed that unless urgent, bold and broad-based action is taken, the insufficient purchasing power of over 140 million poor and low income Nigerians, would continue to deny them the means to purchase enough farm produce, manufactures and services necessary to achieve basic human sustenance, which in turn would continue to deny work and earnings to potential farm and factory workers, traders and service providers, thus creating a self-perpetuating chain of poverty. A situation of poverty begetting poverty.

Thank you for reading.

Ikechukwu Obiorah

A photograph of a middle-aged Black man sitting on a white wooden rocking chair. He is wearing a bright red short-sleeved polo shirt, light-colored trousers, and dark blue high-top sneakers with white laces and white soles. He is looking directly at the camera with a slight smile. His arms are crossed over his knees. The background shows a window with white frames and a wooden floor.

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ISBN 978-978-963-8031



ACRONYMS

1. ACGS – Agricultural Credit Guarantee Scheme
2. ACSS – Agricultural Credit Support Scheme
ACJA - Administration of Criminal Justice Act
3. AEDC – Abuja Electricity Distribution Company
4. AFCFTA – African Continental Free Trade Area
5. AfDB – African Development Bank
6. AFDC – Aid to Families with Dependent Children
7. AFEM – Autonomous Foreign Exchange Market
8. AFREXIMBANK – African Export-Import Bank
9. AGO – Automotive Gas Oil
10. AI - Artificial Intelligence
11. AIP – Approval in Principle
12. AKK – Ajaokuta – Kaduna – Kano
13. ALSCON – Aluminum Smelter Company of Nigeria
14. AMCON – Asset Management Corporation of Nigeria
15. ANAMCO – Anambra Motor Manufacturing Company Limited
16. APC – Armoured Personnel Carrier
17. ARCEN – Agricultural Research Council of Nigeria
18. ASC – Ajaokuta Steel Company
19. ASUP – Academic Staff Union of Polytechnics
20. ASUU – Academic Staff Union of Universities
21. AU – African Union
22. BF – Blast Furnace
23. BOF – Basic Oxygen Furnace
24. BOI – Bank of Industry
25. BPD - Barrels Per Day
26. BPO – Business Process Outstanding
27. BPP - Bureau of Public Procurement
28. BVN – Bank Verification Number
29. CAC – Corporate Affairs Commission
30. CACS – Commercial Agriculture Credit Scheme
31. CAMA – Company and Allied Matters
32. CAPMI – Credit Advance Payment for Metering Implementation
33. CBN – Central Bank of Nigeria
34. CCB – Code of Conduct Bureau
35. CCECC – China Civil Engineering Construction Company
36. CCT – Conditional Cash Transfer
37. CNG – Compressed Natural Gas
38. COREN – Council for the Regulation of Engineering in Nigeria

39. CRF – Consolidated Revenue Fund
40. CSSR – Call Setup Success Rate
41. DAS – Dutch Auction System
42. DCR – Drop Call Rate
43. DisCos – Distribution Companies
44. DPK – Dual Purpose Kerosene
45. DPP – Director of Public Prosecutions
46. DR – Direct Reduction
47. DMO - Debt Management Office
48. DSC – Delta Steel Company
49. DVPCS – Department of Veterinary and Pest Control Services
50. ECOWAS – Economic Community of West African States
51. EFCC – Economic and Financial Crimes Commission
52. EMS – Electricity Management System
53. EPSRA – Electrical Power Sector Reform Act
54. FAAN – Federal Airport Authority of Nigeria
55. FAO-UN – Food and Agricultural Organisation of the United Nations
56. Fannie Mae – American Federal National Mortgage Association
57. FCFMT – Federal College of Fisheries and Maritime Technology
58. FFS – Fee for Service
59. FGN – Federal Government of Nigeria
60. FID – Final Investment Decisions
61. FMBN – Federal Mortgage Bank of Nigeria
62. FME – Federal Ministry of Education
63. FPSO – Floating Production Storage Offloading
64. FRA – Fiscal Responsibility Commission Act
65. Freddie Mac – Federal Home Loan Mortgage Corporation
66. GBB – Galaxy Back Bone
67. GDP – Gross Domestic Product
68. GenCos – Generating Companies
69. GEEP – Government Enterprises and Empowerment Programme
70. GGCN – Gas Gathering Company of Nigeria
70. GOC - Government Owned Corporations
71. GOE - Government Owned Enterprises
72. GIHL – Global Infrastructure Holdings Limited
73. GINL – Global Infrastructure Nigeria Limited
74. GPA – Grade Point Average
75. GVA – Gross Value Added
76. HMO – Health Maintenance Organisation

77. HND – Higher National Diploma
78. IBEDC – Ibadan Electricity Distribution Company
79. ICAN – Institute of Chartered Accountants of Nigeria
80. ICPC – Independent Corrupt Practices Commission
81. ICRC – Infrastructure Concession Regulatory Commission
82. ICT – Information and Communications Technology
83. ID – Identification
84. IDA – International Development Association
85. ID4D - Identification for Development
86. IEI – Innovation Enterprise Institutions
87. IFEM – Interbank Foreign Exchange Market
88. IMF - International Monetary Fund
89. IMO – International Maritime Organisation
90. INTRACEN – International Trade Centre
91. IOC - Integrated Oil Company
92. ISO – International Standard Organisation
93. ISP – Internet Services Provider
94. ITES – Information Technology Enabled Services
95. IYC – Infrastructure Youth Corps
96. JBA – Joint Board Administration
97. JICA – Japanese International Cooperative Agency
98. JSRM – Jos Steel Rolling Mill
99. KSRM – Katsina Steel Rolling Mill
100. LNG –Liquidated Natural Gas
101. LPG – Liquefied Petroleum Gas
102. MAN – Maritime Academy of Nigeria
103. MAP – Metre Assets Provider
104. MAS – Mobile Authentication Service
105. MBS – Mortgage Bank Securities
106. MDA – Ministries Department and Agencies
107. MGI – Migration Governance Indicators
108. MMBtu – Million British Terminal Units
109. MMSCF – Million Standard Cubic Feet
110. MNO – Mobile Network Operators
111. MoU – Memorandum of Understanding
112. MRP - Monetary Policy Rate
113. MTNDP – Medium Term National Development Plan
114. MYTO – Multi Year Tariff Order
115. NACF – Nigeria Agriculture Catalyst Fund
116. NAFDAC – National Agency for Food and Drug Administration and Control

117. NAIDP – Nigerian Automotive Industry Development Plan
118. NAICOM – National Insurance Commission
119. NAQS – Nigeria Agricultural Quarantine Services
120. NATF – National Agriculture Task Force
121. NBA – Nigeria Bar Association
122. NBET – Nigeria Bulk Electricity Trading
123. NBS – National Bureau of Statistics
124. NBTE – National Board for Technical Education
125. NCAA – Nigeria Civil Aviation Authority
126. NCAM – National Centre for Agricultural Mechanization
127. NCC – Nigeria Communication Commission
128. NCDC – Nigeria Centre for Disease Control
129. NCDMB – Nigerian Content Development and Monitoring Board
130. NCS – Nigeria Customs Services
131. NDDC – Niger Delta Development Commission
132. NDG SPP – National Domestic Gas Supply and Pricing Policy
133. NDPHC – Niger Delta Power Holding Company
134. NDLEA – National Drug Law Enforcement Agency
135. NEEDS – National Economic Empowerment and Development Strategy
136. NEITI – Nigerian Extractive Industries Transparency Initiative
137. NEPC – Nigerian Export Promotion Council
138. NETAP – Nigerian Electricity Transmission Access Project
139. NER – Nigerian Electricity Roadmap
140. NERC – Nigerian Electricity Regulatory Commission
141. NESCO - Nigerian Electricity Supply Corporation Limited
142. NESI – Nigerian Electricity Supply Industry
143. NFETF – National Formative Education Task Force
144. NHIRC – Nigeria Health Insurance Regulatory Commission
145. NICTIB – National Information Communication and Technology Infrastructure Backbone
146. NIBRRI – Nigeria Building and Road Research Institute
147. NIBBS – Nigeria Inter-Bank Settlement System
148. NIMASA – Nigerian Maritime Administration and Safety Agency
149. NIMC – National Identity Management Commission
150. NIN – National Identification Number
151. NIOMCO – National Iron Ore Mining Company
152. NIRSAL – Nigerian Incentive-Based Risk Sharing System for Agricultural Lending
153. NIWA – Nigerian Inland Waterways Authorities

154. NLC – Nigeria Labour Congress
155. NLNG – Nigerian Liquidated Natural Gas
156. NLTP – National Livestock Transformation Plan
157. NMDPRA – Nigeria Midstream and Downstream Petroleum Regulatory Authority
158. NMGC - Nigeria Mortgage Guarantee Company
159. NMMP – National Mass Metering Programme
160. NMRC – Nigeria Mortgage Refinance Company
161. NMSME – Nano, Micro, Small and Medium Enterprises
162. NMU – National Maritime University
163. NNOC – Nigerian National Oil Corporation
164. NNSL – Nigerian National Shipping Line
165. NOGICD – Nigerian Oil and Gas Industry Content Development
166. NSDP – Nigerian Seafarers Development Programme
167. NSIP – National Social Investment Programme
169. NSMP – National Sugar Master Plan
169. NSPRI – Nigerian Stored Products and Research Institute
170. NSSA – Nigeria Social Security Administration
171. NUC – National Universities Commission
172. NTERTF - National Technical Education Rehabilitation Task Force
173. NUJ – Nigerian Union of Journalists
174. NUPRC – Nigerian Upstream Petroleum Regulatory Commission
175. NURTF – Nigerian Universities Rehabilitation Task Force
176. Obama Care – Affordable Care Act
177. OEM – Original Equipment manufacturers
178. OMPADEC – Oil Minerals Producing Areas Development Commission
179. OND – Ordinary National Diploma
180. OSRM – Oshogbo Steel Rolling Mill
181. PAGMI – Presidential Artisanal Gold Mining Development initiative
182. PAPSS – Pan-African Payment and Settlement Programme
183. PIA – Petroleum Industry Act
184. PMO – Project Management Office
185. PMS – Premium Motor Spirit
186. POWORA – Personal Responsibility and Work Opportunity Reconciliation Act
187. PPA - Public Procurement Act
188. PPI – Presidential Power Initiative
189. PPP – Public Private Partnership
190. PSB – Payment Service Banks

191. PSRO – Power Sector Recovery Operation
192. PTDF – Petroleum Technology Development Fund
193. PWC – Price Waterhouse Cooper
194. QCA – Quality Component Authorities
195. RBIWDA – River Basins and Inland Waterways Development Authority
196. REA – Rural Electrification Agency
197. REFILS – Research Extension Farmer Input Linkage System
198. RFSC – Rail Freight Services Companies
199. SAP – Structural Adjustment Programme
200. S & T – Science and Technology
201. SCADA – Supervisory Control and Data Acquisition
202. SIM - Subscriber Identification Modules
203. SMACS – Solid Minerals Artisanal Cooperatives Scheme
204. SMEDAN – Small and Medium Enterprises Development Agency
205. SME – Small and Medium Enterprises
206. SMICON – Social Medical Insurance Corporation of Nigeria
207. SOMOCON – Social Mortgage Corporation of Nigeria
208. SON – Standard Organisation of Nigeria
209. SSHIS – State Supported Health Insurance Scheme
210. STEM – Sciences, Technology, Engineering and Mathematics
211. STI – Science, Technology and Innovation
212. TANF – Temporary Aid to Needy Families
213. TCN – Transmission Company of Nigeria
214. TCF – Trillion Cubic Feet/ TCF – Targeted Credit Facility
215. TCH CONG – Traffic Channel Congestion
216. TETFUND – Tertiary Education Trust Fund
217. TELCOS – Telephone Companies
218. TOC – Train Operating Companies
219. TPGL – Torrent Power Generation Limited
220. TPE – Taij Promo Export
221. TREP1 – Transmission Rehabilitation and Enhancement Programme
222. TREP2 – Transmission Rehabilitation and Expansion Programme
223. TVET – Technical and Vocational Education Training
224. UBEC – Universal Basic Education Commission
225. UNCRC - United Nations Convention on the Right of the Child
226. UNDP – United Nations Development Programme
227. UNESCO – United Nations Educational Scientific and Cultural Organisation
228. UNICEF – United Nations International Children's Emergency Fund

- 229. VEI – Vocational Enterprise Institutions
- 230. VON – Volkswagon of Nigeria
- 231. VPCS – Vehicle Purchase Credit System
- 232. WACS – West Africa Cable System
- 233. WAPP – West African Power Pool
- 234. YAP – Youth Agricultural Programme

INDEX

A

abandoned, 4, 12,23,65,126,261, 267
 abidjan, 172
 about 2–3,8, 10,21–23, 26, 29,35,48, 55,
 64–65, 68,74–75, 78, 80–81–82,94, 96,
 99–100,101–102, 105, 108,113–114,123,
 127, 129,131, 136, 138–140,141–143, 145,
 148, 150,151, 154–156,159–160,161,
 163–164, 170,171, 174, 177–180,181–182,
 187,193, 196, 199,204–205, 207,
 209–210,211, 213, 215,
 217,227,233,241–243, 248–249, 253,
 256,261, 264–265, 267,275, 277–278
 above, 3, 6–7, 14–15,54, 64, 67, 69,102,
 106–107,245–246,260
 abysmal, 29,212
 abysmally, 27
 abubakar, 69–70,71, 76,278
 academic, 6,27,31–33,38–39,43–44,95
 accentuated, 47
 accelerated, 4,22
 access, 9,22, 25–27,55,63, 65, 68,
 70,71–72, 75,97,109,121,129–130-
 131–132,144–147,151, 154,165,171–172,
 175, 177–180,181–182, 187–188,192,
 195,213–214,222, 225, 228,
 230,233,241–242,254–256
 according, 1,13,67–68
 accordingly, 5, 15,36,41
 accountable, 8–10, 15
 accountants, 6
 accommodate, 13
 accomplished, 33, 39–40,43
 adamu, 23
 adjournments, 12
 accusations, 5
 accruals, 34
 achieve, 8,22, 26,58,61–62
 achieved, 2–3,13,40
 acquires, 9
 acquisition, 21, 26,38,66, 69
 acuity, 22

acute, 25
 addition, 11,26–27,51, 54,70,101–102,
 104,207,213, 218,220
 additional, 1,23–24, 26,35–36,46,53, 60,96
 adequate, 4,25,34,96, 100,233, 238–239
 administration, 4,8,11,27,35–36, 40,44,99
 adult, 8,33,21, 25–26,35–36,47–48, 50
 adopted, 8,100
 affairs, 9,61–62
 afcfta, 91,195,200,202
 aedc, 137
 afdb, 131
 affirmed, 10
 afroexim, 134,159
 acja, 11–12
 against, 1,4–5,10,13,21, 25, 29,49–50,56,
 60,61
 agencies, 4–6–7,9–10,12, 15, 18,52,
 57,133,182, 184, 188–189,201–203, 205,
 209,218,255,261,274, 278
 aid, 39,44, 50,57–58
 aided, 10,25
 aiding, 10
 allure, 49
 amended, 5,8-
 9,12,14–15,37,41–42,60,232,263, 269,278
 ajaokuta, 78,89,94, 96,132,156, 158–160
 akin, 86
 aladja, 78,89,156, 159
 ali, 82
 amcon, 137,160,207,217–218
 amortized, 135
 amendments, 8
 amotekun, 59
 anini, 63
 anticorruption, 5,12,13,56–57,208
 artisanal, 123–124, 127–128,191
 antisocietal, 49
 arsenal, 5,51
 anarchists, 49
 architectural, 38
 authorities, 5,58

anonymous, 4,10,238
 anti, 4-5,10,49
 assemble, 1
 association, 6
 associate, 41, 44
 asup, 6
 asuu, 6-7
 asphyxiation, 55
 asymmetric, 57–58,62
 athens, 8
 attorney, 7-8
 automatic, 7
 agglomeration, 95
 agriculture, 29,51, 53, 55,81–82,149,184,
 187–188, 190,191, 193, 195, 197,201–202
 appallingly, 26
 applicants, 27–28
 applied, 29
 appeal, 13
 appendage, 42
 application, 9,13,58,66
 applications, 33
 appoint, 33–34, 37–39,43
 appointees, 37
 appointment, 5-6,28,40-41, 44,60
 appreciation, 25
 apprenticeship, 27
 approach, 26,56
 approaches, 22
 appropriation, 28,54
 assurance, 23, 25, 27,43
 attainment, 21
 attitudes, 21,62
 autonomous, 41,175,216
 autonomy, 27–28,40,41, 44–45
 auspices, 36,59
 avail, 26,55
 available, 24, 29
 average, 21, 25
 averaging, 29
 award, 26
 awards, 29

awareness, 27,231, 233, 235, 238
 awolowo, 28
 azikiwe, 233

B

babangida, 63
 ballot, 41, 43–44
 banditry, 1,50,55, 57,62,166
 barite, 127
 barites, 127
 balances, 6
 belligerence, 1
 belligerents, 58
 bias, 5,29,85
 blowers, 4,10
 budgetary, 45–46,257, 260
 building, 7,25,51, 58,91, 93, 95–96,
 99,104–107,117, 119,126–127,132, 134,
 227,236,241,251, 253
 bureau, 5,244, 246, 250
 buck, 4
 bulge, 47–48
 bullet, 4
 busting, 9
 brutish, 1
 basic, 21,
 23–27,47,60,69–70,78,85–86,119,121,
 123, 129,150,152, 158
 bedeviled, 27
 bedrock, 24,67,76,85,199
 benue, 131–132
 besieged, 132
 befitting, 27
 belonging, 21,49
 belatedly, 83
 beyond, 28
 bigotry, 55
 bills, 38
 blighting, 55
 bloated, 36
 blatant, 29
 blocks, 25,50,53

blows, 25
 board, 6-8,26,31, 34-35, 39,41-43,100,102,
 107, 109-110,115, 117-118,121-122,
 128,137,
 139,165,203,218,231-232,243-244,252
 boast, 29
 breed, 28
 biomass, 129
 bitumen, 127
 brim, 48
 bribery, 28
 bridging, 22,
 brookings, 22
 bureaucrats, 66
 bureaucratic, 56
 bureaucracy, 262
 burdened, 21,136
 burdensome, 25
 burgeoning, 18,49,81
 buoyed, 78
 burning, 22,121,133
 bursary, 29
 business, 26, 28,55-56,62, 67, 69,97,
 99,101-103,109-110,114,124,
 129,139,221-223,232, 239,242,
 248,251,261, 269,273, 278

C

cacophonous, 199
 cadre, 63,132
 campaign, 29,35,45,70,184,200,201,235,
 238,246-247,266
 capability, 24
 capable, 25,40,44
 capacity, 4,7,9-10,27-28,31, 37-38,43,
 67,91, 93-95, 99-100,101, 104-106, 108,
 110,111-117,123, 127-130,131-133,
 136-137, 140,141-142, 145, 150,157,
 159-160,161, 164-165,178, 190,181-182,
 189,191, 198-200,201, 204, 208,231,
 238-239
 capital, 1,29,36,55,67-68, 70,71-73, 77-78,

80,83, 85-86, 89-90,101, 105,111-113,
 117-118, 120,122,135-136,
 138-139,163-165,175,204,232,242,
 247-250-251, 256, 260,272-273
 career, 25
 carrying, 28,44,61
 category, 21,33,47-48
 causes, 2-3,6,8,21,171,268,280
 cauldron, 56
 cbn, 55,70,72,135-138, 149,152, 178,
 183,192,195,208,210,211, 214-217,
 241-242, 247, 249-250
 centers, 27,45, 50,51, 54,64, 70
 central, 25, 28,70
 century, 22
 certainly, 24,47
 certificate, 24, 26-27,47,100
 certificates, 29
 challenge, 25,58,65, 70
 challenges, 21
 chancellors, 28
 change, 23
 changing, 22
 chapter, 21
 characterized, 28
 charged, 25,43, 50,52
 chauvinistic, 57
 charging, 23
 chauvinism, 21
 childhood, 23
 children, 21, 23
 choice, 25
 chronic, 23
 classrooms, 23
 cognate, 37,218
 collaboration, 35,50,53,65-66, 70
 cognitive, 23
 colleagues, 22
 collection, 22,41
 colleges, 24, 26, 29,33, 35,41-42,44-45
 combating, 26
 commencement, 23,31, 40

commencing, 25
 commission, 5-7,10,25,31-32, 34,
 36-3760,62, 65, 69
 commissioner, 60,61-62
 committee, 6-7,52-53
 comprising, 6
 commitment, 28-29,35
 communication, 24
 compared, 29
 competition, 28,49
 compulsory, 23,34-35
 consequence, 24,48
 consequently, 25, 28-29
 conceptual, 38
 constraint, 23
 consensus, 45
 continue, 24, 26,45
 contrary, 29
 conventional, 27
 coordinated, 27
 coren, 29,43
 correlation, 21
 corruption, 4,5,8-10-11-13,
 16,28,55-57,68,72, 79,101,114,
 133,160,209, 212, 216-217,221,231,
 238,262
 council, 24
 counterpart, 25
 countries, 21
 country, 21-23
 courses, 24, 26-27
 covenant, 28
 craftsmen, 29
 creativity, 23
 credible, 27
 crime, 23
 chartered, 6
 civil, 6,19,21,52-53, 58,68,71,
 77,124,230,234
 cohesion, 65
 coldtapping, 66
 congress, 61

council, 6
 creating, 6
 conduct, 5,34, 37-38
 confidence, 5,33
 crimes,11,49,56,61-62, 65,265
 criminal, 8,11-14,63
 crises, 27,37,41,48,83,135-136,
 138,190,203,270
 culture, 28,40
 curricula, 27
 curriculum, 24,26,31, 36,69
 commonwealth, 4,102
 composed, 33, 37, 39
 composition, 37, 40
 comatose, 93
 commence, 5,95
 community, 4-5,51,61
 comprehensive, 10
 constitution, 8,45,59-60,61
 countries, 8
 coordination, 7
 cumbersome, 8
 custody, 4
 contrary, 2-3
 captivity,1
 captured,1
 characterized,1
 concentration,1
 circumstances, 9
 clearance, 10
 clogged, 107-108
 clogging, 107
 clausewitz, 58
 collection, 10
 constitute, 47
 construction, 50
 consultation, 44
 contained, 9
 context, 9
 contributed, 31
 contribution,39
 contributions, 34, 39,54

convenience, 33
coronavirus, 32
corporate, 40,50
corps, 36, 40,44, 49–50
consolidated, 39
consolidation, 38–39
constitute, 33
consulting, 34
contemptibly, 34
contractor, 9-10
crook, 9

D

dangote, 109
dashed, 24
data, 22, 27,36,65–66,74,91,
97,125–127,139–140,170-171–173,
175,189,211–212,255–256,279
daunting, 48,65
dearth, 27,67,78,125,182,208
darkness, 8
defense, 48,53,57
deficient, 42
decision, 8
debilitating, 22
declining, 28
deficit, 24
delayed, 24
delivery, 24, 29
demonstrable, 29
demonstrated, 22
dependence, 28
deploy, 24
deprived, 28
design, 28, 53, 65–66
designed, 27,53
desire, 24
desired, 21,58
diffusion, 22
dilapidated, 25
diploma, 26–27
direct, 28

directly, 21
director, 27
disabilities, 23
disabled, 26
disappointing, 21
disaster, 25
disastrously, 29
disciplines, 24
discrimination, 21, 29
disincentivizes, 28
dispersal, 26
displaced, 23, 26
disposition, 26
disequilibrium, 79
disproportionately, 29
diversification, 28,77, 80,81, 87,129,199
diversify, 29
diversifying, 28
desperate, 25
despite, 10,23,55
devastating, 1,25,55
develop, 21–22
developed, 10,45,190,192
development,2-3,18,21, 23, 28,32–34,
37, 39–40,48, 50,52, 60,63,71–72, 74,
76–77, 80,81–83, 85–87, 89–90,94,
99–100,101, 105, 107, 110,111–118,
120,123–130,141, 146–150,152–158,
160,161, 163–164,
166–167,177–179,181, 187–188,
190,193–194, 196–197,
199–20,222,235–236,251–252, 255–256
deeper, 1,23
democracy, 8-9
democratic, 8
demographic, 47–48
denotes, 35
debilitating,1
defined,1
deems, 7
deploying,1
deprivation,1

desolation,1
 despair,1,49
 destitution,1
 destructive,1
 determination,1
 detailed, 10
 diffusion, 34
 digits, 1
 despicable, 35
 disparate, 10
 department, 4-
 5,9,14,39,42,89,106–107,113, 117,227,231,
 239,250
 directorate, 5,7-8,12
 director, 6-7-8,52
 diaspora, 6,8,43,118–119
 disappear, 4
 dogged, 5
 downstream, 69,143
 dormitories, 36
 doldrums, 32, 60,103
 doleful, 92
 discipline, 49,53
 discrimination, 42
 dredging, 106, 110
 disorder, 47
 disproportionately,42,126
 disease,1
 dispersal, 34
 dissemination, 34
 drive, 17,28,70
 driven, 26,51, 55.62, 70
 driver, 21
 dropout, 21, 25
 dropouts, 26–27
 dubbed, 23
 dug, 23
 dynamic, 28
 drafting, 1
 drug, 11,49–50,57,102,237–239,265–266
 drugs, 50,227,233, 237–239,265
 dysfunction, 93

E

each, 1, 28,36, 39–40,54, 59,65,113,
 115, 118–119,121, 124,134,
 138,142,185–187,192,
 197,209–210,213,263,272
 eagerly, 25
 early, 23, 25,32, 34,262, 266
 ecological, 194
 economic, 16, 18,21, 25, 27–28,48,
 50,51, 55,71–72, 77, 80,82–83,91,
 95–96, 99,102,116,129–130,141, 143,
 147,152–153, 158,161, 166,
 169,190,196,205,214–216,225,249,259,
 267, 269–270,271–273, 275–276
 economist, 22,47,267, 269–270,271
 economy, 19,28–29,44,52, 55–56,
 58,67, 69,75–77, 80,81, 83–84, 86,
 89,107–108,115–116,
 118,126–127,135,141–143,
 149,155,163, 169,199,194,
 197–198,203, 210,214–215,224–225,
 228–229,241, 245,256,
 259,268–270,271–273
 education, 1,20,21–29,31–37, 39,41–43,
 45–48, 50,63–64,
 67–69,73,85–88,118–119,121,
 129,166,174,201, 204,212,224,236,
 238,256,263, 266,277
 educational, 21–22, 25, 27, 29,33,
 35–36, 39–40,55,64–65,87,111,164,254
 educationally, 22,34
 educationists, 33
 efcc, 11, 14,218
 effective, 24–25,33,46,64, 66,115, 117
 effort, 24,33,51, 57–58,63,122, 126–127
 egwu, 22
 egypt, 28–29,169
 eisenhower, 161
 electronic, 24
 elements, 22
 eliciting, 35
 eligible, 23

emboldenment, 49,61
 emoluments, 40
 emotional, 23
 emphasizing, 24
 emphasis, 34
 emphasize, 32
 empirically, 22
 enmeshed, 108
 employment, 27,41, 48–50,51, 56,71–72, 77,
 80,105–106,117,183–184,221, 223–224
 enforces, 22
 enactment, 114, 116, 118
 enforcers, 31
 energetic, 48
 energies, 49
 energy, 47–48
 enervating, 42
 endemic, 31
 engineering, 25, 29,31, 73, 79,88
 engineers, 29
 enhanced, 24
 enliven, 24
 enormity, 48
 entrepreneurship, 54
 enumeration, 51
 enunciated, 58
 erosion, 56
 enrolled, 23, 26
 enrollment, 21, 25
 enrolment, 27
 ensure, 22, 24,37
 ensures, 27,37
 ensuring, 24
 enterprise, 26, 28–29,74–76, 80
 enthusiasm, 26
 entrenched, 29
 environment, 27
 eponymous, 25
 equipped, 21, 25, 27
 equipment, 34,100
 equipping, 34–35
 equity, 23, 27

equivalent, 26
 equiano, 172
 equinox, 172
 especially, 24,33, 36, 38
 essence, 28
 essentially, 22,33
 established, 24,38–39,53–54, 59–60
 estimated, 29
 estimates, 22
 etcetera, 29
 ethnocentrism, 21
 even, 25–26, 28–29,48,57,61, 67, 70
 executive, 31, 34, 37–38,60,62, 65
 exert, 24
 exist, 23, 28,38–39,64
 exacerbate, 63
 existential, 38
 existing, 24, 29,36, 38
 expensive, 28,60
 exponential, 17,179,194
 equivalent,1
 europe, 223, 227
 european, 222
 erroneously, 49
 extreme,1
 extremely,1
 extendable, 33
 execution, 40
 expenditures, 40
 experience, 33, 37
 ewelukwa, 139

F

facilities, 25,36, 38–39,50,54,64, 68,90-
 91,
 100,101,116,129,139,146,158,177–178,
 180,181–182, 189–190,193,201–202,
 230–231, 233–234, 236,241, 250-
 251,266
 federal, 11, 15,22, 25–26, 28,31, 33–34,
 36, 39,41–42, 44, 46, 49,53, 56, 59,66,
 87–88,93, 100,102, 104, 106–107,118,

120,124–127,133, 137,156,162–164,16
6,201, 205, 207–208, 210,222, 224, 230,242,
245, 248–249,251, 253, 260,262,
265–266,273–274
federation, 15,39–40,45,52, 58,
60,61,148,230
figures, 25
financial, 14–15, 18,24, 29,60,66–67,
69–70,123, 125, 127,132, 136–137, 139
fintech, 170
fiscal, 15,55,112,127–128,142,207–208
fishermen, 26
fixture, 28
fcfmt, 100,101, 103
fme, 22–23
floundering, 79,89
flung, 36
force, 32–33, 37, 39,51,51, 58–60,63–64, 67,
69,77,81, 85, 89,104
formal, 25,33, 35–36, 39
fortunate, 21
foreign, 33, 37, 39–40,93–94, 98–100,101,
103–105, 109,111, 113–115,129,141,
150,163, 170,178, 180,183, 190,195,221,
223, 225, 227, 235
foundation, 23, 25
framework,
22,39,97,118,142–143,151,234–235,272
french, 22
fra, 15
frc, 15
fpso, 104
frittering, 82
frivolous, 12,82
fringe, 49
freight, 93, 95–97, 99,102,198
frightfully, 26
fuel, 46,81
fuels, 47
functional, 25, 27
fund, 15,26, 29,33–34, 38, 40,74,104,116,
118, 120,124, 126–128,143, 146–148,152,

159,161–163,175–176,
179,194–195,201, 207,
218,230,232,242,
249,251–252,266,277–279
fundamental, 21–22,31,82,117
funded,
25,26,40,86–87,101,208,212,8–9,234,2
68
funding, 23, 25, 27, 29,32–33, 37–40,41,
45–46,51, 53–54,
60,62,71,88,103–104,120,125–126,131,
135,159,179,229,233,
235–236,242,251, 260
funds, 11,25, 29,45,72, 75,
79,124–126,137,183,194,203,218,242,
247,274

G

gangs, 49
gdp, 16–17,52, 55, 57, 80–81, 83,91,
96,108,123, 126–128,152,
155,193,207–208,213–214,224,
229,239,241, 243,253, 256
gargantuan, 52,82,212
gas, 80,82, 88–89,99,104,
107,111–120,121, 127, 129,131–132,
140,141–145, 147,151, 153, 155,
159,211,261–263
gender, 21
geographically, 57
get, 27–28
ghana, 28,199
glamorous, 27,44
glaringly, 29
global, 21, 28,37, 39–40
globally, 28,39
glorified, 27
gombe, 95
goronyo, 196
governing, 28,40,41, 44
governance, 39–40,132, 137

government, 11, 14–16, 19,25–26, 28,33–35, 37–40,42–44, 46, 49,52–54, 56–57, 60,61–63, 66–70,76–80,81, 86–90,93–95, 97,101–107,111–114, 120,123–127, 130–131–134, 136–139,141–142, 144, 146, 148,152, 154, 156–159,162–166,172, 175, 178–199,183–186, 189–190,192–195, 197,199,201–210,211–218,222, 224, 226, 228–229,231–234,243, 245, 249,251–253, 256, 260,261–262, 265–266, 269,271–273, 275–276
 graduates, 26–27,31, 33–34, 36,54,101,224
 grants, 41, 45,53,69,88,195,225,232
 great, 29,
 greater, 29,45,167
 grossly, 42
 grooming, 27
 growth, 28,49
 grown, 1
 guinea, 99
 gulf, 99
 gurara, 131
 gulped, 207,211

H

habitable, 64
 hairdressing, 67
 halls, 36
 havoc, 55
 hampered, 32
 haphazard, 68,187,261
 harmonization, 65
 handle, 36
 handled, 36
 hangs, 34
 hanging, 1
 hard,1
 hapless, 47
 harness, 48
 harnessing, 50
 headquarters, 36,185

healthcare,1,227–230,231, 233–235, 237,266–269,275, 279
 hinterlands, 36,57,95,153,246,253, 258
 highest,1
 heinous, 56
 human, 1,17,21, 28,31, 33–34,37,48, 50,72, 80,83, 85, 87–90–94, 99–100,104–105,111–118, 120,123, 126–129,132–133,163–164, 169,181,191, 199–200,201,218,221, 224,238–240,250,259–260,263,280
 humongous, 114,127
 hunger,1,17
 habitual, 29
 healthy, 28
 heighten, 25
 high, 21, 26,47–48
 highly, 29
 hnd, 44,100
 hole, 23
 homologation, 151
 horrendous, 108
 hopelessness, 49
 however, 26, 28,42, 44–45, 48–49
 huge, 24,91, 95, 99
 hygienic, 63
 hyacinths, 106–107
 hydrographic, 106
 hydrological, 106
 hydropower, 131,196–197
 hyperinflation, 270
 ibadan, 28,96,137,203,278
 ibedc, 137
 ict, 24,32,52,67,71,119,170,172
 icpc, 11, 14–15
 idle, 25
 identification, 36,50,53,69,91
 igbinedion, 31
 illiterate, 35
 illiteracy, 1,21, 25,67
 illiterate, 25
 imbroglia, 109,204

imf, 79–80, 207, 214
 imoukhuede, 213
 imbibe, 42, 87, 191
 immense, 17, 48, 52, 129, 195
 impelled, 43, 49
 imperatives, 42
 implications, 47–48
 impulses, 49
 impelled, 38
 impaired, 26
 improvement, 40
 imprudent, 27
 inadequate, 27
 inadequately, 21
 incapacity, 25
 incentives, 24, 29
 include, 29, 44
 including, 21, 23, 26, 28–29, 41, 43, 53, 63, 69
 incubation, 28
 indeed, 23–25, 45
 independence, 24, 37, 42, 93–94
 indispensable, 31
 industrial, 48, 50
 industrialized, 31
 index, 21, 47
 indexes, 21
 indicators, 21
 indirectly, 21
 individual, 28
 induced, 27
 industrial, 26, 77–80, 81–83, 86–89
 industrialization, 29, 49, 77, 72–73, 75–78
 inequality, 21–22
 incentives, 35, 39
 inferiority, 27, 29
 influence, 28
 information, 24, 27, 40
 infirmaries, 36
 infractions, 38
 infinitesimal, 180
 infrastructural, 28, 71, 77, 83,
 90, 163, 173, 186, 212, 221–222
 infrastructure, 25, 27, 34, 36, 40, 44,
 49–50, 53–54, 56, 64, 68–70, 72, 75,
 80, 91–92, 97, 99, 105,
 108–109, 131–132, 136, 138, 143,
 149–150, 157, 159–160, 162, 164,
 166–167, 169–170, 171–175,
 177–178, 182, 187, 212, 220, 221, 228, 2
 innate, 48
 infuse, 26
 initiation, 28
 inimical, 37
 initiative, 28
 innovation, 26, 29, 42
 innovations, 22
 innovative, 27
 insignificance, 29
 insignificant, 27
 institute, 24
 instituted, 25
 institution, 22, 43, 117
 institutional, 28,
 institutionally, 29, 42
 institutions, 15–16, 26, 28–29, 31–33, 38,
 40, 42–45, 54, 56–57, 100
 intellectual, 37, 40
 instrument, 22
 insecurity, 161, 173, 177, 180
 insufficiency, 27
 intellectual, 23, 28
 international, 33–34, 44, 50, 52,
 54, 66, 73–74, 76, 78, 99, 101–104, 107,
 109, 115, 120, 184–185,
 190, 200, 201–203, 205–207, 212,
 218, 222, 224, 226, 231–232, 23
 internationalize, 37
 internationally, 33
 interlocutory, 12
 interventions, 23, 55, 68
 intolerance, 21
 introduced, 26
 introducing, 24
 investment, 29, 162, 165, 173, 180

information,1
insurgency, 1
introduction,1
itakpe, 94,162
iyc, 36, 40,44, 49–50,51–54, 56–57,iyc,
71,174,184, 187,239,258
ivoire, 108
iocs, 199
iran, 198
iraq, 198
iwebelua, 63

J

jba, 118–119
jingoism, 55
job, 34,47–48,63,99,108,120,164,
169,171,274
jobs, 16,31, 36,47,64,82–83,91, 95–96,102,
105,117,143,155,224,
229,239,241,252–253,261
jumped, 31
june, 28–29,31,207
junior, 23, 25–26, 29,34, 115, 119
just, 21, 27,32,42,74,81–82,93, 95,135,
137,151, 154,198
judges, 260
judicial, 244,252
jurisdiction, 76,107
jica, 131, 134

K

kaduna, 57,78,89,112–113,160,244
kainji, 77
kano, 69,94,178,278
katsina, 78,89,95,156, 159–160
kashamanbilla, 131
kenya, 28,102,169,199,205,214
keynes, 269–270
keynesian, 215,277
kidnapping, 55, 57,62
kidnappings, 23,61–62, 65
kids, 23,45

knowledge, 22, 26, 29,31, 34,
37,62–63,94,121–122
kiosks, 50,69,239
kogi, 105
kretser, 145

L

labor, 18,27,54,67,73,81–83, 85,
89,99,114,141, 143,167,177,
180,193,10,223–224,234,272
lagos, 93–96,108,172,203–205,222,
224,238,244–245
laboratories, 35
labs, 24,35–36,42
lackluster, 67–68,85
lackadaisical, 28
landscaping, 36
lacking, 25,34, 38
leapfrog, 22
leapfrogging, 22
learning, 22, 24–25
least, 24,45
leaves, 21
lafarge, 132
lecturers, 28,31, 34–35,42–44
led, 22–23, 28
legally, 23
legislates, 38
legislative, 32
legislations, 23
less, 25–27, 29
level, 21, 23–26,111, 115, 119,121,
128–129,136
levels, 21–22,46, 48,65, 67,111, 115
linchpin, 67
licensed, 26,31,196
livestock, 183, 186,192–193, 195
local, 57–58,60,61–64, 66–67,75, 80,88,
90,102, 105,111, 113–116, 118,123,
126,151, 153,163–164,183, 185,191,
193–196,253
lyndon, 269

literacy, 21, 25–26,33, 35–36,50
lokoja, 105,131

M

made, 12, 14,25, 28,44, 47,52, 58,63, 68,94,
99,101,111, 114,122, 124, 129,141, 150-
151, 153, 155, 159–160,161, 163, 166,173,
179,207–209,211–213, 215,222,
224,238,247,257
macroeconomic, 79–80,271
mainstream, 49,63
midstream, 143
maiduguri, 93–94, 96
major, 23, 25, 27,74, 77,81,91,
99,107,131–132, 136,
138,150,154,163,179,209,218,223
majority, 17,28,37–38,41,
43,103–104,128,137,165,230,232, 238,252,
259
malaise, 31
malthus, 17–18
malthusian, 17
management, 18–19,27–28,43,74,
79,88–89,93–95, 97, 99–100,101–104, 107,
109–110,113–115,126, 128,131–134, 137,
139–140,147,163–164,173,
177,181–182,200,203, 207,212, 214,
217–218,222, 230,231, 236,245,255
mandating, 31
mandatory, 38
mandatorily, 25
manifest, 29
maneuverability, 58
manpower, 29,57,95–96
manufacturing, 29,48–49,52,67,71, 73,
77–80-81–83, 88,91, 94, 96,105,111, 116,
119–120,149–150,151,
159,162–164,174–176,194,241
marginalization, 29
marginalized, 22,47, 49
marauders, 65

maradi, 94, 96
maritime, 99–100,102–105,108–109,153
market, 27,101, 103
mass, 23–26, 29,49–50,105
massive, 25,45, 47
materials, 24–25,34–35
math, 24
mathematics, 24–25,34
methamphetamine, 265
meager, 29
meaningful, 22,48
meant, 25–26
meanwhile, 28
mechanism, 22
mechanized, 29
mechanical, 94, 96
medieval, 96
micro, 28,53–54,67–70,192
migrant, 26
million, 23, 25, 29
millions, 21, 23
minding, 29
minimally, 25
minimum, 24
mining, 29
minister, 23,37
ministerial, 22
ministry, 22, 33,42
mitigate, 25
mobolaji, 203
mobility, 27
mobilization, 29
mobilize, 24
modern, 25
monotechnics, 26, 29,41, 43
monumental, 100
morale, 24
morocco, 214
moreover, 25
most, 21, 23–25, 27–28
mortality, 47
motivated, 24

motivation, 24
 moving, 26
 muscular, 24
 malignant, 1
 materiel, 1
 muhammadu, 18, 158
 mushrooming, 31
 muster, 1
 mutual, 33
 multifaceted, 66
 mtn, 170-171
 mtunzini, 171
 mtndp, 81
 msme, 75

N

nafdac, 182, 201, 205, 237-239
 nacf, 195, 201
 natf, 51, 184-185, 187, 189
 narrowing, 22
 namibia, 172
 nation, 16-17, 19-20, 24, 28-29, 42, 45,
 47-49, 54-56, 59-60, 64, 67-68, 7072,
 77-79, 81-83, 87-89, 93-94, 96-97,
 99-100, 102-103, 105, 107-108, 111-114,
 118, 141, 143, 147, 149-150, 152-156, 161,
 163-167, 169-170, 174, 177-180, 181-183,
 188, 190, 193, 196, 199-200, 203-206,
 208-210, 212, 214-215, 217, 224,
 227-228, 243, 249, 255-257, 262, 276-277
 national, 14, 18-19, 23-24, 26-27,
 29, 31-33, 35-38, 41-43, 45, 47-50, 51, 53,
 59-60, 65, 69, 77-80, 81, 85-86, 91, 94-95,
 99-100, 102-105, 112, 114, 141,
 145-146, 155-157, 159-160, 161, 163,
 166, 172-173, 177, 179-180, 181-187,
 189, 191, 193, 196-198, 201, 203, 205, 208,
 210, 211-213, 215-217, 221, 225,
 229-230, 231-233, 236-237, 241-242,
 248-249, 251, 255-256, 261, 267-268, 273,
 278

nbte, 26, 31, 41-46
 ncaa, 205
 ncc, 210
 ncs, 205
 nddc, 261-263
 ndlea, 205, 266
 nano, 53, 67-69, 71-72, 75-76, 256, 278
 nanotechnology, 175
 necessary, 24, 28-29, 31, 33, 35, 37, 42,
 44, 48, 74, 90, 82-83, 85-86,
 89, 162-163, 172, 175, 178
 neglect, 23, 28-29, 42
 net, 21, 43
 neiti, 65
 nevertheless, 24, 31
 ndgspp, 141
 ndphc, 142
 nbs, 68, 155
 ncdmb, 117-118, 120, 155
 nfetf, 33-35, 43-46
 nin, 68, 70, 71, 173-174, 186-187
 nlng, 103-104, 118, 120, 141, 155
 nirsal, 149
 nmu, 100-101, 103
 nnsi, 100-101-103
 nnoc, 112
 nnpc, 112
 ner, 133-134
 nerc, 134, 136-137, 139, 144
 nesi, 135-136
 netap, 131
 nmsmes, 67-68, 72-76
 ngozi, 71, 76
 nibbs, 74
 nibss, 74
 npa, 109
 nsdp, 101
 nmdpra, 143
 nogicd, 153, 263
 nguru, 93
 nigeria, 11, 13, 17-19, 21-23, 25,
 27-29, 31-34, 37, 39-40, 42-43, 45,

47–48, 50, 52–54, 56, 59–60, 62–65,
 67–70, 71, 74–78, 80–83, 85–90, 91–97,
 99–100, 101–108, 110, 111–112, 114,
 116–117, 119–120, 121, 123–124,
 126–130, 141–143,
 145–150, 151–160, 161, 163–166,
 169–170, 171–174, 177–180, 181–183,
 186–190, 191, 193–200, 201–202,
 204–205, 207–209, 212–217,
 219, 221–222, 224–225,
 227–229, 231–232, 235,
 237–238, 241–244, 247, 249–250–
 251–252, 255–258, 262–263,
 265–267, 276–280
 nigerian, 11, 22, 24–25, 27–28, 33,
 36–37, 39–40, 41, 43–44, 48, 50, 91,
 93–94, 97, 100, 101–106, 108, 111–113,
 115–116, 118–120, 131, 133, 141, 146,
 148, 152, 154, 160, 181,
 183–184, 189–190, 191, 193, 195,
 197, 201, 203, 205, 207–208, 210, 211,
 213, 215–216, 221–225,
 227–229, 234–235, 248, 250, 253,
 259, 278
 nigerians, 15, 17, 19, 25, 35, 93–95,
 98–100, 101, 105, 111–112,
 114–120, 121–122, 127–130, 131–133,
 135–140, 144–147, 151, 154, 164,
 169, 171, 174–175, 183,
 186–187, 199–20, 211–213, 222,
 224–226, 228, 230, 232, 235, 241, 246,
 250, 252, 255, 261, 263, 277, 280
 nimasa, 99, 101, 103–104
 niwa, 106–107
 npower, 187
 nspri, 189–190
 ntlp, 183
 nomadic, 26, 35
 nomads, 26
 nonetheless, 24
 nonexistent, 24, 28, 100
 notionally, 24

notwithstanding, 23
 nominate, 38, 40, 43
 nominated, 33, 37, 39, 42
 nominations, 37, 43
 nominees, 37, 41, 43
 nuc, 31, 37–40, 41–42, 46, 88
 nuf, 40
 nurtf, 39–40, 104

O

obafemi, 28
 objective, 26, 126
 obligatory, 25, 94
 obligated, 40
 obligations, 39
 obtainable, 24
 oil, 11, 78–80–82,
 88–89, 99, 104, 111–120, 121–122, 124,
 126–127, 190, 197–200, 203, 206–207,
 209, 213, 215, 261–263, 270
 offer, 26, 49
 offering, 26
 ombudsman, 231
 ompadec, 261–262
 opportunities, 48, 51, 56, 68, 75, 82, 90–
 91, 99, 108, 127
 opportunity, 48
 opec, 198
 opt, 27, 39
 optimally, 22
 otherwise, 24, 26
 outrank, 28
 outstripping, 18
 overcrowded, 23
 overcrowding, 28
 overview, 21, 32
 organization, 33, 35, 37, 49
 osinbajo, 19
 oron, 100
 oronsaye, 209
 oshokoshoko, 156

oshogbo, 78,89,96,156,160
osayande, 63
osunbor, 63
ogbemudia,93
ond, 100
onshore, 100
ownership, 93, 99

P

pace, 12, 17–18,49,214,222
pan, 74
painstakingly, 40,222
palpably, 11
pandemic, 32
paradoxes, 34
parlous, 83
participation, 24–25,66, 60,61, 69,97,
99–100,111–114, 116, 118,252
particularly, 12,21–22,48,49,51, 56,86,110
partnership, 28
pass, 27,31, 34, 38–39
patent, 29
path, 26,36,52
pathway, 22,56
penetration, 27,32,50,53
people, 22, 27, 29,47–48
perception, 27, 29,42
perpetuates, 25
personnel,29,33,35, 40,53,58,100,209–210,
228–229
pervasive, 29
phenomenal, 26
philosophical, 26
physical, 23,39,44, 50
piketty, 22
pillars, 23
planning, 27
plausible, 22
poignant, 67
point, 23, 29
policy, 23–24, 29

polytechnics, 26,
28–29,34,41–45,94,120
poor, 21, 24,27,32,48,72, 75–76,87,114
poorly, 25, 27
population, 29,47–49,96, 99,243,
249,251, 255–256, 258–259,269
portraying, 29
portrays, 28
positive, 24
possess, 24,42
possible, 21,47
post, 26
potential, 22,95–96, 99,94
poverty, 1,11, 17,21,76–77, 79–80-
82,147, 150,154,212,238–239,272,
274–275, 279–280
practical, 25–26,31, 36,42
practices, 29
preference, 27, 29
prepares, 23
prescribe, 22
present, 23, 25
presently, 23
pressed, 23
pressure, 28
prevalent, 23, 25
prejudice, 39
primary, 23, 25,50
private, 26, 28–29,78, 80,88–89,124,
126, 128,132, 136, 140,164–165
problems, 22, 27
proceeds, 26,39–40
produce, 28
product, 28
productive, 25,49
productivity, 22,48–49
professors, 34, 37, 39–40
professionalized, 24
profits, 71
program, 24, 26,45, 49–50,71, 75–76,
80,85
programs, 26–27

progress, 22
 project, 28
 projects, 28,41, 44,77–79,88–90
 proliferated, 28
 proliferation, 31
 prioritization, 31
 properly, 25
 prospective, 24
 provide, 24–25, 28
 psychological, 49
 public, 21, 23, 25–29,33, 36, 39–40,41–42, 44–45
 published, 22–23
 pyramid, 29
 population,1,172, 175, 177, 179–180
 president, 18–19,31, 34, 37–40–41, 43, 45, 47,52,
 60,61–62,98,147,158–159,184,188,197,
 200,202–03, 06, 210
 prisoners,1

Q

qualification, 13,24,35,186,245–246
 qualified, 24–25, 27,32,43,53,100,118,185
 qualify, 24,54,103,121,185,
 189,229,242,246
 qualitative, 28
 quality, 19,22–25, 27–28,31, 33, 35,
 37–40,43, 45,72–73,103,129,134,146,151,
 156,169,178–179,188, 190,228,231,
 236–238
 quantum, 29,36,88,111,
 116–117,122,164,221,248
 quartile, 25
 quintuplicating, 200
 quarantine, 201,205

R

rail, 50, 93–97,203
 railroad, 94
 rails, 94–96
 railway, 93–97,203
 railways, 91, 93–97
 ranking, 18,21, 28,39–40,47
 ranks, 28
 rapidly, 17,22,47
 rate, 17–19,21, 25–26,48–49,75,81,
 83,114,124,140,146, 150,159,169,175,
 180,204, 208,214,
 217,248–249,256,268, 270,271–273
 rates,21, 24,47,72, 77,
 79–80,99,111–112, 114,
 118,141,151,208, 210,214,221, 225,
 228,252, 256,269,273–274, 277, 279
 ratios, 23,41, 43, 47,250
 rbiwda, 197
 readily, 24
 reality, 24, 27
 rebecca, 22
 recalibration, 22
 recently, 26
 recommend, 34, 37,43,52
 recommended, 40
 recomposed, 38–39
 recomposition, 40
 recruited, 36,49
 recruiting, 36
 redundant, 36,69–70,124
 reequip, 35
 refectories, 36
 recognition, 22
 recruitment, 28,37,43
 rectors, 28,44
 refurbish, 35
 refurbishing, 35
 refurbishment, 40,43–45
 registered, 29
 registration,
 24,36,50,53,67–70,71,91,106

rehabilitation, 34, 39–40,41,
 43–45,93,104,161, 167,188,194
 rohypnol, 265
 roosevelt, 268
 relation, 28
 relatively, 27–28
 relevance, 22–24, 27
 relevant, 26–27
 reliable, 27
 religious, 21
 reinvigorate, 63
 remain, 24,48
 remains, 21, 24, 27
 remaking, 22
 reminder, 24
 remuneration, 24, 28,35,41
 representing, 27
 representative, 33
 requisite, 24, 28,37, 39
 research, 27–28,38,41
 researchers, 22
 resource, 28,95, 99,117, 120
 resources, 27,48,74, 77, 79–90,103,
 106,112, 115–116, 118, 120
 respective, 25,107
 respectively,1
 responsibility, 28,101, 107, 110,118, 120
 retrofitting, 34
 rfsc, 97
 revamping, 33, 36,43
 revolutionary, 32
 ravaging,1
 referring, 1
 rendered,1
 reviewed, 22
 reviews, 23
 reward, 24
 ridden, 27
 rivalry, 28
 roadblock, 27
 roadmap, 22–23,77,118, 130,133,179
 roadmaps, 23

running, 27
 rural, 25,48, 50,91, 96
 russia, 156, 158–159
 russian, 158–159

S

saddled, 188
 sadly, 15,26,33,48
 salaries, 40
 sam, 22
 same, 13–14,23, 27,31–32,43, 48,74,
 78,82, 90,101, 104,
 109,117–118,166–167,171, 174, 179
 sapping, 48
 sanitation,1,63, 68,91
 scarcity, 27
 scared, 23
 scholarly, 27
 scholarship, 27
 school, 21, 23–26,33–34, 36,47,
 50,85,118–120
 schooling, 23
 schools, 21, 25–27,
 29,33–35,87,118–120,223
 science, 24–25,34–36, 39,119–120,220
 scientific, 21, 28,33, 40,87–88
 scientists, 29,234–235
 scope, 26,50
 scourge,1
 scramble, 28
 seafarers, 100
 seats, 27–28
 secondary, 23, 25–27, 29,32–35
 sector, 21–22,32,49,111, 115,
 118,123–126, 128–130,132–134,
 136–137, 140,142–145,
 147–150,152–156,241, 243, 245–246,
 249,253
 sectors, 26,142–143, 147
 secretary, 34, 37–38,43
 self, 24,31, 40

senior, 23, 26,33–35
 sensitization, 29
 service, 24,201, 205, 207–208, 210,213
 set, 23–25,33, 35, 38–39
 severe, 23
 shabbily, 34
 shaky, 23
 share, 27, 29,39–40
 showcasing, 35
 short, 23,31,45, 48
 shortage, 23,34
 shortages, 21, 23
 shortlist, 39
 shortlisted, 40
 significant, 24, 29,40
 simply, 22
 smacs, 51
 smedan, 52, 54,71–72, 74–76
 smallmedium, 71
 smes, 52–53,71, 75
 simultaneously, 22,35,45
 skewed, 29
 skill, 21, 29,31
 skilled, 26, 29
 skills, 21–23,25–26,31, 36
 slightest, 26
 social, 21, 23, 47, 49–50
 solutions, 21,47
 some, 21–23, 25–27
 sought, 22
 sorghum, 180,191
 south, ,28,171–173, 177, 180
 southern, 172
 soybeans, 180
 span, 31, 33, 39–40
 spanning, 23,36
 spate, 23
 speaking, 27
 spirit, 23
 squalor, 38
 squares, 36
 stabilizing, 33
 staff, 34, 36–38
 staffing, 39
 staff, 27
 standard, 27–28
 standards, 24, 27–28
 state, 13,25, 28,41–42, 44–45,
 50,51–54, 56,59–60,61–63,71,
 75,83,123–124, 126–127,133, 139
 states, 11,25,47, 49–50,51, 54,
 56–60,61–65, 70,71,83, 87,101,
 105–107,118,121, 124, 127,140
 statistics, 29,48
 stem, 25
 stewardship, 22
 stigma, 29
 still, 21, 23, 27
 stipulation, 23
 stoutly, 24
 strategy, 22
 strikes, 25
 stuck, 23,48
 strengthening, 37
 stringent, 38,43
 structure, 11,27,35–36,41, 50,103,132
 structures,33, 39,44, 50,133, 139
 student, 35, 40,42
 students, 31–33, 35, 39,44
 stupendous, 336
 subjects, 24, 26
 success, 26
 successfully, 22
 surfshark, 169
 sukuk, 207
 suffer, 24,42
 suffers, 29
 sundry, 40,205
 superstition, 21
 supposed, 26
 supposedly, 24
 surprise, 24
 system, 21, 23–25, 27–29,32–33, 37,42,
 45,93, 96–97,107–109,171–172,

177,181–183, 186–187,
189–190,192–194,227–230,233–235,
237–238,241–245, 247–248,255,
259,265–268,272, 276–278
systems, 23,32,163,171, 173, 175,182,191,
196,229,238,268,275
systematic, 111, 115–118,167

T

tackling, 31,48
target, 26
targeted, 24
task, 32–33, 39,43, 45,51,
53,69,104,117–118,124, 127,239
tasks, 36,101
teacher, 21, 23–24,33–35
teachers, 21, 23–25, 27,34–36,42–43, 119
teaching, 22, 24–25,31, 34,187,233, 236
tech, 24
technical, 13,23, 25–29,31, 34,41–45,
47,52–53,65–66,73,85,
87–89,93–96,101–102, 104,111–114,
117,119–120,121–122,
125,135,150,158,161, 164,225
technicians, 29
technological, 21, 24, 28–29,50,64,
66,72–73, 77,85, 88,104–105,111–
112,130,150,182, 187–188,213
technologists, 29
technology, 22, 24–25,34–35, 39,43,65,
70,73, 78–80,85–87,102, 118–120,164,172,
175, 180,188,191,220,223, 225,235
technophobia, 32
tens, 21,36
terrorism, 50
terrorist, 49
telecommunication, 170
telecommunications, 169,171, 173
tertiary, 27–28,31, 37–38,41–42,
44–45,104,224, 230
test, 25, 27,38–39

tetfund, 40,45
thereafter, 26
therefore, 11, 19,26, 28,35,42–43, 45,
47, 49,73, 76,83, 86,122, 126,135,141,
144, 146, 149–150
thomas, 17,22
threshold,1
thrive, 22
through, 13, 17–18,28,33–34, 38–40,41,
45,74, 76, 79–81, 83, 86, 88,102, 104,
106, 108, 110,112, 115–116, 118
thrusts, 23
toward, 24
towards, 26, 29,49
trade, 91, 95, 99–100
training, 23–24, 26–27, 29,36,42,
49–50,51, 53–54, 56,63–64, 93–96,
100,101–104, 107,112, 117–118, 120
transitioned, 32
transparent, 40
transportation, 91, 95,
100,105–109,117, 119–120
trap, 208
treasury, 207–208
trimming, 204
trep, 131, 134, 139
tribalism, 21
tuition, 29
tv, 26–27, 29,34,85, 87,164

U

ubec, 34
un, 32,138,155,229,256
uk, 173,214,241
unabated, 31
uganda, 28
unable, 28,31, 33
unaffordable, 28
unavailability, 24
unchecked, 31
unemployed, 36,47–49,69–70,75, 81

underemployment, 21,48,55–56,67
 unesco, 33, 37, 39
 unicef, 33
 undermined, 29
 undue, 27
 unemployment, 21, 26,36,47,49,54–56,77, 79
 unfortunately, 28
 universal, 25,33–36,86
 universities, 26–28,31–34, 37–40,41,94,120
 university, 28,31–32, 37–40,41,95,100,120
 unfettered, 65
 unlocking, 22
 unqualified, 24,37
 unsatisfactory, 24
 update, 27
 upgrading, 25
 upside, 29
 upstream, 65,96,113, 116
 uromi, 63
 upwards, 25
 urgently, 22, 29
 usable, 27
 upskill, 31
 urgent, 35, 39
 utmost, 40
 utterly, 35
 utilities, 29,91

V

vacancies, 37,41, 43–44,104
 value, 40,44,113–114, 116,201, 204,218
 various, 21, 23,202, 206, 215–216, 241,253, 256, 259
 verily, 24
 vessels, 99–100,101, 103–105, 107
 vice, 28,40
 victim, 31
 village, 5,36
 virtual, 32, 35
 vocationalization, 25–26,34,85
 vigorously, 22, 24,184

vitriol, 56
 vladimir, 158
 vocational, 23, 26–27, 29,42, 45,73,85
 volatility, 47
 volunteers, 33
 vote, 37–38,43
 vocationalized, 24
 vociferously, 59

W

wacs, 171
 washington, 224, 227
 wallowing, 33
 war,1,18,58,73,77,147,268–269,war, 274
 warri, 94,108, 110,112–113
 waterways, 91, 99,196–197
 wealth,49
 weaves, 31
 wedged, 38
 webometrics, 228
 widespread, 36
 workshops, 36,42, 44,97,117, 119
 world, 1,31, 47,91, 96, 99–100,104, 108–109,111, 117–118, 120,124, 129,131, 134, 140,187, 190,198–200
 woefully, 31
 whistleblowers, 11,66,263

X

fixtures, 223

Y

yahoo, 223
 yaro, 237
 yap, 184–186
 yearly, 17,29,96,103–104,129,143,152, 155,164,178–179,181, 183,192,209–210,218,224, 229, 235, 237,241, 249,253

years, 12, 15, 17,22–24,31, 33, 35,
38–39,44–45, 47,75,81, 85, 90–91,102, 106,
109,119,128,133,142–143, 145,152, 154,
157–158, 160,162, 170–171, 179,181, 184,
189–190,193–194, 196–200,212–213, 215,
217,221–222, 225, 227, 230,234–235,246,
248–249,252, 256, 259,261, 265,
267,274–275
yet, 23, 26,42,60,81–82, 86,131, 133, 135,
139
young, 21–22,47–48,124,132,199
youth, 20,22, 26,36, 40,44, 47–50,51,
53–56,69–70,106,123,183–184, 187,201,
204,223,239,258,263, 266
youths, 51, 53, 56–57,63,71,
75,99,107,123–124,184, 187,204,258–259
yangtze, 106

Z

zimbabwe, 149
zungeru, 131,141
zuccotti, 275