AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE DE DÉVELOPPEMENT

COUNTRY FOCUS REPORT

NIGERIA

Driving Nigeria's Transformation

The Reform of the Global Financial Architecture



AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DÉVELOPPEMENT

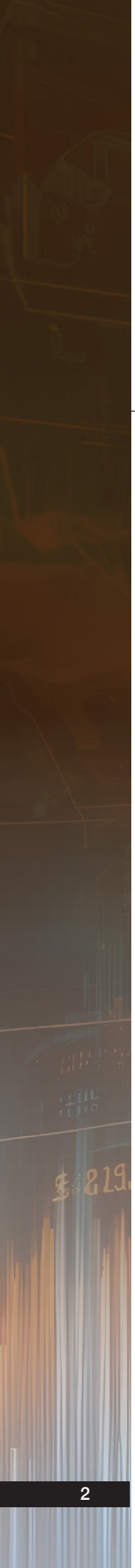
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TABLE OF CONTENTS

ACKNOWLEDGEMENTS **3**

LIST OF ABBREVIATIONS **6**

EXECUTIVE SUMMARY **8**

INTRODUCTION **9**

1. NIGERIA'S ECONOMIC PERFORMANCE AND OUTLOOK **11**

1.1. Introduction 12

1.2. Recent Macroeconomic Developments 12

1.3. Outlook and Risks 14

1.4. Policy Measures to Address Macro Stability 15

2. TAKING STOCK OF NIGERIA'S STRUCTURAL TRANSFORMATION PROGRESS **17**

2.1. Introduction 18

2.2. Taking Stock of Economic Performance and Transformation in Nigeria 18

2.3. Drivers, Bottlenecks, Opportunities to Nigeria's Structural Transformation 18

2.4.Unpacking Structural Transformation Through Labor Productivity Decomposition 20

2.5.Drivers to Accelerate Nigeria's Structural Transformation 21

2.6.Key Bottlenecks to Fast-Paced Structural Transformation 21

2.7.Financing Nigeria's Structural Transformation 22

2.7.1. Financing Needs and gap 22

2.7.2. Closing the Financing Gap Through Domestic Resource Mobilization 23

2.8. Policy Recommendations to Accelerate Nigeria's Structural Transformation 24

3. FINANCING STRUCTURAL TRANSFORMATION IN NIGERIA: THE NEED FOR REFORMS OF THE INTERNATIONAL FINANCIAL ARCHITECTURE **27**

3.1. Introduction 28

3.2. Mobilizing Additional Resources for Africa's Structural Transformation 28

3.2.1. Reform of the International Financial Architecture 28

3.2.2. Rechanneling Special Drawing Rights (SDRs) to Developing Countries 28

3.2.3. Reforms of the Global Tax Architecture 28

3.2.4. Reforms of the Debt Sustainability Analysis Framework 29

3.2.5. Reforms of the Credit Rating Framework 29

3.3.Financing Climate Action 30

4.0. Key Policy Recommendations 30

4.1. Reforms of the Global Financial Architecture (GFA) 30

REFERENCES **31**

LIST OF FIGURES

Figure 2.1: Nigeria's Real GDP Growth Compared to Peers (Percent)
Figure 2.2: Relative Sectoral Productivity and Employment Shares in Nigeria, 2018
Figure 2.3: Economic Diversification and Export Concentration in Nigeria
Figure 2.4: Structural Change in Nigeria, 1999-2018
Figure 2.5: Estimated Annual Financing Needs Gap to Fast-Track Structural Transformation in Nigeria by 2030 and 2063
Figure 2.6: Required Increase in Tax-to-GDP Ratio to Close Nigeria's Financing Gap
Figure 2.7. Total Natural Resources Rents as Percentage of GDP, 2021

LIST OF TABLES

Table 2.1: Macroeconomic Indicators

LIST OF ABBREVIATIONS

ACRA	African Credit Rating Agency
AFSM	African Financial Stability Mechanism
AfDB	African Development Bank
AEO	Annual Energy Outlook 2024
BDCs	Bureau de Change
CBN	Central Bank of Nigeria
CFR	Country Focus Report
CIA	Central Intelligence Agency
CRAs	Credit Rating Agencies
DBN	Development Bank of Nigeria
DFIs	Development Financial Institutions
DSF	Debt Sustainability Framework
ECI	Economic Complexity Index
ECIV	Export Concentration Index Value
ECOWAS	Economic Community for West Africa States
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FGN	Federal Government of Nigeria
FME	Federal Ministry of Environment
FMFBNP	Federal Ministry of Finance, Budget and National Planning
GDP	Gross Domestic Product
GFA	Global Financial Architecture
GNI	Gross National Income
IADB	Inter-American Development Bank
ICT	Information, Communication and Technology
I&E	Investors and Exports
IFFs	Illicit Financial Flows
IMF	International Monetary Fund
LIC-DSF	Low Income Country Debt Sustainability Framework
MDBs	Multilateral Development Banks

MPR	Monetary Policy Rate
MPS	Multidimensional Poverty Survey
MSMEs	Micro, Small and Medium Enterprises
NAFEX	Nigerian Autonomous Foreign Exchange Fixing
NASA	National Aeronautics and Space Administration
ODA	Official Development Assistance
OECD	The Organisation for Economic Co-operation and Development
PMS	Premium Motor Spirit
SDGs	Sustainable Development Goals
SDRs	Special Drawing Rights
SSA	Social Security Administration
NIIMP	National Integrated Infrastructure Master Plan
UNCTAD	United Nations Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VAT	Value-Added Tax

EXECUTIVE SUMMARY

Real GDP growth decelerated from 3.3% in 2022 to 2.9% in 2023, driven by high domestic inflation aggravated by the removal of subsidies on Premium Motor Spirits (PMSs), continued low oil production, and a weakening global economy. To control inflation, monetary policy remained tight in 2023 with the Central Bank of Nigeria (CBN) increasing the Monetary Policy Rate from 16.5 percent in December 2022 to 18.75 percent in December 2023. High food and energy prices stoked inflationary pressures, exacerbated by the removal of fuel subsidies and rapid depreciation of the Naira following the unification of the official exchange rate windows in June 2023. The unification has resulted in rapid depreciation of the Naira against major currencies. At its peak, the Naira depreciated by more than 220 percent from 460 Naira to the US Dollar to 1,470 Naira in June 2024. Public debt remains low at 40.0 percent of GDP as of December 2023 but the Federal Government of Nigeria's FGN debt service to the FGN revenue ratio was high at 111 percent in 2023 due to low revenues and depreciating Naira. Growth is projected to recover slightly to 3.2% and 3.1% in 2024 and 2025, respectively as recent reforms bear fruit.

Despite some evidence of structural transformation, reflected in agriculture employment's falling share in total employment from 49.3 percent in 2000 to 35.2 percent in 2021, the pace of transformation is not sufficient to propel industrial take-off in Nigeria. Labor has relocated to the services sector, whose share of employment rose from 39.4 percent in 2000 to 52.1 percent in 2021. Industrialization has been sluggish, as industry's share of employment has increased only marginally over the past 20 years, from 11.3 percent to 12.7 percent. Furthermore, wage employment is low, at 11.8 percent reflecting low quality jobs, and 93 percent of labor working in the informal businesses and sectors.
The agriculture sector, employing 46 percent of Nigeria's workforce, is half as productive, 48 percent, as average national labor productivity. Furthermore, more than half of Nigeria's workforce, 56 percent, are employed in three sectors that are less productive than the economy-wide productivity (agriculture, transport, and public service).

To finance structural transformation, Nigeria needs to accelerate domestic resource mobilization, especially by reforming the tax administration. The African Development Bank (AfDB) supports the integrated unique identification system aimed at improving tax compliance. Nigeria faces exorbitant financing costs in global financial markets, with its 30-year bond trading at a double-digit yield of 11.1 percent in January 2023 (and 10.9 percent in June 2024) compared with 8.3% at issue in 2021. Consequently, Nigeria was unable to mobilize financing from the Eurobond market in 2023.

As part of the reform of the global financial architecture, establishing an African Financial Stability Mechanism (AFSM) could help Nigeria access liquidity at a lower cost. Furthermore, reforms to the international financial architecture including reduced subjectivity in the global credit ratings can help Nigeria attract development financing at a cheaper cost.

INTRODUCTION

The Nigeria Country Focus Report (CFR) 2024 reviews of recent macroeconomic developments and the outlook for the medium-term (2024-2025). The report also gives a comprehensive overview of progress in Nigeria's structural transformation, identifies key trends, and estimates the financing needs to fast-track structural transformation. In addition, the report presents the external financing need of the country to achieve structural transformation while dealing with the threat of climate change and motivates the needs for reforms to the international financial architecture. This report provides country-level counterpart analysis of the African Development Bank's flagship publication, the African Economic Outlook (AEO) 2024, under the theme: ***Financing Structural Transformation: The Need for Reforms of the International Financial Architecture.***

This CFR is structured as follows: Section 1 discusses Nigeria's recent macroeconomic performance and outlook. Section 2 takes stock of Nigeria's structural transformation journey, while section 3 estimates Nigeria's external financing need to achieve structural transformation and motivates the needs for reforms to the international financial architecture, while Section 4 draws policy recommendations.

1

NIGERIA'S ECONOMIC PERFORMANCE AND OUTLOOK

KEY MESSAGES

• Economic growth decelerated from 3.3% in 2022 to 2.9% in 2023, driven by high domestic inflation, signifying the increasing macro instability the country is facing.

• Monetary policy remained tight in 2023 with the Central Bank of Nigeria (CBN) increasing the MPR from 16.5 percent in December 2022 to 18.75 percent in December 2023 to control inflation which rose from 18.8 percent in 2022 to 24.5 percent in 2023.

• Public debt remains low at 40.0 percent of GDP as of December 2023 but the FGN debt service to FGN revenue ratio is high at 111 percent in 2023 due to low revenues, and the depreciating Naira.
• Growth is projected to recover slightly to 3.2% and 3.1% in 2024 and 2025 respectively as recent reforms bear fruit.

• Policies to restore macro stability should be prioritized, while maintaining the reform momentum and protecting the most vulnerable from the adverse impacts of the reforms

1.1. Introduction

This section assesses Nigeria's recent economic growth performance and the medium-term outlook and proposes policy options to foster high, resilient, and sustainable economic growth, and support macroeconomic stability to anchor structural transformation.

1.2. Recent Macroeconomic Developments

This chapter presents an updated analysis of Nigeria's economic performance for 2023, including medium-term growth projections over the period of 2024-2025. It assesses trends in key macroeconomic indicators including fiscal and monetary policies, and public debt. This chapter also discusses the outlook and the main downside and upside risks and provides policy options to foster macroeconomic stability, and economic transformation.

Economic Growth and drivers: Nigeria's real GDP growth slowed from 3.3% in 2022 to 2.9% in 2023 attributed to weak global growth, and high inflationary pressures resulting from rising food and energy prices (**Table 2.1**). The IMF's April 2024 World Economic Outlook Report estimates that global growth fell from 3.5%, as recorded in 2022 to 3.2% in 2023, and was weighed down by; (i) the impacts of higher global interest rates, which rose by about 400 and 650 basis points on the average in advanced economies and emerging market economies respectively since late 2021; and (ii) spillover impacts of multiple shocks on global food prices. The Food and Agriculture Organization of the United Nations (FAO) Food Index stood at 120.6 in April 2024 (2014-2016=100), higher than the 101.4 recorded in October 2020. Furthermore, the spike in domestic inflation from June 2023 following the removal of subsidies on petrol dampened private consumption and economic activity. Inflation rose to 24.5 percent in 2023 compared to 18.8 percent in 2022 driven by rising fuel costs and depreciating Naira. Inflation increased sharply by 10.4 percentage points between June 2023 and March 2024, from 22.8 percent to 33.2 percent. On the supply side, growth was driven by the services and agriculture sectors, while consumer demand and investment were the main drivers on the demand side

Monetary Policy and Inflation: Monetary policy remained tight in 2023 to control inflation. The CBN progressively increased the MPR from 16.5 percent in December 2022 to 18.75 percent in December 2023. High food and energy prices

Table 2.1- Macroeconomic Indicators

Macroeconomic Indicators	2019	2020	2021	2022	2023(e)	2024(p)	2025(p)
Real GDP Growth	2.2	-1.8	3.6	3.3	2.9	3.2	3.4
Real GDP Growth per Capita	-0.3	-4.3	1.2	0.8	0.5	0.9	1.0
Inflation	11.4	13.2	17.0	18.8	24.5	31.6	20.7
Overall Fiscal Balance, Including Grants (% GDP)	-4.5	-5.0	-5.2	-5.4	-5.1	-4.3	-4.1
Primary Balance (% GDP)	-2.8	-2.9	-2.8	-3.0	-3.0	-2.9	-2.9
Current Account (% GDP)	-3.1	-3.7	-0.7	0.2	0.9	3.0	-3.6
Total Population (Millions)	203.3	208.3	213.4	218.5	223.8		
Life Expectancy at Birth (Years)	52.9	52.9	52.7	53.6	53.9		

Source: Data from domestic authorities; estimates (e) and prediction (p) based on authors' calculations. AfDB Statistics Department, April 2024

stoked inflationary pressures, exacerbated by the removal of fuel subsidies and rapid depreciation of the Naira following the unification of the official exchange rate windows in June 2023. Inflation rose from 21.3 percent in December 2022 to 28.9 percent in December 2023. The most rapid increase, by about 6%, occurred between June 2023 and December 2023, attributed to the sharp increase in retail prices by 183 percent between May 2023 and December 2023. Food inflation increased from 23.8 percent in December 2022 to 33.9 percent in December 2023, and it is partly attributed to the impacts of multiple shocks as well as decreasing domestic food production due to insecurity in food producing zones of Nigeria.

Exchange Rate Movements: Recent depreciation in the exchange rates has weakened macroeconomic stability. In June 2023, the CBN unified the multiple official exchange rate windows into a single window - the Investors and Exports (I&E) window with the aim of removing distortions in the allocation of foreign currency and boosting investor confidence. Prior to the unification, Nigeria had three main official exchange rate windows, namely (i) the Nigerian Autonomous Foreign Exchange Fixing (NAFEX) used for government transactions, official foreign reserves, and some priority sectors; (ii) the interbank exchange rate, which commercial banks used to trade in foreign currencies among themselves; and (iii) the Investors and Exporters (I&E) window rate which allowed investors and exporters to buy and sell foreign currencies at market-determined rates.

The unification and market convergence has resulted in rapid depreciation of the Naira against major currencies. In addition, forex supply constraints due to dwindling oil exports receipts-imposed liquidity challenges that further undermined exchange rate stability. At its peak, the Naira depreciated by more than 230 percent from 460 Naira to the US Dollar to 1,490 Naira in June 2024. The Naira had strengthened, to 1,147 Naira to the dollar in April, 2024 following several interventions including monetary policy tightening and tightening of Bureau de Change (BDCs) regulations including sale of foreign currency equivalent to USD 10,000 to the BDCs and restricting their margins to no more than 1.5% above the purchase price but reverted to 1,470 Naira to the dollar in May 2024 as import demand pressure on the dollar mounted.

Fiscal Developments: The recent improvements in non-oil revenues have moderately improved Nigeria's fiscal position. Total revenues increased from 6.5% of GDP in 2020 to 7.6% in 2023, driven by increased non-oil revenues on the back of economic recovery from the impacts of COVID-19. The increase in oil production from 1.1mbpd in 2022 to 1.2mbpd in 2023 and further to 1.4mbpd in the first two months of 2024 helped to further boost revenues. Despite the increase, oil production is still below Nigeria's output quota of 1.8 million bpd set by OPEC and the 2024 budget benchmark of 1.78 million bpd. In June 2023, OPEC lowered Nigeria's 2024 output quota to 1.58 million bpd reflecting Nigeria's failure to meet its targets in the previous years. Furthermore, Nigeria suffers from a large tax gap estimated at 14-15 percent of GDP due to tax evasion and collection inefficiencies. The country also faces weak tax effort attributed to failures in developing a modern, simple and efficient tax policy, and legal framework. Value-Added Tax (VAT) revenues averages between 1% of GDP below the Social Security Administration (SSA) average of 8% while VAT tax rates of 7.5% remains far below SSA averages of 15 percent. Tax compliance on the other hand remains low because of low tax morale with recent surveys indicating that less than 20 percent of respondents reported paying income taxes in the past year, and just 8% reported paying property taxes. Fiscal deficit is projected to narrow from 5.4% in 2022 to 5.2% of GDP in 2023 as revenues improve. The removal of subsidies on petrol will help boost domestic revenues and narrow the deficit further to 4.8% and 4.4% of GDP in 2024 and 2025 respectively as the recent government reforms bear fruits. Through AfDB support, the government is implementing several

reforms including harmonization of tax laws to improve domestic resource mobilization with a target of 18 percent tax to GDP in 2027 up from 10 percent in 2024. The deficit was financed largely by domestic borrowing, notably from the Central Bank's Ways and Means.

Public Debt: Nigeria's total public debt is low compared to Africa's average, but debt service consumes a high proportion of revenues. Total public debt increased from USD 108,110 million in 2022 (36 percent in 2022) to about 40 percent of GDP in 2023 to USD 108,229.34 million, attributed to securitization of borrowing from the Central Bank. Total external debt outstanding as of December 2023 was USD 42,495.16 million and constitutes 39.3 percent of the total debt while 60.7 percent is domestic. However, the FGN debt service to FGN revenue is high, compromising further the country's macroeconomic stability. According to data published by the country's debt management office in March 2024, the FGN debt service to revenue stood at 111 percent in 2023, attributed in part to exchange rate depreciation effects.

Current Account: Nigeria's current account surplus widened from 0.2% in 2022 to 0.9% of GDP in 2023 on account of improved oil production from 1.38 million barrels per day (mbdp) in 2022 to 1.5mbpd in 2023. Exports increased by 1.9% from 14.5 percent of GDP in 2022 to 16.4 percent in 2023 compared to 0.4% increase in imports from 24.9 percent of GDP to 25.3 percent over the same period.

Poverty and Social Indicators: The 2022 Multidimensional Poverty Survey (MPS) shows that 63 percent of Nigerians (133 million) are multidimensionally poor. Poverty rates are above the national average in 18 out of the 36 States and the Federal Capital Territory. High poverty reflects the effects of economic shocks as well as policy and structural challenges in the economy that undermine the private investment to create quality jobs.

1.3. Outlook and Risks

Growth: Real GDP growth is projected to improve to 3.2% in 2024 and 3.4% in 2025, due to improved security, higher oil production, and stronger consumer demand. Oil production has increased from 1.2 million barrels per day (mbpd) in 2023 to 1.4mbpd in the first two months of 2024, helped by improved security in the oil producing regions.

Inflation: Inflation is expected to rise to 31.6 percent in 2024, driven by higher food prices and continued depreciation of the Naira, before moderating to 20.7 percent in 2025 as inflationary pressures abate. Retail prices of petrol remain high at 696 Naira in March 2024 and are expected to remain high for the rest of 2024. Exchange rates on the other hand are expected to remain at around 1,400 Naira to the dollar in the remaining months of 2024.

Fiscal Developments: The fiscal deficit, financed by domestic borrowing, is projected to narrow to 4.3% of GDP in 2024 and 4.1% in 2025 as both oil and non-oil revenues improve. Oil revenues are expected to improve following increased production, while non-oil revenues are expected to get a boost following the tax administration reforms currently under implementation by the government. Among the reforms is the introduction of an integrated unique identification system, supported by the Bank, aimed at improving tax compliance and revenue mobilization.

Current Account: The current account surplus is expected to improve to 3.0% of GDP in 2024 and 3.6% in 2025 due to higher oil exports. Oil exports are expected to increase with higher oil production. Oil imports on the other hand are expected to reduce following the coming to stream of the 650,000 barrels per day (bpd) by Dangote

refinery, which would significantly reduce Europe's 1.33 mbpd gasoline exports to West Africa.

Risks: Headwinds include insecurity, lower oil production, rising fuel and food prices, and further exchange rate depreciation.

1.4. Policy Measures to Address Macro Stability

Several policy measures can be gleaned out of the preceding analysis.

Short-Term Measures

In the short-term, the FGN should maintain a tight monetary policy to reduce demand pressures and achieve faster reduction in inflation. The monetary policy rate, which was raised to 26.25 percent in May 2024 should be maintained at around the same level in the short-term. Furthermore, the FGN should sustain social protection, but targeting of beneficiaries should be tightened to ensure social benefits go only to those who merit them.

Medium- and Long-Term

In the medium to long-term, several policy measures can be pursued to address macro stability. In the medium-term, the FGN should improve security conditions to enable farm access for improved food production and increased oil production for increased forex earnings to support the Naira.

In the long-term, the FGN should focus on improving infrastructure, particularly energy, to support structural transformation through industrial development and better manufacturing capacity.

2

TAKING STOCK OF NIGERIA'S STRUCTURAL TRANSFORMATION PROGRESS

KEY MESSAGES

• Despite some evidence of structural transformation, reflected in agriculture employment's falling share in total employment from 49.3 percent in 2000 to 35.2 percent in 2021, the pace of transformation is not sufficient to propel industrial take-off in Nigeria.

• More than half of Nigeria's workforce (56 percent) are employed in three sectors that are less productive than the economy-wide productivity (agriculture, transport, and public service), suggesting that there may be scope for aggregate productivity gains by reallocating labor to the high productivity sectors (real sector, utilities, and financial services).

• Relative productivity of the manufacturing sector is lower than average, and constraints the pace of industrial development and structural transformation.

• The annual financing gap to fast-track Nigeria's structural transformation is estimated at US$31.5 billion under the SDG framework in 2030 and US$5.5 billion, assuming the Agenda 2063 deadline.

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2.1. Introduction

This chapter presents a comprehensive overview of recent progress in Nigeria's structural transformation journey, identifies key trends, and estimates the financing needs to fast-track structural transformation. The chapter estimates the financing gaps, with the objective of highlighting the main pull and push factors and guiding both evidence-informed policymaking, and investment opportunities.

2.2.Taking Stock of Economic Performance and Transformation in Nigeria

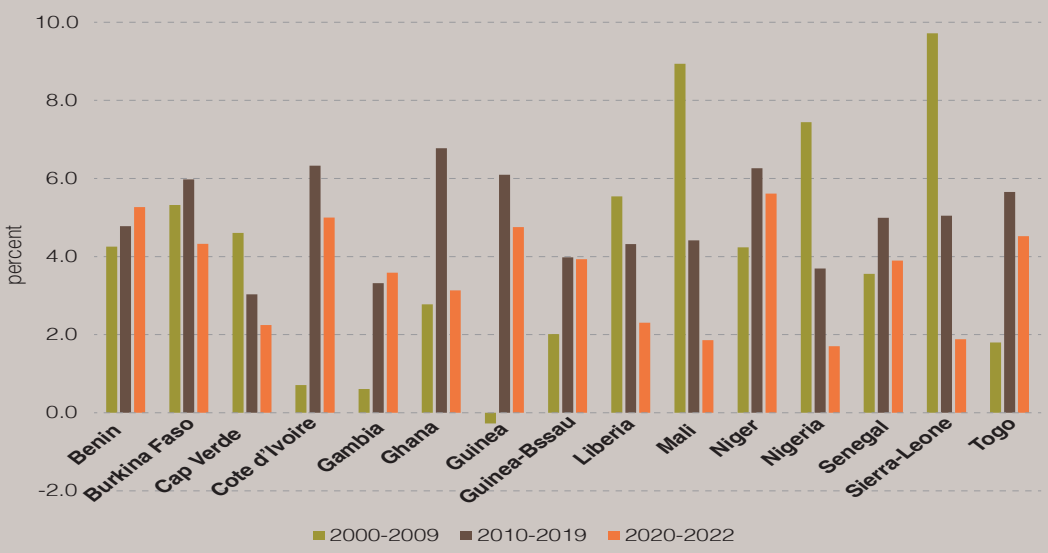
GDP growth averaged 7.8% during the 2000-2009 period, peaking at 15 percent in 2002. Since then, Nigeria's economy has slowed significantly with growth averaging only 1.7% annually between 2020 and 2022 (figure 2.1). By comparison, West African lower middle-income peers have maintained resilient average of 5.0% in Cote d'Ivoire, and 3.9% in Senegal over the 2020-2022 period.

Part of the slowdown is the lack of revenue diversification. Annual growth in manufacturing value-added as a percentage of GDP stagnated at around 1% during the 2020-2023 period, and was negative, at 0.01% between 2015-2022. Consequently, the economy is not well equipped to generate diversified revenues to support its development. While Nigeria's economy is one of the most diversified in Africa, with the oil sector accounting for less than 10 percent of the GDP and with the non-oil sectors accounting for more than 90 percent, the country's key challenge is revenue concentration. The oil sector accounts for 75 percent of export revenues and 50 percent of all government revenue, underscoring the vulnerability of the economy to oil-related shocks.

2.3. Drivers, Bottlenecks, Opportunities to Nigeria's Structural Transformation

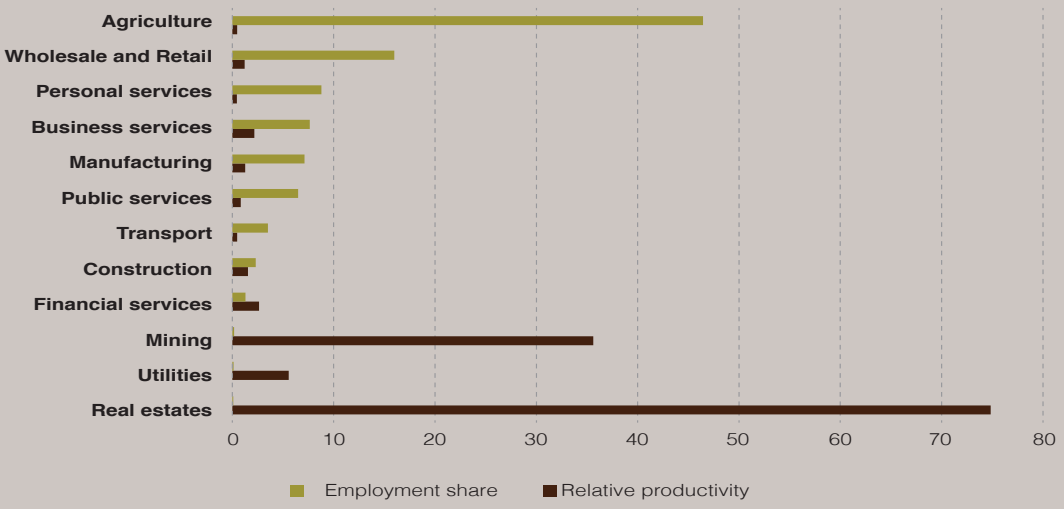
Despite some evidence of structural transformation, reflected in agriculture employment's falling share in total employment from 49.3 percent in 2000 to 35.2 percent in 2021, the pace of transformation

Figure 2.1: Nigeria's Real GDP Growth Compared to Peers (Percent)



Source: AfDB, Statistics Department

Figure 2.2: Relative Sectoral Productivity and Employment Shares in Nigeria, 2018



Source: Economic Transformation Database (ETB). Note: relative to the nationwide average labor productivity.

is not sufficient to propel industrial take-off in Nigeria. Labor has relocated to the services sector, whose share of employment rose from 39.4 percent in 2000 to 52.1 percent in 2021. However, industry's share of employment has increased only marginally over the past 20 years, from 11.3 percent to 12.7 percent, reflecting slow industrialization. Furthermore, wage employment is low, at 11.8 percent reflecting low quality jobs, and characterized by high informality at 92.6 percent.

As discussed in the Annual Energy Outlook (AEO) 2024, a frequent finding of the structural change[1] literature is that developing countries display large gaps in labor productivity between sectors. On one hand, these productivity gaps point towards potential allocative inefficiency,[2] on the other hand, in the sense of Lewis (1954), the gaps suggest that there may be potential for growth through the reallocation of labor from less to more productive sectors[3]. This growth is reinforced to the extent that there is also growth within sectors, in addition to structural change. Productivity within sectors can increase through capital investments, technological innovation, and intra-industry efficiency gains arising from trade.

Figure 2.2 shows the relative labor productivity of key sectors in Nigeria, highlighting significant labor productivity gaps across sectors[4]. The agriculture sector, which employs 46 percent of Nigeria's workforce, is one of the least productive sectors with relative productivity of 0.48%, implying that the agricultural sector is more than 50 percent less productive than average Nigeria economy-wide productivity. This may be attributed to the rudimentary nature of agriculture with limited mechanization and dependence on rainfed production, particularly in the rural areas. On the

1 Structural change is the reallocation of economic activity across agriculture, industry, and services. It is sometimes used interchangeably with ìstructural transformationî, which extends to include social changes such as demographic shifts, institutional adjustments, and changes in social structure (see Gollin and Kaboski, 2024 for new forms of structural transformation).
2 Mensah, et al, 2023; McMillan et al, 2014.
3 McMillan et al, 2014.
4 Relative productivity is calculated as the ratio of each sectorís labor productivity to the average labor productivity of the economy.

other hand, real estate, mining, and utilities, all of which together employ only about 0.5% of Nigeria's workforce, are over 116 percent more productive than the average productivity of the economy.

Figure 2.2 shows that more than half of Nigeria's workforce (56 percent) are employed in three sectors that are less productive than the economy-wide productivity (agriculture, transport, and public service). Adding manufacturing and wholesale and retail trade, both of which are only 20 percent more productive than the economy-wide productivity, the total workforce employed in the five sectors is 80 percent. This suggests that there may be scope for aggregate productivity gains by reallocating labor to the high productivity sectors, even though not all the high-productivity sectors are labor intensive. Modest movements out of the lowest-productivity sectors may generate some growth.

The low relative productivity of the manufacturing sector, which constraints the pace of industrial development and the pace of structural transformation is of much concern. The manufacturing sector in Nigeria, like in many parts of Africa (as noted in the AEO 2024) is characterized by a growing number of small and informal firms that experience employment growth but little or negative productivity growth[5]. The service sector is the most productive in Nigeria. All the service sub-sectors except the public service, are more productive relative to the economy wide productivity. The real estate is 74 times more productive relative to the economy-wide productivity level.

As noted in the AEO 2024, structurally underdeveloped and developing countries are further characterized by a low Economic Complexity Index (ECI), an indicator that measures how diversified and complex the export basket of a country is. The low ECI is also confirmed by their level of export concentration. Export Concentration Index Value (ECIV) closer to 1 indicates a country's exports are highly concentrated on a few products, while values closer to 0 reflect exports are more homogeneously distributed among a series of products.

Nigeria, with economic diversification index of 0.7% and export concentration of -1.6% (red dot in **figure 2.3**) is relatively more economically diversified compared to many African regional peers but is high export concentration in a few products

.

2.4. Unpacking Nigeria's Structural Transformation Through Labor Productivity Decomposition

Reallocating labor from agriculture, where productivity is below the economy's average, to services, where productivity is above the economy's average, has in part resulted in growth-enhancing structural change in Nigeria. Figure 2.4 shows the decomposition of labor productivity in Nigeria following McMillan and Rodrik's methodology (see McMillan and Rodrik 2011). Nigeria experienced structural transformation with a growth of 2.1% in the 2001-2010 period compared to -1.5% in the 1991-2000 period (**see figure 2.4**), and further to 2.4% in the 2011-2018 period. Within-sector productivity, growth was weak in manufacturing and mining, and stronger in agriculture during the 2001-2010 and 2011-2018 period, implying that as labor moved out of the less productive agriculture, within-agriculture productivity increased as less labor is deployed in production. The movement of labor into mining and industry weakens within-sector labor productivity in mining and manufacturing sectors. As noted in the AEO 2024, the structural change effect will be short-lived if non-agricultural sectors do not experience rapid productivity growth[6], and consequently stalling overall labor productivity growth. Policies aimed at boosting productivity within modern sectors such as manufacturing, and services are therefore imperative for driving and maintaining Nigeria's structural transformation.

5 Diao et al, 2021; Kruse et al, 2023.
6 Diao et al, 2019.

Figure 2.3: Economic Diversification and Export Concentration in Nigeria



Source: Staff computations using database from the Harvard University Atlas of Economic Complexity, United Nations Trade and Development (UNCTAD) and World Bank's World Development Indicators.

2.5. Drivers to Accelerate Nigeria's Structural Transformation

Understanding the main drivers of structural transformation is important to ensure appropriate policy measures are put in place to accelerate structural change. AEO 2024 applies an exploratory regression approach on an unbalanced panel comprising 48 African countries from 2000-2019 to estimate the key drivers of structural change in Africa.

The results, which are applicable to Nigeria show that natural resource dependence does not significantly drag structural transformation.

The results further show that currency undervaluation (overvaluation) enhances (stymies) structural transformation. In this case, a competitive exchange rate is crucial for structural transformation.

In addition, the analysis finds that stringent labor market regulation benefits workers by guaranteeing job security, but this often comes at the cost of limited labor mobility and hence job reallocation. It also binds employers to retain workers, regardless of their efficiency levels and contribution to labor productivity. This is costly to firms and a major drag on their productivity, impeding structural transformation.

The results also confirm the view that well-defined and functioning institutions positively drive structural transformation by reducing transaction costs and information externality[7].

The index of gross fixed capital formation, which measures level of investment is positive and statistically significant at 5% in the AEO 2024 regression indicating that capital accumulation drives structural transformation.

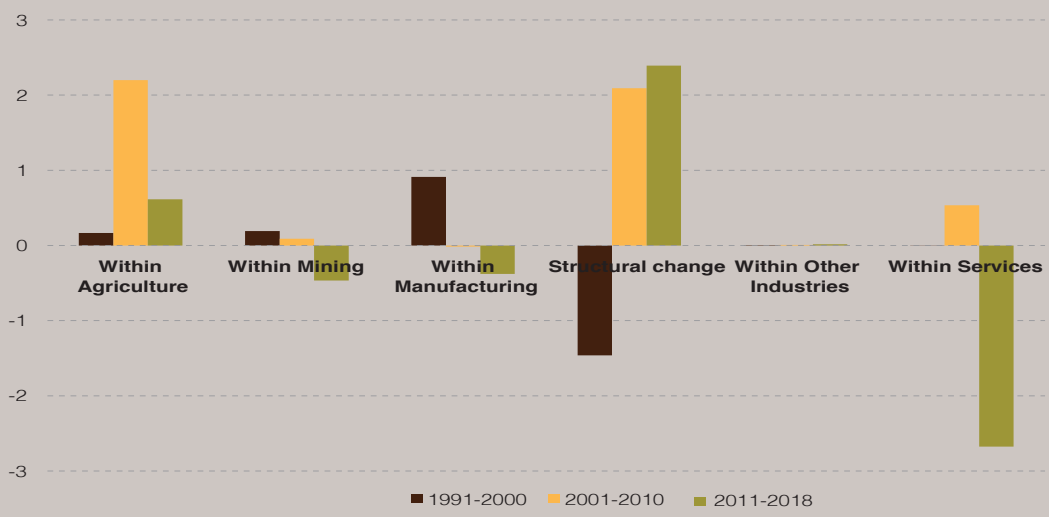
2.6. Key Bottlenecks to Fast-Paced Structural Transformation

Several bottlenecks stand in the way of accelerated structural transformation journey in Nigeria.

Large infrastructure deficit, particularly in energy are a major clog. Electricity generation capacity is far

7 For instance, Deininger et al, 2014.

Figure 2.4: Structural Change in Nigeria, 1999-2018



Source: Staff computations using Economic Transformation Database (Kruse et al, 2023).

lower than the demand due to aging infrastructure. Consequently, only about 59 percent of Nigerians have access to electricity, and about 40 percent of all electricity consumed in the country is produced from back-up generators. Furthermore, transmission losses are high at 8.1% in 2023 compared to emerging countries' benchmarks of 2-6%, with collection efficiency of 73.6 percent, compromising the sectors' financial sustainability. In addition, infrastructure financing gaps are wide. The 2020 National Integrated Infrastructure Master Plan (NIIMP) estimates that Nigeria requires $2.3 trillion in infrastructure investments over 2020-2043 (equivalent to $100 billion annually) to raise its infrastructure stock to the international benchmark of 70 percent of GDP. Transport sector requires $575 billion.

Accelerated structural transformation cannot take place without the right skills. Skills gap in manufacturing is particularly high at 66.9 percent. Furthermore, the quality of jobs is low, with only 12.7 percent of workers in wage employment as of December 2023.

2.7. Financing Nigeria's Structural Transformation

2.7.1.Financing Needs and gap

The AEO 2024 uses a benchmark approach linked to Sustainable Development Goals (SDGs) to compute the estimated financing needs and resulting gap for Nigeria's structural transformation. The methodology quantifies the annual cost and gap of achieving high performance across the four sectors considered directly linked to structural transformation (for more details on the methodology see Annex 2.2 of the AEO 2024).

Using this benchmarking methodology, the Bank estimates that Nigeria will need US$47.6 billion annually until 2030 to accelerate its structural transformation process. When the deadline for the Agenda 2063 is used as reference, the annual financing needs reduce to US$8.3 billion (***figure 2.5***). The bulk of these needed resources are in supporting SDG9 on industry, innovation and infrastructure (USD 19.6 billion in 2030 and US$ 3.4 billion in 2063).

[7]For instance, Deininger et al, 2014.

Given Nigeria's current performance levels on these critical sectors and their projected values – assumed to change in line with GDP per capita, the annual financing gap to fast-track Nigeria's structural transformation is estimated at US$31.5 billion under the SDG framework in 2030 and US$5.5 billion, assuming the Agenda 2063 deadline

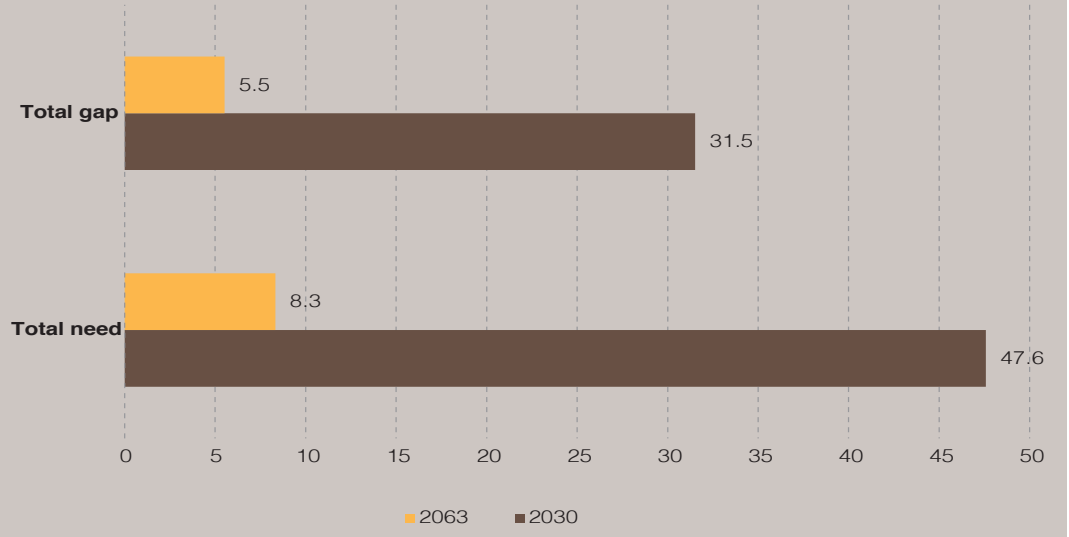
2.7.2. Closing the Financing Gap Through Domestic Resource Mobilization

Closing the financing gap will require accelerated domestic revenue mobilization. However, Nigeria suffers from a large tax gap estimated at 14-15 percent of GDP. The country also faces weak tax effort attributed to failures in developing a modern, simple and efficient tax policy and legal framework. In addition, Nigeria needs to control public revenue leakages through strengthening oversight of public expenditure. VAT revenues averages between 1% of GDP below the SSA average of 8%, while VAT tax rates of 7.5% remains far below SSA averages of 15 percent. Tax compliance on the other hand remains low because of low tax morale with recent surveys indicating that less than 20 percent of respondents reported paying income taxes in the past year, and just 8% reported paying property taxes.

Figure 2.6 shows that Nigeria will need 10.3 and 1.8% increases in tax-to-GDP ratios to close the structural transformation financing gap by 2030 and 2063 respectively. This projection assumes that all the mobilized additional tax revenues are efficiently deployed and allocated to that objective.

Beyond taxes, critical and rare earth minerals present an opportunity to mobilize resources to complement its tax revenues for financing structural transformation. Nigeria is rich in natural capital, relative to other regions. Nigeria's natural gas reserves for instance are estimated at 206.5 trillion cubic feet (Tcf). As noted in the AEO 2024, these natural resources often constitute a major source of export earnings, and government revenues. If well valued, managed, and harnessed, revenues from these natural resources have the potential to generate resources to complement existing domestic resources for financing structural transformation. However, the rents from natural resources have been declining in Nigeria (see Figure 2.7).

Figure 2.5: Estimated Annual Financing Needs and Gap to Fast-Track Structural Transformation in Nigeria by 2030 and 2063



Source: AfDB Statistics Department, May 2024

Furthermore, oil revenue is still below potential mainly attributed to insecurity in the oil producing regions. Despite the increase from 1.1mbpd in 2022 to 1.2mbpd in 2023, oil production is still far below Nigeria's reduced 2024 output OPEC quota of 1.5 mbpd and far below the 2024 budget benchmark of 1.78 mbpd, mainly attributed to insecurity around the oil producing regions and illegal oil bunkering, estimated to take about 10 percent of Nigeria's oil production. With full potential crude oil production and resolution of insecurity around the oil producing regions, Nigeria will not need external financing of its development.

Other than crude oil and natural gas, Nigeria has rich endowments of solid minerals, including precious metals, gemstones, barites, gypsum, kaolin, marble, gold, and columbite, which can be harnessed through beneficiation activities to develop industrial clusters. The establishment of a lithium processing facility in Nasarawa State will provide important raw materials for production of solar panel and batteries for Electric vehicles in Nigeria.

2.8. Policy Recommendations to Accelerate Nigeria's Structural Transformation

Accelerating Nigeria's structural transformation will entail:

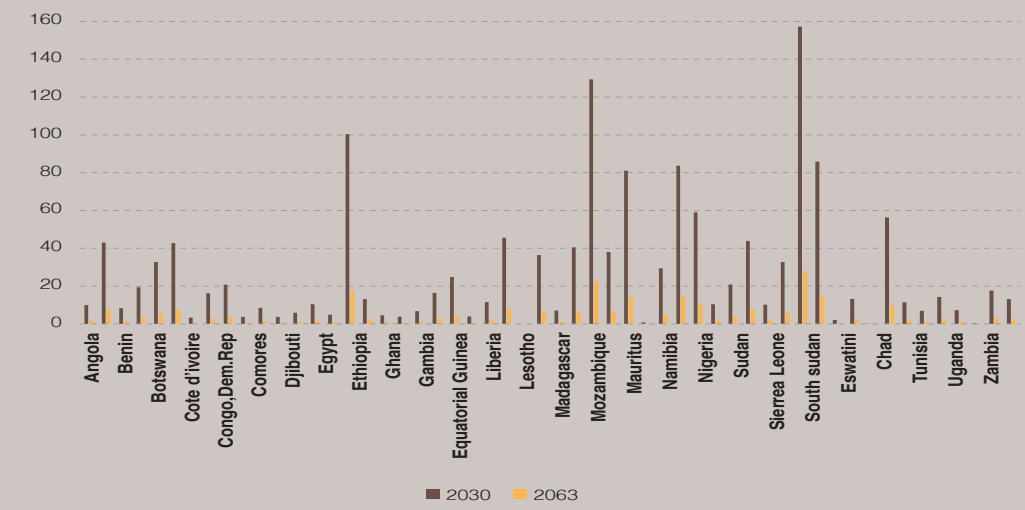
• Accelerating Domestic Resource Mobilization

Nigeria's revenue-to-GDP ratio of about 8% is among the lowest globally and lags the West Africa average of 13 percent. Raising the non-oil revenues therefore remain the main policy option to accelerate structural transformation. Measures that must be prioritized include improving tax collection and tax administration; preventing revenue leakages through effective oversight of public expenditure and ensuring that multinational companies pay appropriate royalties and taxes, and that leakages in tax collection are closed.

• Developing a Supportive Infrastructure

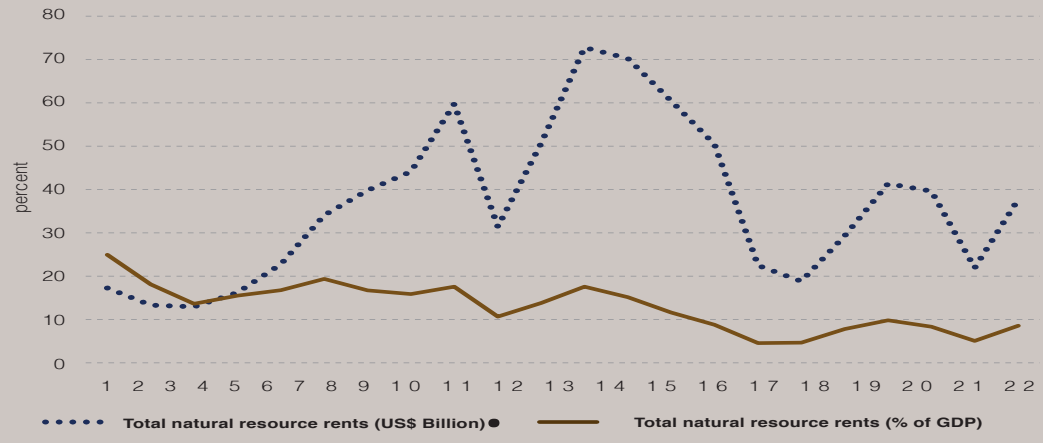
Nigeria faces major infrastructure access challenges, which inhibits its ability to accelerate

Figure 2.6: Required Increase in Tax-to-GDP Ratio to Close Nigeria's Financing Gap



Source: Staff computations based on McMillan and Rodrik (2011) methodology and database from the AfDB Statistics Department and Sachs et al (2023).

Figure 2.7: Total Natural Resources Rents as Percentage of GDP, 2021



Source: World Bank's World Development Indicators

structural transformation. Energy remains the most persistent challenge. Nigeria should invest massively in renewable energy, especially solar, leveraging the platform of the $25 billion Desert-to-Power initiative aimed at providing electricity for 250 million people across the Sahel, including the northern parts of Nigeria.

• Supporting Export-Oriented Private Sector and Public-Private Partnerships

A well-functioning and competitive private sector can innovate and help quicken the structural transformation process. However, private sector development has been constrained by policy incoherence, exchange rate shortages, and implicit taxation. The recent removal of exchange rate distortions is an important reform signal from the new administration to correct distortions to the private sector, enhance transparency in the allocation and access to foreign exchange, as well as boost export competitiveness. Close collaboration between the government and the private sector is necessary to develop new private sectors through public-private partnerships. In particular, the government can support diversification through four main (non-exclusive) types of roles as: regulator, buyer, producer, or financier. In the latter case, development banks like the AfDB can contribute through long-term financing, and building of modern infrastructures (in energy, telecommunications, or transportation).

3 FINANCING STRUCTURAL TRANSFORMATION IN NIGERIA: THE NEED FOR REFORMS OF THE INTERNATIONAL FINANCIAL ARCHITECTURE

KEY MESSAGES

• Nigeria faces rising financing costs in global financial markets, with its 30-year bond trading at a double-digit yield of 11.11 percent in January 2023 (and 10.58 percent in April 2024) compared with 8.25% at issue in 2021. Consequently, Nigeria was unable to mobilize financing from the Eurobond market in 2023.

• As part of the reform of the global financial architecture, establishing an African Financial Stability Mechanism could help Nigeria access liquidity at a lower cost.

3.1. Introduction

This chapter presents Nigeria's external financing needs to achieve structural transformation. It uses the Bank's estimates on financing needs and gaps to fast-track structural transformation (AEO2024) and to finance climate actions (AEO2022 and 2023) respectively by 2030. This chapter assesses, using Bank's estimate, Nigeria's capacity to mobilize financing to fast-track structural transformation by 2063 and motivates the needs for reforms to the international financial architecture towards that end.
agency criteria and accounting standards for their classification as equity. The loans can then be channeled to weaker and more vulnerable countries.

3.2. Mobilizing Additional Resources for Africa's Structural Transformation

As noted previously, Nigeria will need US$47.6 billion annually until 2030 (or US$8.3 billion annually till 2063) to accelerate its structural transformation process. This investment will have to be financed by external flows and domestic private and public resources. Financial flows including Official Development Assistance (ODA), Foreign Direct Investment (FDI), portfolio flows and remittances to Nigeria have been erratic. ODA to Nigeria for instance averaged only 0.78% of Gross National Income (GNI) or USD 3.72 billion (in current prices) in 2021 (latest data), a slight increase from USD 3.69 billion received in 2020. FDI inflows on the other hand declined to $422 million in the first eleven months of 2022 (the latest data available) from $581 million during the same period in 2021 as persistent economic challenges remain.

3.2.1. Reform of the International Financial Architecture

Reforms of the global financial architecture should support increasing external flows to finance Africa's economic transformation. Nigeria faces rising financing costs in global financial markets, with its 30-year bond trading at a double-digit yield of 11.11 percent in January 2023 (and 10.58 percent in April 2024) compared with 8.25% at issue in 2021. Consequently, Nigeria was unable to mobilize financing from the Eurobond market in 2023. As part of the reform of the global financial architecture, establishing an AFSM could help Nigeria access liquidity at a lower cost. Furthermore, multilateral development banks can reform their risk capital models to allow additional lending capacity to regional member countries, including through risk transfer and balance sheet optimization instruments.

3.2.2. Rechanneling Special Drawing Rights (SDRs) to Developing Countries

The AfDB has been at the forefront championing how to better optimize the use of the International Monetary Fund (IMF)'s Special Drawing Rights (SDRs). The framework, developed by the Bank, together with the Inter-American Development Bank (IADB) proposed the rechanneling of SDRs from SDR-rich countries to the Multilateral Development Banks (MDBs) and could be leveraged by 3–4 times. Thus, a US$5 billion allocation to the AfDB could deliver up to US$20 billion of new financing for African countries. The IMF Board in May 2024 approved the acquisition of hybrid capital instruments issued by prescribed holders, subject to a cumulative limit of SDR 15 billion to minimize liquidity risks. The approval allows the IMF to channel SDRs from countries with strong external positions to the AfDB in form of loans with perpetual maturity that meet rating agency criteria and accounting standards for their classification as equity. The loans can then be channeled to weaker and more vulnerable countries
.

3.2.3. Reforms of the Global Tax Architecture

Global tax architecture reforms would help improve domestic resource mobilization by containing illicit financial flows and tax avoidance. The AEO (2024) reports that international profit-shifting, one of the

most prevalent sources of leakage, costed African countries about 7% of their total tax revenues in 2021. For decades, decision-making on global tax matters has largely been led by the Organisation for Economic Co-operation and Development (OECD) with most multilateral tax agreements reached in fora without universal participation, particularly by developing countries that bear the highest burden of resource leakages[8]. The result is that developing countries with the greatest financing needs were excluded from the development of new international tax norms. This deficiency has limited the potential effectiveness and inclusiveness of the global tax norms and the tax system over time. Indeed, the OECD's inclusive framework for Base Erosion and Profit Shifting (BEPS) has been the main mechanism to date for international tax collaboration which was launched in 2013 to end tax avoidance. Although 27 African countries are presently part of the BEPS framework, there is concern that the initiative has not helped much to stem Illicit Financial Flows (IFFs) from the continent. There is need for a more representative body to oversee the establishment and management of international tax rules.

3.2.4. Reforms of the Debt Sustainability Analysis Framework

The current Debt Sustainability Framework (DSF) developed by the World Bank and IMF needs to be updated to reflect the changing structure of economies and the impact of shocks such as pandemics and climate change, on economies, especially those in Africa. Many low-income countries like Nigeria have abundant natural capital that is not captured as part of their wealth in assessing their headroom for debt accumulation. The value of Nigeria's natural capital[9] was estimated at a high of US$ 1.2 trillion in 2015 (in constant 2018 prices), and US$ 843 billion in 2018 (see Nigeria Country Focus Report 2023).

The current DSF however focuses only on the liabilities side of the government balance sheet, that is, what the government owes and ignores government assets, that is, what the government owns and from which resources can be generated to liquidate the debt. Moreover, DSF does not include climate or other sustainability and fragility risks. Yielding to growing concerns on the weakness of the current DSF, the IMF and the World Bank have recently agreed to incorporate climate considerations in their ongoing work on debt sustainability, including through the revised joint Low Income Country Debt Sustainability Framework (LIC-DSF).[10]

3.2.5. Reforms of the Credit Rating Framework

As noted in the AEO 2024, credit rating agencies play an important role in informing the public about the creditworthiness of different countries and in enabling emerging and developing economies to secure sufficient funding to achieve their development goals. Despite the high appetite for Africa's bonds from global investors, policymakers from the region often flag a mispricing of their sovereign debt presumably originating from a perception of risk by international investors that lead to "unjustifiably" high borrowing costs. AEO 2024 estimates that African countries pay 500 percent more in interest on international capital markets loans compared to rates on concessional loans. According to a United Nations Development Programme (UNDP) estimate, subjectivity in credit rating, and lack of transparency, cost African countries over US$24 billion in excess interest and over US$46 billion in foregone lending over the life of multiple bonds in both domestic and

8 https://globaltaxjustice.org/news/press-release-governments-approve-proposal-for-international-tax-cooperation-at-united-nations/

9 The World Forum on Natural Capital defines natural capital as the stock of natural resources, which includes geology, soil, air, water, and all living things. It underpins the economy and society and thus makes human life possible. Some natural capital provides people with free goods and services, usually referred to as ecosystem services.

10 https://www.imf.org/en/News/Articles/2023/09/06/pr23305-joint-statement-imf-managing-director-world-bank-president

foreign currencies (Guzman et al., 2022). As a way forward, operationalizing the proposed African Credit Rating Agency (ACRA) will be helpful.

3.3. Financing Climate Action

Nigeria Country Focus Report (2023) notes that Nigeria's climate financing needs, estimated at US$ 247.3 billion to meet its climate change, green growth objectives are substantial. Fully closing the gap (100 percent contribution) will require private sector financing to grow 42 percent, which is much higher than the average for West Africa at 26 percent, and Africa's 36 percent, implying that catalyzing private sector climate financing in Nigeria may require additional policy support and effort.

Nigeria has several national policy and strategies providing the framework for mobilizing private sector financing for green growth and climate action. The government should design a coordinated implementation framework to operationalize these strategies and policies. Aligning the policies and strategies with Vision 2050 will also create synergy between the overall development agenda and sector-specific mandates in tackling the challenge of climate change and fostering green growth.

4. Key Policy Recommendationst

Mobilizing resource at scale and on affordable terms for the financing of structuring transformation will require the following reforms:

4.1. Reforms of the Global Financial Architecture (GFA)

Champion efforts to improving transparency in credit rating: The Given Nigeria's rich endowment in natural capital, estimated at US$ 842.6 billion in 2018, the FGN should be at the forefront in championing for less subjectivity and more transparency in Africa's rating by the major Credit Rating Agencies (CRAs), and account for the value of natural capital in assessing a country's debt risk profile. In that regard, Nigeria should support efforts to operationalize the African Union of an African Credit Rating Agency (ACRA).

4.2. Reforming the global tax architecture to curb tax avoidance and IFFs

Nigeria should be part of the coalition of African countries advocating for the reforms of the international tax architecture, especially by further increasing the global minimum corporate tax and tax evasion, which is especially harming for Africa given its low tax base. Even though PECD's base erosion and profit shifting (BEPS) framework exists to help in international tax collaboration, particularly to end tax avoidance, only 27 African countries are presently part of the BEPS. There are concerns that the initiative has not helped to stem IFFs from the continent. There is therefore need for a more representative body to oversee the establishment and management of international tax rules.

4.3. Review of the Debt Sustainability Analysis:

The IMF/World Bank has recently responded to calls for reforms of the DSF framework, but more needs to be done. In particular, the IMF/World Bank DSF needs to be updated to reflect the changing structure of economies such as natural resources, and the impact of shocks such as pandemics and climate change, on economies, especially those in Africa. Indeed, the current DSF focuses only on the liabilities side of the government balance sheet, that is, what the government owes and ignores government assets, that is, what the government owns and from which resources can be generated to liquidate the debt. The FGN can be part of the discussions to champion for the reforms in the DSF.

REFERENCES

AfDB, 2023. Nigeria Country Focus Report, 2023. African Development Bank, Abidjan, Cote d'Ivoire. https://www.afdb.org/en/documents/country-focus-report-2023-nigeria-mobilizing-private-sector-financing-climate-and-green-growth

BloombergNEF. 2023. Scaling-Up Renewable Energy in Africa. New York. Bloomberg NEF.

Bruederle, A. & Hodler, R. 2019. Effect of oil spills on infant mortality in Nigeria. Environmental Sciences, 5467-5471.

Dunne, D. 2023. The Carbon Brief Profile: Nigeria. The Carbon Brief Profile-Clear on Climate. Retrieved from https://www.carbonbrief.org/the-carbon-brief-profile-nigeria/

FGN. 2023. Nigeria Agenda 2050. Abuja. Federal Ministry of Finance, Budget and National Planning.

McMillan M. & Rodrik D., 2011. "Globalization, Structural Change and Productivity Growth," NBER Working Papers 17143, National Bureau of Economic Research, Inc

Meattle, C. & Stout, S. 2022. Landscape of Climate Finance in Nigeria. San Francisco: Climate Policy Initiative.

National Planning Commission. 2020. Revised Long-term National Integrated Infrastructure Master Plan. Abuja. National Planning Commission, Federal Republic of Nigeria.

Ogunkan, D. V. 2022. Achieving sustainable environmental governance in Nigeria: A review for policy consideration. Urban Governance, 212-220.

Stein, E. Goren, E. Yuan, CW. Cao, J. Smith, A. Hsiao, T., Pletcher, RT. 2020. Fertility, mortality, migration, and population scenarios for 195 countries and territories from 2017 to 2100: a forecasting analysis for the Global Burden of Disease Study. Lancet, 1285-1306.

USAID. 2012. Climate Change Adaptation Plan. Annex: Nigeria Climate Vulnerability Profile. Washington DC. United States Agency for International Development.



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