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March 13, 2019

Approved By
African Department

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GOVERNANCE IN NIGERIA: FOCUS ON THE OIL SECTOR AND AML/CFT[1]

Accountability, governance, and transparency in the state-owned enterprise (SOE) sector facilitate the efficient use of public resources and help to monitor fiscal risks. Reducing leakages in the petroleum sector is especially macroeconomically critical, given Nigeria's current fiscal and external dependence on oil revenue. Against this background, this paper provides an overview of developments, recent reforms, and challenges, and outlines policy recommendations for stronger governance and corruption prevention, detection, and resolution, including through anti-money laundering and combating the financing of terrorism measures that are useful beyond the petroleum sector.

A. Introduction

1. Issues of transparency and corruption rank high among the concerns of Nigeria's population and have a substantive impact on macroeconomic outcomes in the country, particularly in the petroleum sector.

- According to a recent survey by Nigeria's National Bureau of Statistics, one out of three respondents that had contact with a public official reported having paid a bribe, and respondents identified corruption as one of the three most pressing issues affecting Nigeria (NBS 2017). Indeed, estimates suggest that the macroeconomic costs of corruption are large: lowering corruption to the levels of other peer countries could boost growth by ½ to 1½ percentage points annually, increase public investment efficiency, and increase the tax-revenue to GDP ratio by 1½ percentage points (IMF 2018).

- With oil currently accounting for 57 percent of total government revenues and 94 percent of exports, reducing leakages in the petroleum sector is key to fiscal sustainability and external stability.

2. The government has initiated several reforms that signal its commitment to addressing these concerns.

- ***The National Anti-Corruption Strategy (NACS) for 2017–20*** identifies priorities at the national level, including improving asset recovery and management, the adjudication of corruption cases by the court system, investigation and prosecution, and coordination and collaboration among competent authorities.

- ***Strengthening the anti-corruption infrastructure***. Key institutions have been bolstered, with additional resources provided to the Economic and Financial Crimes Commission (EFCC), and the

[1] Prepared by Ozlem Aydin Sakrak, Pasquale di Benedetta, Jay Purcell (all LEG), and Monique Newiak (AFR).

passage of the Nigerian Financial Intelligence Unit (NFIU) 2018 Act, which provides the NFIU with operational independence, in line with the Financial Action Task Force's recommendations.

- The National Assembly has passed amendments to the ***Companies and Allied Matters Act*** (CAMA, 1990), in part to ensure the transparency of ultimate or "beneficial" ownership (BO) of legal entities and arrangements, which may be abused to conceal or launder the proceeds of corruption and other crimes.

- The ***publishing of the monthly financial and operational reports of the Nigerian National Petroleum Corporation*** (NNPC) is a good step toward enhancing the transparency and integrity of the oil sector. The 2019 Extractive Industries Transparency Initiative (EITI) report found that Nigeria has fully addressed corrective actions from its first validation and made satisfactory progress overall with implementing the EITI standard. The Petroleum Industry Governance Bill (PIGB), approved by the National Assembly, could be an important step towards improving institutional arrangements and oversight in the oil sector.

- The ***whistle-blower policy*** and the ***open government initiative*** are also welcome steps towards improving governance.

3. This paper discusses further concrete steps to improve the governance of SOEs and of the oil sector, given their importance to fiscal transparency and sustainability. [2]To this end, it details the strengths and weaknesses of Nigeria's SOE governance framework, notes critical pending and future reforms, and highlights the unique potential of anti-money laundering and combating the financing of terrorism (AML/CFT) tools to support anti-corruption efforts in and beyond the SOE sector. It points to a number of important reforms, including with respect to the building of institutions, that would improve transparency and reduce incentives for corruption, thus strengthening corruption prevention. It further argues that when prevention fails, the infrastructure for public-private cooperation in the detection of corrupt acts must not. And where corrupt acts are indeed detected, Nigeria's criminal justice system must function to counteract impunity.

B. Governance of the State-Owned Enterprise Sector

4. The current ownership arrangements for Federal Government enterprises (FGOEs) follow a dual decentralized model that has become more complex. The state is both the provider of the product or service and the regulator and supervisor of the performance, resulting in an inherent potential conflict. The association of the FGOE with public policy increases the chances that enterprise assets are misused to avoid going through the budget appropriation process or for narrowly political purposes. Ownership functions are fragmented among the Ministry of Finance (MoF), the office of the Accountant General, sector ministries and the Bureau of Public Enterprises.

[2] The broader anti-corruption strategy should include also efforts to strengthen governance and thereby reduce vulnerabilities to corruption across a range of key state functions, including tax administration, procurement, market regulation, FX policies, and financial sector oversight, as discussed in the accompanying staff report.

5. Quantifying the fiscal risks stemming from the SOE portfolio is increasingly challenging. The definition of an FGOE is not consistent across several Acts. There is no standard reporting policy and no aggregated annual report on the financial performance of the overall FGOE sector. A lack of standardized accounting policies complicates quantifying the 'operating surplus' of each FGOE. Obtaining a true picture of the FGOEs' performance or financial situation enabling the authorities to react on time and to be selective in their intervention is therefore difficult.

6. In view of these weaknesses, the central government has decided to strengthen its oversight of the FGOE sector. Performance contracts are being designed to ensure surplus revenue targets are realistic and adhered to. The review of FGOE portfolio to ensure proper classification and separate an SOE from a departmental agency as well as calls for publishing regular quarterly financial statements are also ongoing.

7. One key priority—in line with international practices—is to gradually centralize existing fiscal oversight arrangements and enhance ownership arrangements. Efforts to improve financial and fiscal discipline—as currently planned by the authorities— should be integrated with a broader public financial management reform agenda. A cohesive ownership vision would redesign and streamline the division of regulatory, oversight, policy, and ownership roles and responsibilities. Best-practice examples suggest a central role for the Ministry of Finance in monitoring SOE performance (Table 1).

Table 1. Nigeria: Elements of an Effective Ownership Policy
• Create a monitoring fiscal oversight unit within Ministry of Finance • Line ministries should only perform core ownership functions such as voting shares, overseeing board members, and monitoring SOE performance • Develop safeguards against political interference in commercial decision-making. • Provide SOEs greater autonomy from line ministries by empowering SOE boards to take on greater responsibilities • Develop/strengthen SOE corporate governance tools and guidelines • Develop a system to monitor and benchmark the performance of ministries as owners

8. The current FGOE institutional features are present in the petroleum industry. The institutional fragmentation and overlaps of roles and responsibilities pave the way to strengthen operational efficiencies, management, and accountability. This has a direct impact on the operations of NNPC, which remains the largest source of income for the Federal Government.

C. Governance of the Petroleum Sector and the NNPC

9. Several agencies are tasked to oversee the petroleum industry in Nigeria, with blurred regulatory, policy, and ownership roles. The Ministry of Petroleum Resources (MPR) is responsible for oversight of the overall sector, including all its agencies, and for policy making. The Department of Petroleum Resources (DPR) exercises regulatory powers on behalf of the MPR, and licensing and monitoring powers for oil, gas, and downstream petroleum products. The Petroleum Products Pricing Regulatory Agency regulates petroleum products prices. The Petroleum Technology Development Fund is in charge of training. The Petroleum Equalization Fund is responsible for the equalization of pricing of petroleum products countrywide. NNPC is the national oil company.

10. These overlapping roles pose governance challenges. The Minister of Petroleum, in charge of overseeing the sector and NNPC, is also the chairman of NNPC. The DPR is legally founded in the Act that constitutes NNPC, which calls for an inspectorate Directorate within NNPC. An inadequate budget, limited human resources, and conflicting objectives limit the operational effectiveness of DPR. The Auditor General does not have a direct mandate to audit NNPC. There is no central role for the Ministry of Finance in the current set up.

11. The management of NNPC is a direct consequence of its incorporating Act, with the current board structure creating a number of challenges. The 1977 NNPC Act empowers NNPC to engage in oil and gas related activities. Two key aspects influence the way NNPC operates: (i) the Act does not assign a commercial mandate to NNPC, and (ii) the Act allows NNPC to be an agent of the Federation without defying the commercial aspects of this agency contract. The governance of NNPC faces several challenges: appointment, evaluation, and remuneration policies do not appear to be in place, and the power to make appointments of key board members and CEO remains concentrated in the hands of the President of the Federation. As a result of these governance weaknesses, oversight roles and executive responsibilities run the risk of facing political interference in NNPC's decision making processes.

12. NNPC's corporate structure and internal audit and control functions are under transformation. NNPC is a federally owned entity, with 12 subsidiaries incorporated as joint stock companies as per the Company and Allied Matters Act. To be more efficient on the core businesses, NNPC is attempting to become a de facto corporate group by creating four autonomous business units (Upstream, Downstream, Gas and Power, and Refineries) with corresponding subsidiaries. It also aims to move from a compliance-based audit to a risk-based audit and control approach. Needs assessments were completed in 2017, and the overall internal governance architecture has been drafted to promote better board oversight, communication channels, and reporting mechanisms. Policies to support the internal audit and control function have been developed. When fully implemented, this revamp could help NNPC adapt to new challenges (including the transformation to a corporate entity as per CAMA provisions), and better fit within the parameters of a profit-oriented mandate. It would also be important for NNPC to envision an approach to integrating sustainability, including environmental and social considerations, into NNPC operations, with clear indicators that are measurable and monitorable, and feed disclosure reporting.

Fiscal Discipline of NNPC

13. Limited fiscal oversight and a fragmented institutional set up impacts revenue collection. NNPC engages in major fiscal arrangements in the oil sector on behalf of the Federal Government of Nigeria, which mainly consist of Joint Ventures (JVs) and Production Sharing Contracts (PSCs).As reported in 2015 NEITI reports, revenues are often lost or under-collected due to discretionary decision-making in the award of oil blocks, unpaid signature bonuses after a license is awarded or renewed, unpaid royalties, and significant crude oil theft.[3] For example, in 2015, NEITI

[3] The extractive Industries Transparency Initiative (EITI) provides international standards for the good governance of oil, gas and mineral resources along the value chain of the sector. NEITI is the Nigerian chapter of EITI.

estimates that NNPC owes $ 9.8 billion to the Federal Government, mainly due to deductions from gross oil revenues and opacity in the new JV cash call arrangements. The involvement of various agencies (NNPC, DPR, and Federal Inland Revenue Service) in collecting revenues adds to the lack of clarity.

14. Legal ambiguities generate uncertainty on NNPC revenue transfers. The Constitution requires that all NNPC revenue proceeds be paid to the Federation Account but the NNPC Act states that the NNPC shall maintain a fund from which NNPC can defray all expenses. NNPC thus makes prior deductions out of its gross income with no need to recourse to appropriation by the National Assembly. The Fiscal Responsibility Act mandates NNPC to remit one-fifth of its operating surplus to the Consolidated Revenue Fund of the Federal Government but neither defines "operating surplus" nor provides a limit to deductions (generally related to landing and transportation costs for imported petrol, crude losses, product losses, and pipeline management and repairs). NEITI and Audit General's Reports have consistently highlighted concerns of transparency and accountability as deductions have increased over the years. Making revenues more transparent requires revisions to the legal framework (Table 2).

Table 2. Nigeria: Required Revisions to the Legal Framework to Increase Transparency of Revenues
• Strengthen information sharing and coordination among collecting agencies to compare payments • Establish a clear mandate to fund NNPC operations (define the surplus, the possibility to make deductions and limits to defray operating costs) • Reconcile provisions of the NNPC Act concerning revenue withholdings in light of constitutional requirements.

15. The new funding mechanism for cash calls has helped to reduce arrears accumulation, which had been a recurrent problem in the past.[4] Before 2017, gross proceeds were transferred immediately to the Federation Account, and monthly cash calls were paid to JV partners through a budget appropriation process. This set up allowed the Federal Government (FG) to better oversee revenue distribution. However, discrepancies between NNPC approved amounts and FG budget allocations coupled with budgetary process delays contributed then to the accumulation of significant arrears (US$ 5.1 billion 2011-2015; US$ 1.2 billion in 2016). To prevent arrears accumulations, NNPC has begun to first pay cash call obligations and then remit net revenues to the Federation Account in January 2017, decreasing accumulations of cash call arrears but raising concerns about the constitutionality and transparency of deductions in the annual reports of the Office of the Auditor General (OAuGF).

16. The publication of contracts is necessary to reduce fiscal risks. Petroleum contracts (sales contacts, service contracts, PSCs, and JVs) that have a significant impact on public finances are kept fully confidential which can facilitate abuse in the negotiation process, prevent public scrutiny, and

[4] NNPC participates in the JVs arrangements with international or domestic oil companies for upstream operations in which the Nigerian government is a majority share equity investor. This usually entitles NNPC to receive a production share equal to its ownership stake (petroleum revenue). In return, NNPC pays cash liabilities that are its share of the operating and capital expenses associated with its JV activities (cash call payments).

represent fiscal risk (Table 3). With attention to confidentiality of commercially sensitive data, and in line with international transparency standards, it is important that contracts be fully disclosed.

17. Budget allocation and actual expenditures of NNPC differ significantly, and NNPC's participation in the appropriation process seems limited. Nigeria's budget process is governed by the Constitution, the Finance (Control & Management) Act and the Fiscal Responsibility Act. They require NNPC (along with other FGOEs) to submit, as part of the appropriation bill process, its revenue and expenditure estimates to the Budget Office, which submits it to the National Assembly for approval. However, amounts approved by the NNPC do not often match Federal Government budget allocations. In fact, the Ministry of Finance is in charge of revenue forecasting and scenario modeling but is constrained in its technical and sector expertise as well as by limited data access. NNPC's budget is not published, nor identified in the federal government's budget. There is also no information on the operational surplus of NNPC, while non-appropriated spending is increasing due to NNPC's first deductions, calling for significant changes (Table 4).

Table 3. Nigeria: Steps to Increase the Transparency of Petroleum Revenue
• Establish a clear decision-making process on revenue inflows and outflows in the framework: clarify procedures for payment and withdrawal from certain accounts, and which agency should make the determination • NNPC's JVs arrangements should be fully disclosed, including clear information on gross revenues received and of transfers made beyond those to the Federation Account • Grant relevant Government stakeholders (Ministry of Finance; Accountant General) full oversight of Government cash flows across cash call bank accounts

Table 4. Nigeria: Towards Good Practice in Budget Allocation and Documentation
• Introduce better systems of information sharing, and disclosure of fiscal risks • Include in the budget documentation forecasts of credible and transparent resource revenues • Ensure that all NNPC revenues and expenditures are fully integrated in the budget process • Place strict limits on extra-budgetary spending to achieve a more realistic incorporation of NNPC's budget into Federal government budget • Publish JV contracts

Transparency of NNPC

18. The legal framework for fiscal transparency has been significantly enhanced with the issuance of the FRA. The FRA requires that fiscal and financial affairs be conducted in a transparent manner and that SOEs (including NNPC) provide full and timely disclosure and wide publication of all transactions and decisions involving public revenues and expenditures and the implications for their finances. On the company side, the NNPC Act provides that the corporation shall prepare and submit to the National Council of Ministers, in each financial year, a report on the activities of the Corporation, which includes a copy of the audited accounts of the Corporation for that year and the auditors' report.

19. NEITI has played a pivotal role in improving financial disclosure standards in the oil industry. Incorporated as a Government Agency in 2007 (to protect its role from political interference), Nigeria is one of the few countries to have legislated the EITI with the 2007 EITI Act.[5] The Act gives Nigeria's EITI a mandate to develop a framework for transparency and accountability

[5] Extractive Industries Transparency Initiative (EITI) provides international standards for the good governance of oil, gas and mineral resources along the value chain of the sector.

in the reporting and disclosure of all extractive industry companies' revenue due to or paid to the Federal Government and enables EITI to conduct financial, physical and process audits of Nigeria's oil and gas industry. As a result of NEITI's efforts, NNPC now publishes monthly financial and operation reports and monthly petroleum statistics and annual statistical bulletins. Of note, in February 2019, the Board of EITI agreed that Nigeria reached 'satisfactory' progress in implementing the EITI standards as the first Anglophone African country.[6]

20. Despite recent reforms, improving auditing and data reconciliation is essential for proper monitoring of NNPC's financial situation. NNPC is self-reporting and its figures cannot be verified or challenged by other government bodies, complicating the validation of information. There are concerns about the accuracy of revenue statements and room for enhancing the level of disclosure, including on what NNPC ultimately considers as net revenue. As highlighted by NEITI, there is significant scope to improve the regularity of NNPC disclosures (for example, NNPC Financial and Operational Reports are available only until November 2018, while the last Annual Statistical report and petroleum statistic were published in 2017 and 2016 respectively) and to subject them to analysis. For instance, NEITI noted that its auditors under the EITI framework have not independently verified the information and data from NNPC monthly reports. Further, there are data discrepancies between the NNPC, Audit General, Central Bank of Nigeria, and Accountant General. Finally, the Fiscal Responsibility Act requires NNPC to prepare and publish audited accounts but there is no published audit report to date.

21. Strengthening transparency is needed to ensure that Nigeria receives maximum benefits from the oil and gas sector. The IMF's Fiscal Transparency Code requires that resource corporations report on project-level fiscal payments to and from the government, which should be reconciled with government receipts in line with international standards, with no major unexplained reconciliation error. In line with good practices, it is important for the NNPC to disclose all revenue transfers and remittances to the Federation Account by providing complete and timely information that ensure accountability of its receipts and expenditure. In addition, NNPC could consider further enhancing and integrating its transparency practices by reporting on environmental, social, and governance considerations. The recently adopted Sustainability Disclosure Guidelines by the Nigeria Stock Exchange could provide useful guidance in this respect.[7]

Oversight of NNPC

22. The Constitution does not give the Auditor-General a direct mandate to audit NNPC. It establishes the appointment of the Auditor-General to audit public accounts and offices of the Federation. It explicitly excludes the accounts of government statutory corporations from the scope

[6] The EITI Board confirmed Nigeria's efforts to use the EITI as a crucial diagnostic of oil and gas industry oversight to support reforms of state participation, license management and off-budget revenues. While discrepancies between rules and practice in the governance of the extractive industries persist, the Board considered that the latest EITI disclosures adequately reflected practical challenges in the mining, oil and gas sectors.

[7] The guidelines are to primarily provide the value proposition for sustainability in the Nigerian context. It also articulates a step by step approach to integrating sustainability into organizations, indicators that should be considered when providing annual disclosures, and timelines for such disclosures.

of the Auditor General's mandate but grants the Auditor-General power (not defined) to conduct periodic checks aimed at (i) verifying that budget appropriations are spent in accordance with the Ministry of Finance's instructions and (ii) investigating expenditure patterns of the government including inflows and outflows of NNPC revenues to the Federation Account.

23. The role of the Auditor-General can be strengthened (Table 5). The Office of the Auditor General (OAuGF) is resource-constrained, as it requires greater financial and operational independence to strengthen the overall quality of its audit function (Table 5). According to the law, the Auditor General is the only physical person in the OAuGF that can be considered civil servant. The rest of the office instead depends on a British Ordinance that was never converted into Nigerian law, de facto eliminating a legal basis to grant civil servant status for OAuGF employees, which has affected the regularity of their salaries and the allocation of an operational budget to conduct audits and to do capacity building (in the last two years, a total of $300 was allocated by the Accountant General to the OAuGF for training purposes). In addition, the relationship between the OAuGF and the Committees of the National Assembly and other external stakeholders needs to be strengthened to enhance the usefulness of the Auditor General Report as an effective instrument for legislative oversight over the NNPC's operations.[8]

Table 5. Nigeria: Strengthening the OAuGF and National Assembly's Oversight Functions
• **Enact a law that will provide OAuGF with**: - financial and operational tool when conducting audit over public accounts. - petroleum sector expertise - better tools to improve stakeholders' engagements, in particular with the National Assembly

24. The fiscal oversight role of the Ministry of Finance should be strengthened (Table 6). The Finance (Control and Management) Act gives the Minister of Finance powers to supervise and control the expenditure and finances of the Federation and all matters related to the financial affairs of the Federation which are not by law assigned to any other Minister. Despite these general powers, the Ministry's fiscal oversight function over NNPC should be strengthened and enhanced. The Petroleum Unit, which was established in the Ministry with a mandate to provide sector revenue forecasting and support to the Federal Inland Revenue's audit functions, needs to be enhanced through additional training on the sector, appropriate staffing (total of 6 people) and greater resources. The oversight unit should be responsible for oversight of, among other things, planning and budgeting

Table 6. Nigeria: Strengthening the Role of the Ministry of Finance
• Legally provide the Ministry of Finance with powers to exercise fiscal oversight of NNPC, covering a comprehensive range of fiscal risks • Establish reporting systems to allow the MoF to regularly oversee monitor and assess NNPC operations. • Foster close collaboration with other revenue collecting agencies and oversight/auditing institutions (information sharing, financial assessment, joint audits and technical assistance)

[8] Standing Committees have been set up in both the Senate and House of Representatives to oversee Nigeria's oil and gas industry, such as Committees on Petroleum Resources (downstream and upstream) and Public Accounts Committee.

arrangements, in year and end-of-year reporting requirements, dividend policy, and financial assistance from the Government, including guarantees and quasi-fiscal activities.

25. An effective sanctions and enforcement regime would also help. This may include giving to the Auditor General and the Ministry of Finance the legal powers to enforce sanctions for individuals and institutions for the non-remittance of revenues to the Federation Account, failure to disclose information required by the laws, and non-compliance with requirements related to process, expenditure, and mismanagement of public assets.

The PIGB Act

26. Recognizing the above challenges, the government has tried to push for the approval of the Petroleum Industry Bill (PIB)—a key element of its Economic Recovery and Growth Plan—to improve institutional weaknesses. The PIB aims at redesigning the overall institutional architecture of the oil industry in a bill of four acts. The first act—the Petroleum Industry Governance Bill (PIGB)—aims at: clarifying separation of ownership, policy making, and regulatory roles and responsibilities among the agencies; establishing a commercially oriented focus for petroleum entities; promoting transparency and accountability in the administration of the petroleum resources; and creating a conducive business environment. Following a number of versions over the past decade, the PIGB had been approved by parliament in 2018 and is now awaiting final presidential approval.

D. Using AML/CFT Tools in and beyond the SOE Sector

27. Further strengthening Nigeria's AML/CFT regime will bolster critical aspects of the anti-corruption effort in and beyond the FGOE sector, including by diminishing the underlying financial incentives. The proceeds of corruption must almost always be laundered, i.e., made to appear legitimate to be spent, transferred, or invested. As such, the AML/CFT tools for identifying, tracing, and confiscating ill-gotten gains play a dual role: helping to detect, investigate, and sanction corrupt practices that have already occurred while also diminishing the incentive to engage in such practices in the future.

28. The Nigeria AML/CFT National Strategy 2018-2020, adopted in June 2018, reflects the government's high-level commitment to strengthening the AML/CFT regime. The Strategy recognizes a strong AML/CFT regime as key to the country's socio-economic and political development and includes the review and enactment of AML/CFT legislation, as necessary; the issuance of related guidelines and regulations; awareness-raising for the private sector; the provision of adequate resources, e.g., funding and staffing, in the public sector; and enhanced stakeholder collaboration.

Box 1. Selected Challenges in PIGB

Implementation of the PIGB would represent a clear break from past practices by restructuring institutional arrangements and calling for greater transparency. Its effectiveness will be strengthened by ensuring the following selected challenges are addressed:

- ***Coordination***: The PIGB gives responsibilities for rents and royalties to the Nigerian Petroleum Regulatory Commission, for PSCs to the Petroleum Asset Management Company (PAMC), and of other contracts by NNPC (especially JV) to the National Petroleum Company (NPC). Coordination between these different parts of the new fiscal regime is critical and may require adequate information flows among these institutions, assistance in audit processes, and sharing expertise.
- ***Monitoring and oversight***: Additional safeguards are required to subject new institutions to effective government oversight, whilst continuing to operate independently of political interference. The PIGB's objective is to improve clarity of the roles and responsibilities of sector agencies. According to PIGB, the NPC and PAMC will be subject to Companies and Allied Matters Act and the Securities and Exchange Commission's Codes of Corporate Governance. This will enhance the corporate governance but there is no single oversight unit that can monitor these entities.
- ***The role of the Ministry of Finance***: The MoF's role in monitoring key financial information in relation to NPC and PAMC and assessing fiscal risks arising from their activities is not provided under the PIGB. This is particularly important given that NPC would be entitled to retain revenue from its operations to cover its expenses, debt liabilities, and cash call obligations in the JVs. The PIGB also excludes the new NPC from the provisions of the Fiscal Responsibility Act 2007 and the Public Procurement Act 2007. This creates additional fiscal risks as NPC is excluded from budgetary planning, borrowing limitations, conditions for guarantees by the federal government, public procurement provisions and fiscal transparency requirements
- ***Formalize Appointment, Remuneration, and Evaluation Policies***: The PIGB remains silent on transparency and formalization of the appointment process, evaluation, and remuneration of the members of the Commission and of the board of directors of NNPC and AMC

29. Several of the AML/CFT reforms discussed in the following sections would have a direct impact on promoting and ensuring good governance in the SOE sector. Greater visibility into the beneficial ownership (BO) of legal entities (i.e., companies) and arrangements (i.e., trusts), along with the strengthened implementation of existing measures designed to enhance scrutiny of the finances of politically exposed persons (PEPs)[9] – whether via transaction monitoring or asset declaration – would advance the authorities' efforts to uncover acts of corruption, including those that involve SOEs; track the associated proceeds; and prevent those proceeds from being laundered and spent (see text table for illustrative examples).

[9] The Financial Action Task Force (FATF), the global AML/CFT standard-setter, defines domestic and foreign PEPs as individuals who, "are or have been entrusted…with prominent public functions, for example Heads of State or of government, senior politicians, senior government, judicial or military officials, senior executives of state owned corporations, [and] important political party officials."

Transparency of Beneficial Ownership

30. Ensuring the transparency of ultimate (or "beneficial") ownership is critical to prevent, detect, and investigate the abuse of corporate vehicles to engage in corruption. Corrupt officials may form or use legal persons (e.g., companies) to obscure their part in a bribery or kick-back scheme; strike advantageous deals with themselves, their family, or their associates (see Text Table 1 below); or launder the associated proceeds. The risk of the abuse of corporate vehicles is particularly acute in the SOE sector, where large sums of state resources are regularly expended to procure equipment or obtain services and expertise from contractors, whether local or foreign.

Text Table 1. Examples of Acts of Corruption in the SOE Sector and AML/CFT Tools to Address Them

Theft or Diversion of Funds from SOEs	Relevant AML/CFT Tools
Cooking the Books: An external accountant hired by an SOE discovers serious – and seemingly deliberate – discrepancies in the ledgers of the previous Chief Financial Officer (CFO).	*Suspicious Transaction Reports (STRs)*[10]: The accountant files an STR with the national financial intelligence unit (FIU), noting possible complicity within the SOE.
Hiring Yourself: A high-level SOE executive attempts to steer a lucrative contract to a previously unknown parts supplier that submitted a relatively unattractive bid.	*Transparency of Beneficial Ownership*: After consulting the official corporate registry, the contracting committee determines that the supplier is "beneficially" owned by the high-level executive.
Receiving Kick-Backs from a Foreign Partner: An SOE Metering Technician receives several wire transfers from a firm incorporated in a small country known as an offshore financial center.	*International AML/CFT Cooperation*: With help from the FIU, investigators obtain critical information from overseas counter-parts: the firm is a shell company with possible ties to the SOE's foreign partner.
Taking Bribes from a Local Contractor: The Chief Executive Officer (CEO) of an SOE makes several large, all-cash deposits into her bank account. Her salary is paid in regular intervals by direct deposit.	*Enhanced Monitoring of PEPs*: As required by law, the bank monitors the PEP's account closely, requests information on the funds' origin, and suspends her account/submits an STR when there is no response.

[10] STRs are confidential disclosures made by banks, other financial institutions, and designated non-financial businesses and professions (DNFBPs), such as accountants, lawyers, and notaries, to a national FIU, based on the suspicion that a client may be engaged in money laundering, terrorist financing, or related criminal activity. STRs are then analyzed by the FIU and, when appropriate, disseminated to law enforcement for possible investigation.

31. The passage of amendments to the Companies and Allied Matters Act (CAMA, Repeal and Re-enactment) Bill, 2018 represents a critical step forward, but they have yet to be enacted. In view of the relevant Financial Action Task Force (FATF) recommendations, and Nigeria's commitments under the EITI and at the London Anti-Corruption Summit of 2016, the Government crafted amendments to the CAMA that would mandate the disclosure of beneficial interests in a company's shares and task the Corporate Affairs Commission (CAC) to compile and maintain the resultant information in the public domain. The Amendment ("Repeal and Re-enactment") Bill was passed by the Senate on May 18, 2018, and by the House of Representatives on January 17, 2019. Presidential approval is needed for its enactment.

Table 7. Nigeria: Steps to Strengthen the Transparency of Beneficial Ownership
• Enact the amendments to the CAMA, once they have received Presidential assent. • Collect and compile BO information for all companies registered in Nigeria and ensure that it is regularly updated and verified. • Amend the NFIU's STR template to include a field for BO information, when the object of the report is a legal person.

32. The lack of reliable BO information is a significant impediment to the full use of key AML/CFT tools to support Nigeria's anti-corruption framework (Table 7). Among the affected tools are the NFIU's analysis of STRs involving corporate entities and law enforcement's efforts to conduct financial investigations ("follow the money") in certain corruption cases. In the present environment, the authorities must request BO information from financial institutions (FIs), which are required to "identify and take reasonable steps to verify" the BOs of their legal person clients per the Central Bank of Nigeria (AML/CFT in Banks and Other Financial Institutions in Nigeria) Regulations, 2013. However, the authorities have found some FIs resistant to providing this information, while others are slow to do so, and still others provide information that is later determined to be inaccurate or incomplete.

Politically Exposed Persons and Asset Declaration

33. Applying special scrutiny to PEPs' financial dealings, including via asset declaration requirements, makes detection of corrupt acts and ML more likely. Such scrutiny also deters criminals from attempting to carry out corrupt acts in the first place.

34. In line with the FATF recommendations, Article 18 of the 2013 CBN regulations puts relevant requirements on FIs. These include to (i) obtain senior management approval before establishing (or continuing) business relationships with PEPs; (ii) conduct enhanced ongoing monitoring of those business relationships; (iii) render monthly returns on all PEP transactions to the CBN and the NFIU; and (iv) take reasonable measures to establish the source of wealth and of funds of PEP customers.

35. In practice, FIs struggle to identify their PEP clients (Table 8). To facilitate their compliance with the requirements noted above, banks, BDCs, and other FIs requested a list of qualifying Nigerian officials from the CBN. However, the preparation of such a list falls outside the CBN's remit, is unlikely to prove a sufficiently comprehensive or dynamic solution and could foster private sector complacency. The Chartered Institute of Bankers of Nigeria (CIBN), Nigeria's banking association, is therefore taking the welcome step of working with consultants to develop a proprietary account and transaction monitoring tool. A similar, but still nascent, effort on the part of the Association of Bureaux de Change Operators of Nigeria (ABCON) would also be welcome, especially as BDCs already appear to lag other Nigerian FIs in the implementation of their AML/CFT-related obligations.

Table 8. Nigeria: Steps to Strengthen Scrutiny of PEPs
• Amend the NFIU's STR template to include a field to indicate if the individual in question is a PEP. Such a field would provide context to the NFIU and enable it to prioritize more efficiently the analysis of STRs.
• Complete the NFIU's strategic analysis of corruption. The NFIU already intends to increase its focus on strategic analysis; it should prioritize corruption.

36. In parallel, all "public officers" must declare their assets, but the completed forms are not available to the public. Per the Fifth Schedule to the Constitution, all "public officers", whether at the local, state, or federal level, must declare their assets immediately after taking office, every four years thereafter, and again at the end of their terms/service. The Code of Conduct Bureau (CCB) is responsible for receiving and analyzing completed asset declaration forms, but must currently do so on a confidential basis, thereby limiting the potential for civil society organizations and members of the general public to identify, and bring the CCB's attention to, assets that have not been declared—or that have not been declared accurately. Moreover, the current forms do not contain fields to capture certain highly relevant information, such as sources of income, beneficially owned assets, or personal property above a certain value.

37. The CCB receives few completed asset declaration forms and is in need of additional resources (Table 9). The CCB has no list of declarants, i.e., specific individuals that it considers to be "public officers", estimating only that they number between 4 and 4.5 million. Yet it received fewer than 17,000 completed asset declaration forms in 2018. Even this number of forms is difficult to process, as the CCB works with limited resources and on an almost exclusively manual/paper-driven basis with a relatively small number of staff (889) spread out among a national headquarters and 36 state-level offices. The CCB's budget allocation declined from $8.5M to $8M in FY 2019.

Table 9. Nigeria: Improving Asset Declaration by Public Officials

- **Provide additional resources to the CCB** to enable it to (i) recruit, train, and retain staff; (ii) compile the names of (at least the high-risk) public officers required to declare assets; (iii) establish an IT infrastructure for the digitization of records and on-line submission of asset declaration forms; and (iv) proactively pursue cases involving non- or inaccurate declaration.
- Amend the legal framework and issue the National Assembly Guidelines necessary to enable and ensure the publication, on-line, of the list of declarations received from high-level federal and state officials, along with the declared assets and their values.[1]
- Once the amendments noted above have been enacted and implemented, consider further amendments to establish criminal penalties for non- or inaccurate declaration, at least with respect to high-level federal and state officials.
- Update the asset declaration form to include fields for all sources of income, beneficially owned assets, and personal property above a certain value. This would help clarify unexplained wealth and reveal conflicts of interest.

[1] This would require the National Assembly to issue guidelines for the release of information per paragraph 3(c) of the Third Schedule to the Constitution; to amend sections 12, 14, and 15 of the Freedom of Information Act (2011); and, potentially, to amend both the Code of Conduct Bureau and Tribunal Act (1991) and the Official Secrets Act (1962) (so as to clarify the CCB's custodial responsibilities with respect to completed asset declaration forms). In parallel, i.e., while working to enact these changes to the legal framework, the Government should encourage public declaration on a voluntary basis.

AML/CFT Supervision

38. AML/CFT-specific supervision is critical to ensuring that financial institutions faithfully implement the full range of their AML/CFT-related obligations, including with respect to the transparency of BO, the identification of PEPs, the submission of (corruption-related) STRs, and the implementation of targeted financial sanctions. Absent adequate AML/CFT supervision, private sector compliance levels tend to remain sub-par, whether owing to ignorance, incompetence, or the knowing facilitation of illicit activity.

39. The CBN's AML/CFT (Administrative Sanctions) Regulations of 2018 addressed an important gap in its supervisory framework; the pilot program for risk-based supervision is welcome. The Regulations provide the CBN with an adequate legal basis to impose administrative sanctions and penalties for non-compliance with AML/CFT-related obligations, and include a detailed schedule laying out the specific sanctions and penalties to be imposed in response to identified violations. The CBN reports that it has begun to issue sanctions in accordance with the new regulations, but that the schedule will likely have to be updated on an ongoing basis, to ensure that the applicable penalties remain sufficiently dissuasive in the context of normal inflation. The pending commencement of a pilot program for risk-based supervision represents a substantial step toward increasing effectiveness. The risk-based approach (RBA) entails the classification of supervised entities by money laundering and terrorist financing (ML/TF) risk and the subsequent varying of the frequency, scope, and intensity of inspections in accordance with that classification. As such, it should enable the CBN to focus its limited resources more sharply.

40. However, limited human resources continue to pose a challenge (Table 10). The CBN incorporates AML/CFT-related components into its annual prudential inspections of each of Nigeria's 34 primary mortgage banks. But the limited number of dedicated AML/CFT inspectors precludes regular AML/CFT inspections of those banks or of a sufficient sample of BDCs, which were labeled as "high-risk" in Nigeria's 2016 National Risk Assessment. Only 2.3 percent of licensed BDCs received AML/CFT on-site inspections in 2018 (relative to 2.5 percent in 2017).

Table 10. Nigeria: Strengthening AML/CFT Supervision of FIs, BDCs
• Conduct thematic inspections of banks and BDCs to ensure the full and consistent implementation of their PEP-related obligations. A methodology based on the robust sampling of customer files would help determine the true extent to which Nigerian FIs are willing and able to identify their PEP clients and apply enhanced monitoring to their transactions. • Progressively increase the number and severity of sanctions applied for violations of AML/CFT-related obligations to demonstrate the CBN's resolve to achieve compliance. When violations of AML/CFT-related obligations are uncovered, the CBN should share the inspection reports with the NFIU.

Effectiveness of the Nigerian Financial Intelligence Unit (NFIU)

41. A critical component of every country's AML/CFT regime is its FIU. It collects, analyzes, and disseminates STRs related to ML, TF, and the related, underlying (or "predicate") offenses, such as fraud, bribery, the diversion of public funds, and other forms of corruption. The private sector is on the front lines of the fight against corruption, with FIs functioning as the primary conduit for attempts to transfer, store, or launder ill-gotten gains. FIUs therefore play an essential role in translating confidential, private sector-generated tips into criminal investigations and prosecutions. In 2018, for example, the NFIU disseminated 134 STRs to its former parent agency, the Economic and Financial Crimes Commission (EFCC); 88 involved possible corruption.

42. The passage of the NFIU Act in 2018 represents a major milestone. It assures the NFIU's operational independence in line with the FATF recommendations, thus restoring the NFIU's international network by enabling its reconnection to the secure information-sharing platform for the 159 FIUs that comprise the Egmont Group. Moreover, the Act gives the NFIU the power to conduct inspections of FIs and DNFBPs, thereby putting it in a position to help ensure that they submit – and maintain the confidentiality of – STRs in all cases of suspected corruption, regardless of the prominence of the affected customer or the size of his or her business. The NFIU has also benefited from the recent confirmation of a new director and the provision of its own line-item in the FG budget. The NFIU's budget for the current fiscal year saw a substantial increase, with many resources already invested in the training of analysts.

43. The NFIU's close collaboration with its domestic partners is already yielding results but would benefit from additional formalization (Table 11). The NFIU's domestic partners, including the EFCC and the closely related Independent Corrupt Practices and Other Related Offenses Commission (ICPC), report that it can be relied upon to provide timely and accurate information, whether held by the NFIU itself or by a foreign partner – and that, in the latter case, working with the NFIU to obtain information is generally more efficient than pursuing the same via mutual legal assistance channels. Still, to the extent that this collaboration is based at least partly on good faith and/or interpersonal connections, it will be important to formalize it to make it more sustainable over the long term.

Table 11. Nigeria: Maintaining Momentum Generated by the NFIU Act
• Issue an executive order requiring all domestic competent authorities to provide the NFIU with information as and when requested, to reduce the NFIU's reliance on bilateral memoranda of understanding (MOUs) and *ad hoc* requests to obtain critical information from its domestic partners. • Conclude an MOU between the NFIU and the EFCC to establish a template for the relationship between the newly autonomous NFIU and its former parent agency.

Vigorous Prosecution and Timely Conclusion of Corruption-Related Cases

44. The timely and effective administration of criminal justice, particularly in high-profile cases, is key to deterring future corruption. Strengthening the application of the tools discussed above for detecting and investigating corruption will be in vain to the extent that the criminal justice system fosters a sense of impunity by failing to convict and sanction offenders in a timely manner, if ever.

Table 12. Nigeria: Advancing the Effective Prosecution and Timely Conclusion of Corruption-Related Cases
• Rebalance any new resources between the EFCC and the ICPC to enable both to pursue their core mandates with maximal coordination and minimal overlap. The Presidential Advisory Committee Against Corruption should continue to play a coordinating role, while maintaining a bird's eye view of Nigeria's entire anti-corruption architecture. • Vigorously enforce the Administration of Criminal Justice Act (ACJA, 2015), which was designed, in part, to minimize the ability of defendants to achieve impunity through delay. • Make greater use of information technology (IT) systems over time to begin to chip away at the daily delays caused by manual processes in the judiciary.

45. A recent budget increase for the EFCC and the confirmation of a new director for the ICPC – both critical law enforcement agencies – are welcome. An infusion of resources allowed the EFCC to hire 1,200 additional staff in 2018, while opening 3 new "zonal offices". It is now working to train recent recruits and build the skills of existing investigators. By contrast, the ICPC conducted its last recruitment in 2012; the new director, confirmed in December 2018, plans to work with both the Government and external development partners to address any resource gaps. Both agencies report that they conduct parallel financial investigations in corruption and other cases involving the generation of illicit proceeds.

46. But further efforts are needed to reduce procedural delays in the criminal justice system (Table 12). The EFCC and ICPC report that many of their prosecutions stretch on for years, as wealthy and sophisticated defendants leverage appeals and adjournments to delay their trials, often in contravention of the law. Moreover, the retirement, promotion, or movement of judges among different assignments leaves some cases in limbo while forcing others to be retried, owing to persistently poor caseload management at all levels of the criminal justice system. Those rare corruption cases that manage to advance without undue disruption tend to advance slowly, as judges record the proceedings in longhand and motions are filed manually.

E. Conclusion and Key Policy Recommendations

47. The Nigerian authorities must accelerate their anti-corruption efforts to maintain momentum against both entrenched challenges and evolving threats. Despite the high-level commitment of the administration and the deep devotion of many public servants working in the SOE sector, as well as in the country's anti-corruption and AML institutions, the Nigerian government will need to accelerate and intensify its reforms in this area—as stated in its Economic Recovery and Growth Plan— if it is to have a durable impact on the incentive structures that underpin corruption in Nigeria. This paper has examined issues in two key areas of the anti-corruption effort—SOE governance, especially in the petroleum sector, and AML/CFT efforts.

48. Achieving critical improvements to SOE governance and AML/CFT efforts will require a combination of legislative action, institutional reform, and additional resources.

- Legislative Action. The authorities should prioritize the enactment and implementation of the PIGB and the CAMA (Repeal and Re-enactment) Bill of 2018. They should also consider legislative action to design an overall ownership policy for SOEs, improve fiscal and financial discipline with a broader public finance management reform, and enhance the transparency of public revenue flows and coordination among collecting institutions.

- Institutional Reform. The MOF should regain a central role in the oversight of fiscal risks while the Auditor General should have a legal basis to operate effectively; the CBN will need to fully implement the risk-based approach with respect to its AML/CFT supervision; and the judiciary will need to embrace both legal requirements and best practices related to its management of individual cases and system-wide caseloads.

- Additional Resources. The authorities should prioritize the allocation of any new or newly available resources to: (i) the Oversight and Oil and Gas Departments within the MOF; (ii) the Auditor General's staffing and operational and training budgets; (iii) the CCB; (iv) the ICPC; and (v) the judiciary, such that these are all able to carry out their core functions efficiently, leveraging technological solutions as available and appropriate.

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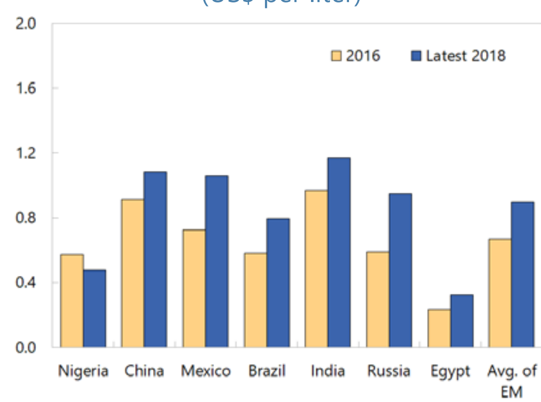
FUEL SUBSIDIES-LATEST INCREASE AND IMPLICATIONS OF A CHANGE IN THE REGULATED GASOLINE PRICE[1]

The implicit cost of fuel subsidies is significant. Analysis based on Nigerian household data shows that a removal of the implicit subsidy (through an increase in the regulated price of Premium Motor Spirit, PMS) would reduce income inequality and, if combined with targeted transfers, could result in a decrease in the poverty gap while leaving significant fiscal space for other productive expenditures. To avoid a re-emergence of fuel subsidies, a deregulation of fuel pricing or the implementation of an independent and automatic fuel price-setting mechanism will be necessary. In the interim, the cost of currently below-cost recovery regulated prices should be explicitly stated in the budget.

1. **Nigeria's regulated price for PMS is no longer cost-reflective and is lower than in most comparator countries**. In May 2016, faced with fuel shortages and severe external and fiscal pressures, the Nigerian government increased the regulated fuel price significantly (by 68 percent, to Naira 145 per liter)—making the level appropriate in the context of premium gasoline prices of just above US$500 per ton at then prevailing oil prices of US$45 to US$50 per barrel and exchange rate of 197 Naira/US$. Since then, the price of PMS has remained unchanged. Oil prices are now hovering above US$60-65 per barrel, Rotterdam Platts prices increased, and the exchange rate has further depreciated in windows reflective of market rates, while fuel imports are still priced at 305 Naira/US$. As a result, the regulatory fuel price cannot fully cover the cost of fuel importation and distribution. Oil companies in the downstream business have relied on their allocation of fuel imports by the national oil company (NNPC) for distribution. The cost incurred by the NNPC in absorbing below market costs results in lower net oil revenue transfers to the federal government and reduced transfers to state and local governments. In contrast, fuel prices in comparator countries have increased significantly, and are on average substantially higher than in Nigeria.

Figure 1. Selected Emerging and Developing Countries: Average Gasoline Price, 2016 vs. Latest 2018

(US$ per liter)



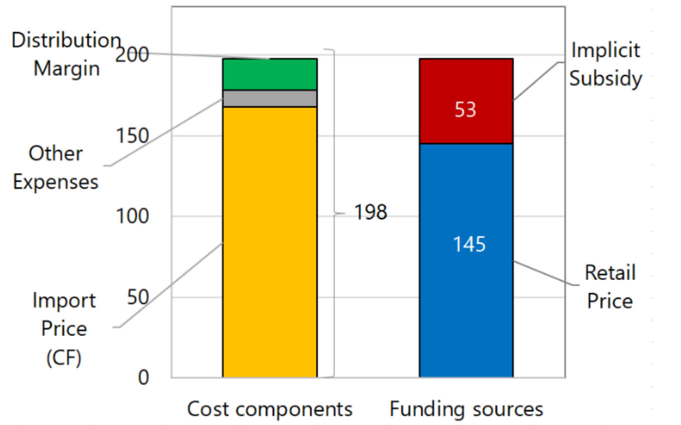
Note: Nigeria's PMS price converted at N/US$ 253 and 305 in 2016 and 2018, respectively.
Source: FAD Fuel Survey Database, IMF staff calculations.

[1] Prepared by Monique Newiak (AFR) and Stephen Younger (Commitment to Equity Institute).

2. **As a result, implicit subsidies have increased markedly; removing them would increase fiscal space**. In 2018, the cost of delivering a liter of Premium Motor Spirit has exceeded the regulatory retail price of Naira 145 by some 40 percent. At this level of price under-recovery, and assuming consumption of about 37 million liters in Nigeria per day, the implicit cost to the budget could amount to 0.5 percent of GDP in 2018, compared to just 3 to 4 percent in tax revenues), and even 0.9 percent of GDP under publicly announced import numbers of 55 million liters per day that are used to build strategic reserves and are to a large extent diverted through smuggling into neighboring countries. The exchange rate margin created through pricing fuel imports at N/US$ 305 instead of the market rate (N/US$ 360) creates an additional implicit subsidy that is not accounted for in the analysis but would add around 20 percent to the cost. A removal of subsidies would therefore imply increased fiscal space.

Figure 2. Decomposing the Cost of One Liter of PMS

(Naira)



3. **However, a price adjustment would reduce households' purchasing power**, calling for an analysis of the impact by income groups, in particular for poorer households.

- With transport prices currently estimated at 6.5 percent of the consumption basket based on current CPI weights, the direct first-round impact on the overall price level in Nigeria of a 40 percent fuel price hike would be around a 2½ percentage points increase. The inflationary impact from this "one-off" increase would affect households with varying income levels differently.

- To estimate the distributional impact, incidence analysis is used to assess the implications of a 40 percent price increase (recovery of current costs) on households' budgets, based on the 2015/16 representative Nigeria General Household Survey that captures 5,000 households across all states. The approach assumes that demand for PMS is inelastic, implying that the direct impact on households' budgets is proportional to their consumption levels. It takes into account that a price increase results in an indirect impact on households' budgets by increasing the prices of other goods and services (such as transport and goods that require transport, see above).

4. **The analysis shows that increasing retail prices would reduce income inequality but increase poverty levels**.

- Richer households tend to spend a larger share of their income on petrol than poorer households (Figure 3). The same relationship holds for fares and other transport-related expenditures (Figure 4). Not surprisingly, a fuel price increase is therefore progressive, i.e. it disproportionately reduces the disposable income of richer households, and thus decreases income inequality (here measured by the Gini coefficient) by ¼ point.

- However, the negative impact on poor households' purchasing power results in increasing the poverty gap by 0.4 percentage points and the poverty headcount by 1.2 percentage points (Figure 5, part (1)).

Figure 3. Petrol Expenditure by Income Percentile

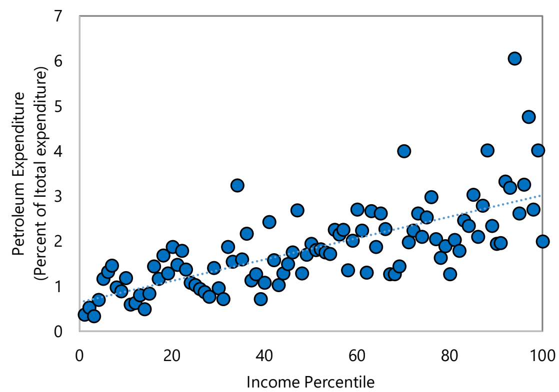


Figure 4. Fares and other Transport Expenditures by Income Percentile

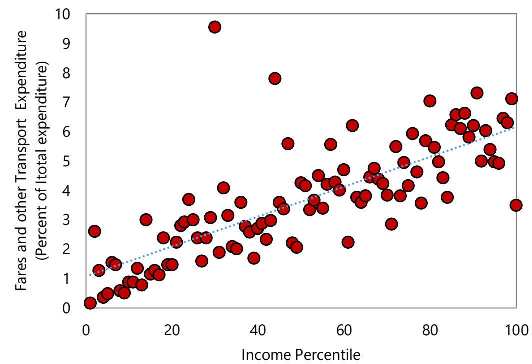
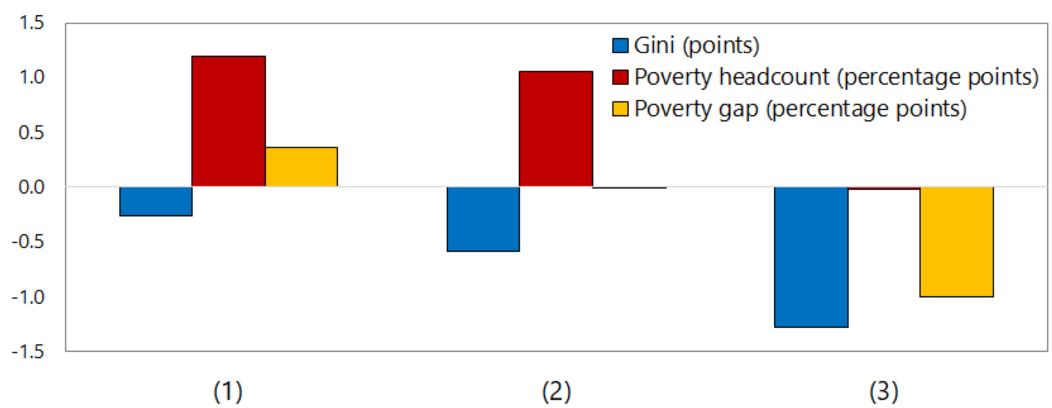


Figure 5. Distributional and Poverty Impact from a Regulatory Fuel Price Increase



(1) Impact from the price increase to cost recovery levels
(2) As in (1), but transfers to the poor to keep the poverty gap constant
(3) As in (1), but transfers to the poor to keep the poverty headcount constant

5. The cost of measures to mitigate the adverse impact on the poor are relatively small and would amplify the reduction in income inequality from the price increase.

- To assess the cost of compensatory transfers to the poor, the analysis chooses households to benefit from transfers through proxy-means testing. The proxy-means test identifies poor households that should receive the transfer based on their predicted household expenditure based on a range of indicators that may be easily verifiable in practice (state in which household resides, rural vs. urban location, ownership of a refrigerator, ownership of a car, electricity expenditures). A scenario that keeps the poverty gap (the mean shortfall of the total population from the poverty line) constant, would imply transfers with at a total cost of just Naira 63 billion, less than a tenth of potential savings through the price increase. Income inequality would decline further (by 0.6 point). However, even with the compensation, the poverty headcount would still increase by 1.1 percentage points (Figure 5, part (2)).

- To eliminate this increase in the poverty headcount based on the national poverty line, transfer packages would need to be scaled up further, to Naira 239 billion—still just about a third of potential gains of the reform at current prices and costs, excluding administrative cost of such transfers, see IMF (2018) for caveats around the design (including challenges to scale up administrative capacity in the short term). In such a scenario, the poverty gap would decrease even compared to the situation before the price increase, and income inequality would decline significantly (by 1.3 points, Figure 5, part (3)).

- Safety nets could be scaled up as part of a wider project to increase the National Social Safety Net (World Bank 2018).

6. **The impact of an increase in PMS prices is thus expected to be overall positive if compensatory measures to protect vulnerable households are introduced**. In addition, these effects do not take into account a number of other positive implications of the price increase in productive fiscal expenditures (e.g. infrastructure) that could have positive growth and distributional implications that would help compensate for adverse effects on demand from higher input costs, which are not taken into account in this analysis.

7. **Fuel price reform requires increasing transparency**, ensuring timely adjustment of prices to cover costs based on market conditions, and participation at the state level:

- **Transparency**. Independently from a price adjustment, the budget should communicate any foregone benefits of the implicit fuel subsidy transparently by including them as an explicit item into the budget and communicating domestic PMS consumption levels. In addition, if the government wishes to share costs across state and local governments, then these should be explicitly shown and implemented, possibly through a cost-sharing formula, rather than indirectly through lower net oil revenue transfers from NNPC to the government.

- **Price-setting mechanism.** To eliminate the subsidy in a sustainable manner, an increase in the regulated price should be accompanied by an implementation of an independent and automatic fuel price-setting mechanism. As part of the mechanism, regulated prices would be reviewed regularly to avoid the re-emergence of fuel subsidies. The pricing formula could include a best-practice smoothing mechanism to avoid disruptive adjustment in cases of large oil price shocks and volatility, while guaranteeing a pass-through of oil prices over the medium term (see, e.g., Coady and others (2012) for design and implications). For example, Chile's scheme consists of a two-part fuel tax, with one part indexed to inflation, and the other adjustable. A gradual adjustment is also possible. For instance, India raised the price of diesel every month from Jan 2013 to Oct 2014, until the unit subsidy was eliminated, and then let it follow international price fluctuations.

- **Deregulation**. Alternatively, deregulating fuel prices to allow for market pricing would achieve a similar effect with less control on profit margins but savings in costs of regulation.
- **Communication**. Designing and implementing an effective public communication strategy will be critical to implement the fuel price reform.

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ASSESSING THE COST-RISK OF INCREASING NIGERIA'S EXTERNAL DEBT[1]

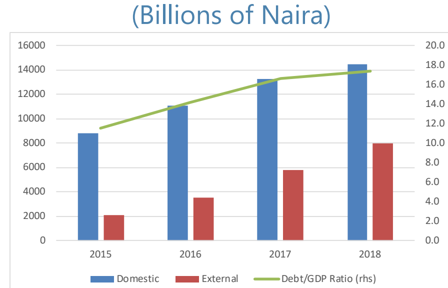
1. **This paper assesses the potential costs and risks of shifting the composition of Nigeria's public debt from the current ratios of 66 and 34 percent for domestic and external debt to 60:40**. A simulation exercise helps assess the cost and risks of this debt management strategy by considering a range of alternative financing strategies (concessional, market-based and pausing external financing). The findings— based on debt-to GDP and interest-to-revenue ratios— indicate that moving to a debt-mix of 60:40 is less costly overall than keeping the current debt mix. Recourse to concessional financing is the cheapest option at both shorter and longer horizons. While increasing the external debt share is the authorities' preferred strategy, there is a tradeoff involved in terms of vulnerability because greater recourse to international markets over the longer run could be the riskiest strategy as illustrated by a rising debt service to reserves ratio in the case of outlier shocks such as an extreme depreciation of the currency.

A. Background

2. **Nigeria's public debt[2] has increased by 6 percentage points of GDP between 2015 and 2018 with the share of external debt rising from just below 20 percent to 34 percent over the same period**. While highly concessional multilateral loans traditionally account for the largest share of the external debt portfolio, the increase in Eurobond issuances in the recent past has significantly changed the composition of external debt. The two major multilateral creditors of Nigeria are the International Development association (IDA) and the African Development Fund (ADF). Total loans from these two institutions accounted for about two thirds of the external debt portfolio in 2015. China is the main bilateral creditor, with total bilateral debt in 2015 amounting to 15 percent of total external debt. However, with the issuances of the past 2 years, Eurobonds now account for 55 percent of external debt compared to 14 percent in 2015 while the shares of multilateral and bilateral debt have fallen to 39 percent and 6 percent respectively.

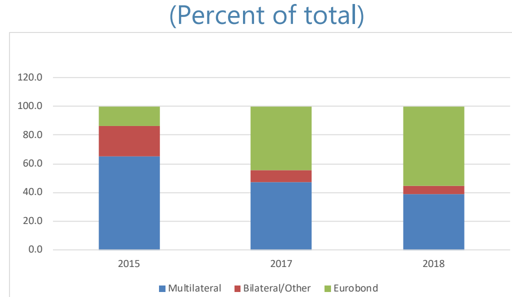
FGN Debt 2015-18

(Billions of Naira)



Composition of External Debt 2015-18

(Percent of total)



Sources: Nigerian authorities and IMF staff calculations.

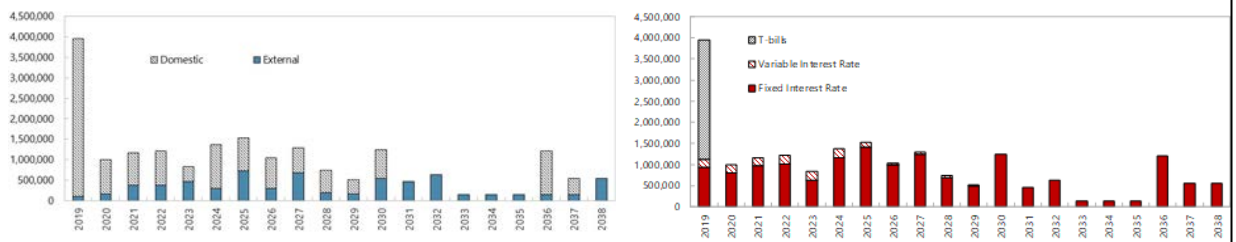
[1] Prepared by Liam O'Sullivan (AFR).

[2] The definition of public debt used for the purpose of this analysis includes federal government but not state and local government debt. Sub-national debt accounts for 15.7 percent of total public debt.

3. There are a number of different sources of risk to the existing debt stock.

- **Refinancing risk** is relatively high for domestic debt and low but increasing for external debt. The average time to maturity (ATM) for domestic debt is 7.2 years due to the significant share of T-bills in the domestic debt portfolio. The redemption profile for external debt shows that about 1.25 percent of total external debt will mature within the year rising to 8.5 percent by 2027 when a number of Eurobond maturities fall due. ATM for external debt is 12.3 years.

Redemption Profile for 2018 Existing Debt
(Millions of Naira)



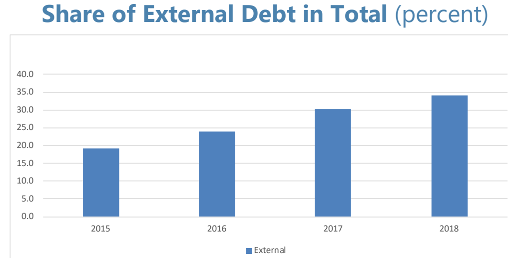
Sources: Nigerian authorities, IMF Staff calculations.

- **Exposure to interest rate risk** is high for domestic debt and rising for external debt. The average time to refixing (ATR) on domestic debt is 5.4 years while on external debt, it is 12 years. While this level of exposure for external debt is relatively low, it is nonetheless increasing in response to the decline in the share of concessional debt.

- **Exchange rate risk exposure** is increasing in line with the rising level of external debt currently estimated at 34 percent of total debt. Recent recourse to Eurobond financing (now accounting for 55 percent of external debt) has added considerably to this exposure. In terms of currency risk, exposure is principally to the US dollar (taking account also of its weight in the composition of the SDR (42 percent).

4. The authorities' Medium-Term Debt Management Strategy (MTDS) aims to increase the share of external debt. The authorities' decision to increase the share of external debt from 20 percent in 2015 to 40 percent in 2019 has been motivated by a desire to avail of lower external interest rates, particularly through loans from multilateral and bilateral creditors, and to take advantage of longer maturities and grace periods. This would allow them to contain the increase in the interest-to-FG revenue ratio, a major vulnerability for

Share of External Debt in Total (percent)



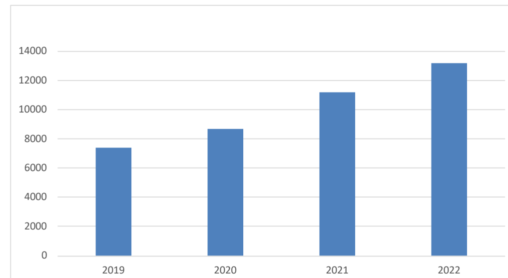
Sources: Nigerian authorities, IMF Staff calculations.

Nigeria in terms of fiscal sustainability.[3] As of 2018, the share of external debt has reached 34 percent, mostly as a result of regular Eurobond issuance, totaling $10 billion since 2017. This has led to considerably less net domestic issuance in 2018 with treasury bills issuances falling to N3,335 billion from N4,442 billion in 2017 and bonds to N992 billion from N1,521 billion. With only $2.5 billion external funding expected in 2019, the authorities are expected to fall short of their objective, at best only reaching the 60:40 target mix in 2022.

5. In view of the extensive ongoing debate about Nigeria's increasing recourse to non-concessional external borrowing, the analysis here assesses whether the MTDS debt mix objective remains appropriate. To do this, scenario analysis was conducted using the MTDS Analytical Tool which considered various shocks. The baseline assumed that Nigeria would have to borrow on average about $10.5 billion a year externally from 2019-22 under different borrowing strategies, rising to an average of just above $16 billion for the period 2019-28. While the authorities will continue to maximize borrowing from existing concessional financing sources, particularly the International Development Association (IDA) and bilateral partners, the secular decline in the share of concessional lending is projected to continue. The implication is that the appetite for Nigerian Eurobonds shown by investors in the past two years will be sufficient to maintain a growing interest in the medium term without requiring an additional risk premium. Contingency plans to identify other sources of financing may however need to be prepared taking into account the possibility that this volume of external funding does not materialize.

External Financing

(Millions USD)

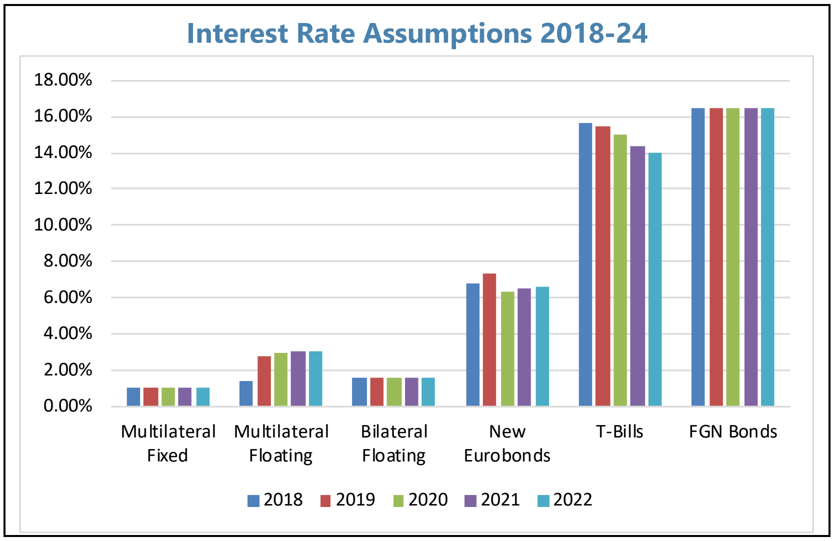


Sources: Nigerian authorities, IMF Staff calculations

[3] Long maturity and grace periods minimize near-term rollover risk (liquidity risk), and exposure to interest rate risk by spreading refinancing over time or pushing it further into the future.

B. Macroeconomic Assumptions

6. The analysis is based broadly on staff's current macroeconomic projections. This implies that real GDP will grow by 2-2.5 percent over the medium term, and that inflation will remain in double digits while the primary fiscal deficit will average around 2 percent of GDP reflecting relatively low oil prices. As regards the external account, the current account balance is projected to remain close to zero with international reserves declining from their current level to reach $33-34 billion in the medium term. On the basis of the authorities' established policy aiming at maintaining stability vis-à-vis the US dollar, the naira exchange rate is assumed to be at 325 N/$, slightly below the retail rate, throughout the analysis (except in the case of exchange rate shocks). The tightening of financing conditions at international level is reflected in the assumption that Eurobond interest rates will increase in the short term, with significant and persistent differentials between domestic and external interest rates and within the latter category, between Eurobond and concessional rates (text chart).



C. Methodology

7. Four strategies that would help assess the feasibility and desirability of increasing external debt were identified (See Annex 1 for details on methodology and assumptions):

- Strategy 1 (S1): Assumes future external financing starting in 2020 is on concessional terms, as stated in the Debt Management Office (DMO)'s original 2015-19 debt strategy.

- Strategy 2 (S2): Assumes market-based financing in 2019-2022 (i.e., Eurobond financing) to reach the composition target of 40 percent external debt by 2022.

- Strategy 3 (S3): As (S2) but market-based financing is achieved at higher risk premium (i.e., the cost of borrowing is 500 basis points higher than in S2), equivalent to two standard deviations from LIBOR.

- Strategy 4 (S4): No further external financing apart from that assumed for 2019. All financing raised domestically at prevailing interest rates.

8. The four strategies were subjected to interest and exchange rate shocks in a total of 5 scenarios for each strategy:

- Baseline (no shock to either interest or exchange rates).
- Mild interest rate shock, implying an increase of 2.5 percentage points in interest rates. The calibration of this shock is based on one historical standard deviation for LIBOR (capturing the peak in 2007).
- Extreme interest rate shock implying an increase of 5 percentage points in interest rates, calibrated as double the increase for the mild interest rate shock. Under S3, this is an outlier shock, equivalent to 4 standard deviations from LIBOR.
- Extreme exchange rate shock implying that the naira depreciates by 100 percent in 2019 for the 4Y exercise (and in 2023 in the 10Y case) and remains at this level. The exchange rate shock is an outlier shock based on the depreciation of the Naira following the 2015 oil price shock. The historical data also suggests that the value of the naira is very sensitive to the movement in oil prices, with the previous marked decline in 2009 (about half of that occurring in 2016) taking place contemporaneously with a sharp drop in oil prices.
- Combined mild interest and moderate exchange rate shock (a naira depreciation rate of 50 percent, less severe than the recent depreciation), reflecting the reality that market uncertainties surrounding exchange rates often result in correspondingly higher domestic and external interest rates.

9. The analysis is carried out in two assessments covering a four-year (4Y) period to 2022 and a ten-year (10Y) period to 2028. Extending the analysis to the longer time period is important from the perspective of assessing the effect of currency depreciation over a long-term horizon on Eurobonds which the authorities' financing policies have been heavily reliant upon since 2017. All Eurobonds have a maturity of 10 years or longer, with the exception of a single Diaspora bond of $300 million. Extending the strategy period to 10 years helps assess the long-term exchange rate risk, assuming that the authorities choose to maintain the 60:40 ratio through 2028. However, there is naturally greater uncertainty over all variables when running a scenario over a significantly longer period, so the results need to be interpreted with caution.

10. The overall effect of the strategy is directly impacted by:

- **Composition of Existing Debt**: Domestic debt still accounts for two thirds of overall debt.
- **Concessional Financing:** A large share of existing external debt is on concessional terms (almost 45 percent at end-2018), which creates an important base effect and mitigates the impact of the significant increase in the use of market instruments since 2017.

- **Use of Eurobonds to reach the 60:40 Target**: longer maturities associated with Eurobond financing confer significant advantages in minimizing near-term refinancing risk and hence reduce the gross external financing need to meet the 60:40 target.[4]

D. Results of the Analysis

11. The analysis captures the effect of the strategy on key debt portfolio indicators under each of the four alternative strategies (Tables 1 and 2). Under the baseline, all strategies lead to an increase in the debt-to-GDP ratio, but the debt-to-GDP ratio remains around 25 percent of GDP by 2022 or 32 percent by 2028. Given the lower cost of financing, using concessional sources (S1) is the cheapest strategy, reducing interest payments, the debt-to-GDP ratio and reliance on short-term funding (lower refinancing risk). On the other hand, S4 has the lowest share of FX debt as a share of total debt (4 percent by 2028), and therefore the lowest foreign exchange risk. However, it is the costlier strategy in terms of interest payments, debt-to-GDP ratio, and refinancing risk (with debt maturing in one year increasing to 9 and 19 percent of total debt in 2022 and 2028, respectively).

Table 1. Cost-Risk Indicators under Different Debt Management Strategies (2022)

Risk Indicators		2018	As at end 2022			
		Current	S1	S2	S3	S4
Nominal debt as percent of GDP		17.0	25.3	25.5	25.8	26.0
Present value debt as percent of GDP		16.2	21.9	25.0	25.2	25.5
Interest payment as percent of GDP		60.0	71.2	77.7	84.4	90.4
Implied interest rate (percent)		9.7	8.9	10.0	11.2	12.1
Refinancing risk2	Debt maturing in 1yr (percent of total)	18.0	6.3	6.3	6.4	9.1
	Debt maturing in 1yr (% of GDP)	3.1	1.6	1.6	1.6	2.4
	ATM External Portfolio (years)	12.3	16.6	12.1	12.1	10.3
	ATM Domestic Portfolio (years)	7.2	6.7	6.7	6.7	6.7
	ATM Total Portfolio (years)	9.0	10.7	8.9	8.9	7.4
Interest rate risk2	ATR (years)	8.8	10.6	8.8	8.8	7.3
	Debt refixing in 1yr (percent of total)	23.8	7.4	8.0	8.1	10.2
	Fixed rate debt incl T-bills (percent of total)	93.4	98.3	97.6	97.7	98.3
	T-bills (percent of total)	12.9	3.0	3.0	3.1	5.3
FX risk	FX debt as % of total	34.0	40.0	40.5	40.1	18.0
	ST FX debt as % of reserves	0.7	4.3	4.3	4.3	4.3

Sources: Nigerian authorities, IMF staff calculations

[4] However, Eurobond bullet repayments pose significant refinancing risk when they become due and need to be managed carefully.

Table 2. Cost-Risk Indicators under Different Debt Management Strategies (2028)

Risk Indicators		2018	As at end 2028			
		Current	S1	S2	S3	S4
Nominal debt as percent of GDP		17.0	31.6	34.2	36.8	39.1
Present value debt as percent of GDP		16.2	26.0	34.0	36.6	38.9
Interest payments as percent of total revenue		60.0	85.9	111.6	138.8	161.2
Implied interest rate (percent)		9.7	9.3	11.3	13.1	14.5
Refinancing risk	Debt maturing in 1yr (percent of total)	18.0	12.4	11.6	11.9	18.7
	Debt maturing in 1yr (% of GDP)	3.1	3.9	4.0	4.4	7.3
	ATM External Portfolio (years)	12.3	19.1	10.8	10.9	7.4
	ATM Domestic Portfolio (years)	7.2	7.5	7.5	7.5	7.6
	ATM Total Portfolio (years)	9.0	12.3	8.9	8.9	7.6
Interest rate risk	ATR (years)	8.8	12.3	8.8	8.8	7.6
	Debt refixing in 1yr (percent of total)	23.8	12.5	12.4	12.6	18.8
	Fixed rate debt incl T-bills (percent of to	93.4	99.9	99.2	99.2	99.9
	T-bills (percent of total)	12.9	7.4	7.4	7.8	12.9
FX risk	FX debt as % of total	34.8	40.2	41.3	40.3	4.3
	ST FX debt as % of reserves	0.7	8.9	1.8	1.8	1.6

Sources: Nigerian authorities, IMF staff calculations

12. **Figures 1 and 2 illustrate the cost-risk trade-offs for each strategy at the end of the four-year and 10-year horizon: debt as a share of GDP and interest payments as a share of revenue**. The horizontal axis in the figures on the left represents the risk of each strategy, defined as the maximum deviation of the cost measure from the baseline scenario experienced under any of the five shock scenarios. In the figures on the right, the maximum deviation of costs from the baseline scenario is added to the projected baseline costs. The analysis implies:

- The worst cost outcomes in the short run (by 2022) result from the strategy that relies solely on domestic financing (S4). To that extent, the DMO's emphasis on switching to external financing is borne out in the analysis. This holds particularly for the interest-to-revenue ratio as the debt-to-GDP ratio remains comparable across scenarios.

- By 2028, S4 still remains the costliest option in terms of interest-to-revenue. It becomes unsustainable under stress tests, reaching 200 percent. However, based on the debt-to-GDP indicators, the stress tests results show that the highest increase is for the strategy where external financing is only available at a market premium, albeit with the debt-to-GDP ratio remaining below 45 percent of GDP (almost matched by the strategy relying on domestic financing).

- Exchange rate risk also matters to the results. The impact of exchange rate shocks on debt sustainability as measured by the debt/GDP ratio is the highest of all shocks with an increase of 4 points relative to the baseline occurring in the 4Y case and about 7 points in the 10Y exercise under all strategies (indicated by the margin of the maximum risk results, lower panels, Figures 1 and 2).

Figure 1. Cost-Risk Representation of Different Borrowing Strategies, 2022

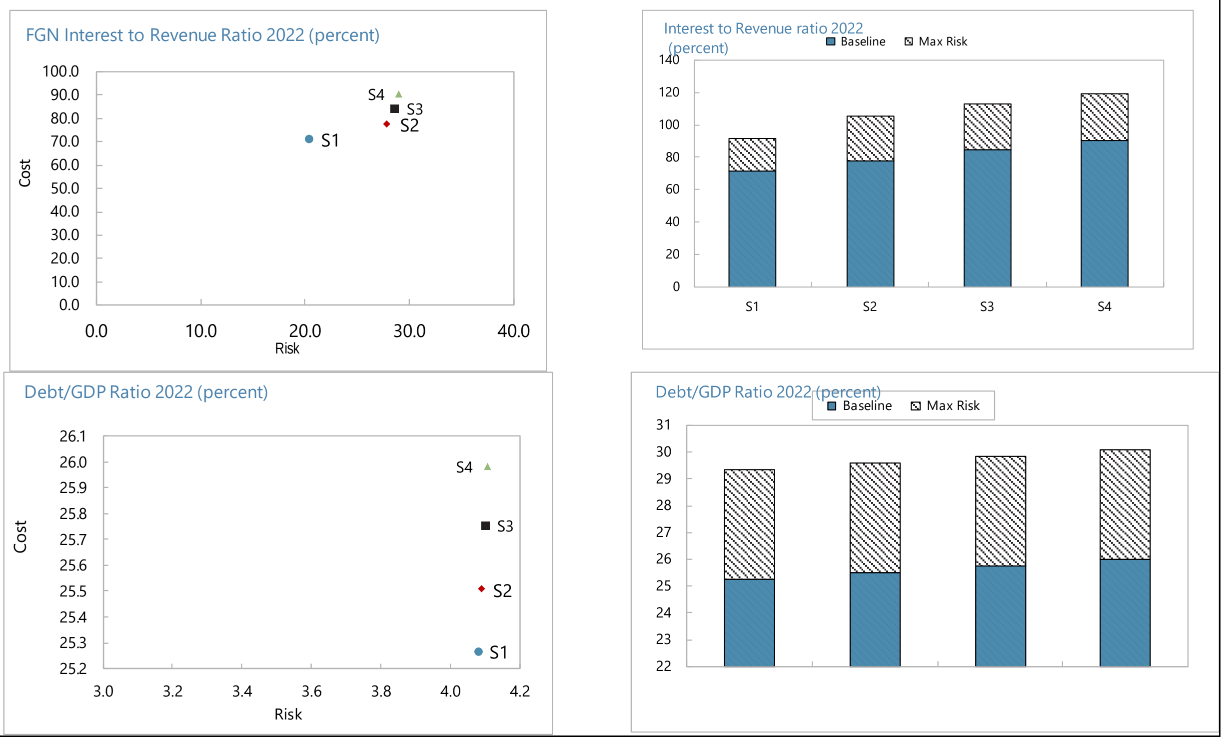
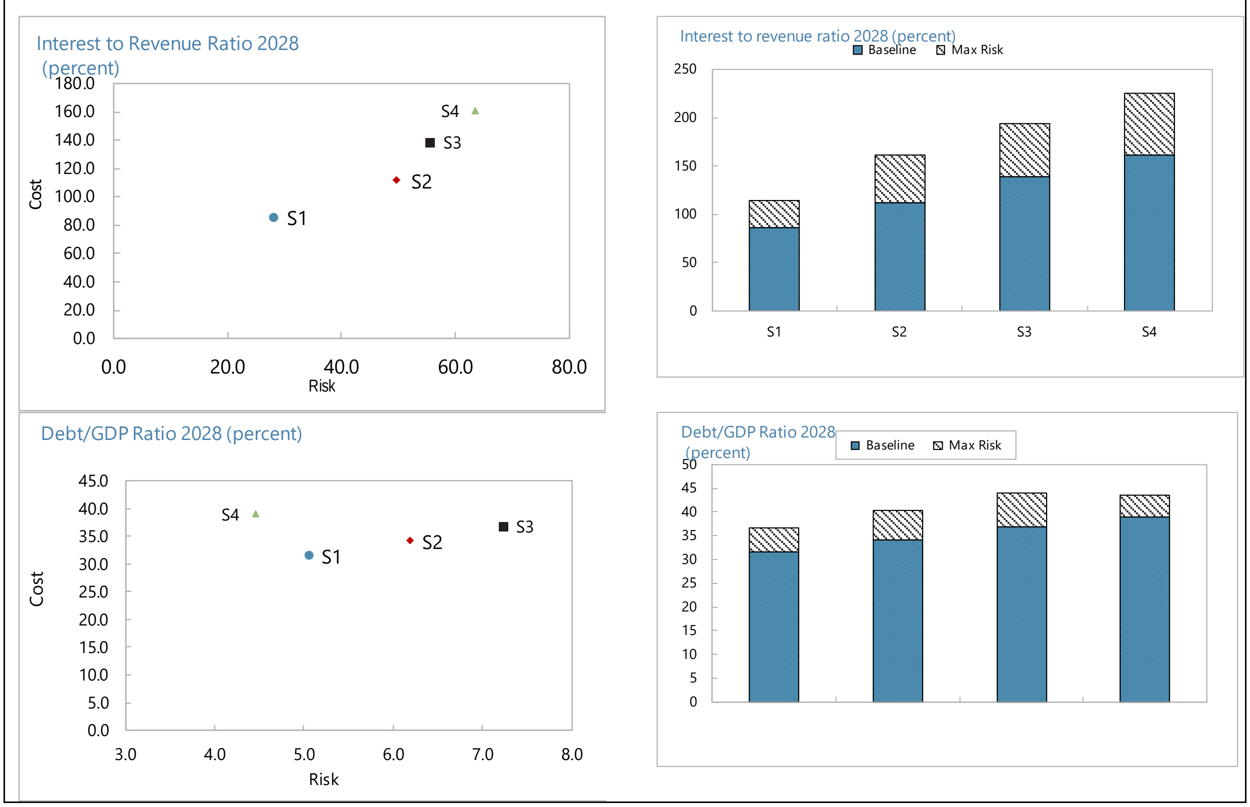
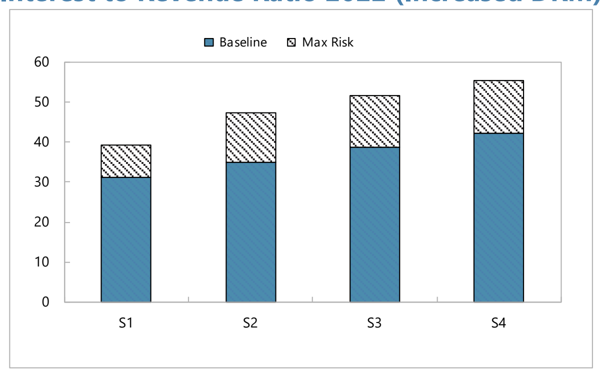


Figure 2. Cost-Risk Representation of Different Borrowing Strategies, 2028



13. The results above clearly underscore the importance of improved domestic revenue mobilization. An additional simulation analysis based on an assumption of an increase of 0.5 percent of GDP per year in revenue mobilization relative to the baseline from 2019-22 and maintained thereafter would bring the interest-to-revenue ratio down by more than half by end-2022 under all strategies, reflecting the cumulative impact of lower financing needs and an increase of 2 percent of GDP in revenues.

Interest to Revenue Ratio 2022 (Increased DRM)

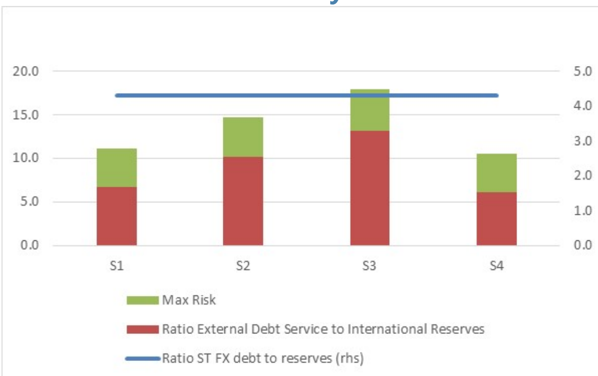


Sources: Nigerian authorities and IMF staff calculations

14. To bring out the cost-risk tradeoffs between S4 and the other strategies, FX debt (short-term debt and debt service) to reserves ratios also need to be considered. These FX ratios are already relatively high in the baseline for strategies S2 and S3 and would deteriorate in the case of an exchange rate depreciation consistent with maintaining a constant real exchange rate. Consideration also needs to be given to the implications for the balance of payments should the scale of government external borrowing assumed here impact the risk appetite of international investors and result in reduced private sector external borrowing. In addition, the external risks are likely to be correlated with fiscal risks: a plausible scenario involves a fall in the oil price, larger financing needs, lower international reserves, and substantial depreciation.

15. Results for the external debt service to international reserves ratio highlight the extent of vulnerability to exchange rate risk (Figures 3 and 4). The results of the analysis indicate that the high interest rate premium under S3 significantly increases vulnerability relative to other strategies in this respect. In the 10Y case, this ratio would reach almost 50 percent under S3 in the baseline unless international reserves were to increase significantly. However, this would increase to almost 65 percent under an exchange rate shock and 68 percent under an extreme interest rate shock. The importance of concessional financing to the outcome is borne out in the contrast with the results of S1 which show the ratio reaching 12.9 percent in the baseline and 23.3 percent in the case of an extreme exchange rate shock. Interestingly in this case, S4 (domestic financing) is the less risky under all scenarios.

Figure 3. Measures of External Debt Vulnerability 2022

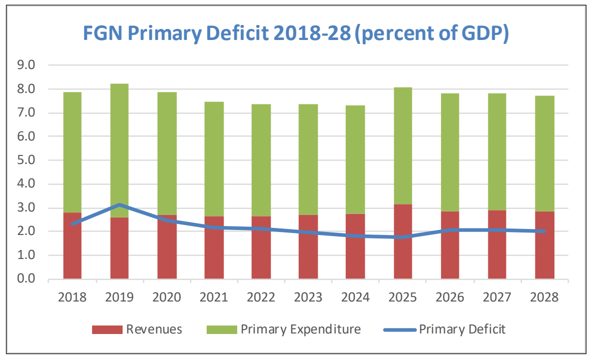


Sources: Nigerian authorities and IMF staff calculations.

Figure 4. Measures of External Debt Vulnerability 2028

Sources: Nigerian authorities and IMF staff calculations.

16. A number of caveats apply to the analysis conducted:



- ***Primary deficit***. The baseline scenario assumes a primary deficit of around 2 percent of GDP under current policies throughout the projection period. It could deteriorate if oil prices decline more than anticipated or improve if new revenue measures reduce the deficit as illustrated above. In view of the results of the analysis and their implications for debt sustainability, it is important for the authorities to undertake regularly a fiscal sustainability analysis of their debt strategy, including an in-depth assessment of the assumptions driving the primary deficit.

- ***Concessional Financing*: **Even if borrowing on the international capital markets is made at lower interest rates than prevailing domestic rates, it is nevertheless undertaken at a significant premium relative to the terms of the existing concessional loan portfolio. The authorities' 2015 debt strategy is however based on an assumption of the continued availability of concessional financing, which is one of the main reasons why the 2019 target date for the 40 percent share is not achievable this year.

- ***Exchange rate***. In line with the authorities' current stated strategy, the nominal exchange rate is assumed to remain constant (except in the case of specific shock scenarios). Relaxing this assumption would increase vulnerability to exchange rate changes and magnify the impact of exchange rate shocks for the exercise.

- ***Risk premia***. Market sentiment could change, and additional risk premia may need to be paid to compensate investors for the risks associated with the country's increased exchange rate exposure and the potential for capital flight. In terms of the analysis, this would imply that S3 more accurately reflects the authorities' strategy than S2 and should therefore be used as the basis for comparison with domestic financing options.

- **Maturity structure.** Refinancing risk increases in the longer term as a result of Eurobond maturities falling due in 2027.

E. Conclusions

17. The DMO's MTDS includes a target of 40 percent for the ratio of external debt to total debt. Significant progress has been made towards achieving the target following the reduction in issuances of domestic government securities. However, meeting it would likely require a few more years than the targeted 2019, and even then, it would require doubling, on an annual basis for the next five years, the considerable level of external financing obtained in 2018.

18. Using a range of alternative financing strategies over a 4-year and 10-year horizon, the analysis shows that a debt-mix of 60:40 is less costly overall than keeping the current debt mix. The results confirm that recourse to external financing (and preferably concessional) financing is the cheapest option, which in this respect is an endorsement the authorities' preferred strategy. However, this strategy also involves a tradeoff in terms of a higher level of risk than reliance on domestic financing due to the exchange rate risk it embodies, which would under some scenarios put considerable pressure on international reserves. Overall, the strategy aimed at increasing the share of external debt to 40 percent of total debt remains appropriate but will require careful monitoring of the associated exchange rate risk.

19. The key implementation risks to the medium-term debt strategy highlight the importance of revenue mobilization. The underlying primary fiscal deficit is a key factor driving the results, which implies that improving domestic revenue mobilization will be central to the DMO's prospects of meeting its targets. The analysis shows that the interest payments to revenue ratio could be reduced by more than half by 2022 under all strategies if the authorities were to even partially meet their revenue objectives under the Economic Recovery and Growth Plan. The authorities' and staff's emphasis on the importance of substantially increasing non-oil revenues in the medium-term as well as maintaining efforts to secure concessional external financing is thus important in order to mitigate existing risks.

20. One additional caveat from the analysis worth emphasizing is that the current exchange rate path could be more flexible than is currently envisaged. As the analysis of exchange rate shocks emphasized, assuming a baseline that itself incorporates more flexibility would increase the amplitude of the results of the shock scenarios, making a scenario relying on more market financing at a premium even more costly and risky. For this reason, the authorities need on an ongoing basis to carefully monitor the exchange rate risk associated with their debt portfolio as this may become a major source of vulnerability in the event of outlier shocks. While increased exchange rate risk needs to be factored into the options for debt management strategies, the longer maturity structure of Eurobond financing is at the same time an important source of reduced short-term rollover risk.

Annex I. Data Requirements and Assumptions

The following inputs were used for the analysis:

- The level of the **primary deficit** remains the same under all strategies and scenarios and is the same as that assumed in staff's baseline scenario (averaging around 2 percent of GDP),

- **Existing debt**: debt service payments (principal and interest payments cash flows) of existing debt remain the same under all strategies and scenarios. The exception would be interest payments of instruments with variable (floating) rate.[1] This information is used to calculate cost and risk indicators of the debt portfolio at the start of the analysis period, and over the strategy period including new debt.[2]

- **Interest and exchange rates enter as exogenous variables**. The analysis requires both a baseline scenario and a range of shock scenarios for each variable. These are used to compute the cost and risk of borrowing strategies under different scenarios.

- The **financing mix** determines the external-domestic financing mix per annum for each strategy. To facilitate comparison between strategies, external financing was chosen as the operational target, meaning, the amount of external financing was determined to allow the increase in external debt to reach the target of 40 percent by 2022 (and maintained thereafter in 10Y), while financing that was unmet by external financing was assumed to be fully met from domestic market sources.

- **Borrowing strategies** determine how future financing needs will be met. Strategies are presented as the proportion of the financing need that will be met through a set of debt instruments. The terms of the different debt instruments are specified to allow the calculation of debt service (principal and interest payment) over the strategy period. The analysis starts by calculating the interest and amortization cash flows associated with alternative strategies in the first year, which is then fed back into calculation of the total gross financing need for the following year, and based on specified strategy for the second year, interest and amortization cash flow are calculated to determine the third- year gross financing need, and so on. This iteration is repeated until the end of the strategy period, 2022 (or 2028). These strategies determine how the composition of the debt portfolio will change over the strategy period, allowing the generation of cost and risk indicators, including the evolution of debt composition between external and domestic debt.

[1] Loans from IBRD, African Development Bank and France are referenced to US 6-month LIBOR, with margin ranging from -0.46 –1.25 percent (Source: DMO).

[2] The analysis excludes net claims from the central bank, given the negligible size. However, converted bonds are part of the analysis as they are included in the domestic debt stock portfolio.

Common assumptions across all strategies are:

- **External financing for year 2018** reflects external disbursements that have already taken place in year 2018, actual Eurobond issuances of $5.4 billion and staff estimates of $1 billion from multilateral and bilateral is applied for strategies including Strategy 4 that assumes no further external financing.

- **Domestic financing composition**: borrowing instruments are T-bills and bonds, where the proportion by instrument was also kept the same across strategies. The latter makes results across the four strategies more straightforward as cost-risk results will be driven by external financing composition and not domestic instruments.

Financing instruments are broadly grouped into 3 types:

- **Multilateral and bilateral creditors:** Financing terms from multilateral and bilateral partners remain mostly unchanged. They tend to be on concessional or semi-concessional terms: with low interest rates, long maturity and grace periods. In this case, loans with fixed interest rates range from 0.75–2.50 percent, whereas floating rate loans are referenced to US 6 months Libor with margins set at 0.50–1.25 percent (erring on the side of caution the margins were set slightly above the terms for existing debt). Projections for US 6 months LIBOR for years 2019 – 2022 were obtained from Bloomberg.

- **International capital markets**: for S2, to reflect current global risk-off sentiment, a margin was added to the weighted average cost of Eurobond issuances for 2018 (7.23 percent) in year 2019 to price them at an average cost of 8 percent. A further 0.5 percent was added per annum until the end of the strategy period. In the case of Strategy 3, where the credit risk premium is assumed to be higher, the cost of issuing Eurobonds was raised by 5 percent compared to S2.

- **Domestic marketable instruments**: yields for Treasury bills (15.5 percent) and bonds (16.5 percent) were kept in line with current staff assumptions. For 2018 actual rates were used and for years 2019-2027 domestic yields were derived from US Treasury curve. Applying no arbitration methodology forward rates were derived from UST. Credit spread (based on the spread between Nigeria Eurobond and US Treasury) and exchange rate risk (based on inflation differential between US and NGA) were applied. Actual yields in 2018 were compared with yields derived according to this methodology and the difference was used to revise down the derived forward yields.

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ASSET MANAGEMENT CORPORATION OF NIGERIA (AMCON)[1]

The Asset Management Company of Nigeria (AMCON) was established as a temporary resolution vehicle to resolve the banking crisis in Nigeria that erupted in 2008/2009. Ever since, AMCON has been a central element in the authorities' responses to address banking sector inefficiencies. Its balance sheet has grown significantly, and its lifespan kept extending indefinitely. This paper provides a summary background on AMCON, discusses its implications, and provide policy recommendations. The priority is to wind-down AMCON through the immediate closing of its asset acquisition window, earmarking cash flows to retire bonds, and setting annual asset disposal targets.

A. Background

1. **AMCON was established as a vehicle for resolving insolvent banks.** The AMCON bill was passed in July 2010. The objective was to detoxify the banking system through purchase of bad assets, non-performing loans, and liquidity injection in troubled banks. Its mandate includes: (i) assisting Eligible Financial Institutions (EFIs) to efficiently dispose of Eligible Bank Assets (EBAs); (ii) efficiently manage and dispose of EBAs or other acquired assets; and (iii) obtain the best achievable financial returns on EBAs. To achieve these mandates, AMCON is empowered with a wide range of functions that include issuing bonds and other debt instruments; maintaining a portfolio of diverse assets including equities, fixed income bonds and real estate; providing equity capital; borrowing money in domestic or foreign currencies; and entering into financial derivative contracts. It currently employs around 400 staff.

2. **AMCON played a pivotal role in resolving the banking sector during the 2008/2009 crisis in Nigeria**. During the crisis, ten banks accounting for a third of total banking assets were either insolvent or undercapitalized. In response, AMCON bought a total amount of N 1.23 trillion of the banking sector's NPLs in 2010. By September 2011, the full stock of NPLs was bought by AMCON from all intervened banks, accounting for N2 trillion worth of NPLs and around 10.5 percent of total assets. The bad loans were bought through three-year-zero coupon bonds that represented a third of the entire outstanding bonds issued in the market. In addition, AMCON had purchased the three bridge banks established to take over three insolvent banks, with a view to resell those banks to private investors. Two of those banks were sold in 2015 while the third was sold in 2017.

3. **The funding of AMCON is shared between the public and private sectors**. The Federal Government provided the initial capital of N10 billion. In 2015, AMCON's act was amended to establish the Banking Sector Resolution Cost Fund (RCF), a sinking fund held at the central bank. Under the RCF, effectively introduced since 2011 through an MoU between the CBN and banks but

[1] Prepared by Ayman Alfi (MCM).

with slightly different terms, the CBN provides an annual contribution of N50 billion for up to 10 years while Banks pay a flat premium of 50 basis points of their total assets.

4. **Although established only to address issues of the 2009 banking crisis with a 10-year lifespan, AMCON's balance sheet continues to grow**. By 2019, AMCON's total assets exceeded N1.7 trillion while its liabilities reached around N5.5 trillion. The CBN remains the main creditor (and owner) of AMCON holding around N5.3 trillion of AMCON bonds by end-2018 (including the N1.3 trillion bonds issued to acquire Polaris bank). Currently, AMCON holds 12,000 loans of which 350 loans represent 85 percent of AMCON's total exposure. Latest financial results reveal a large negative net worth of AMCON in 2017, exceeding NGN 3.9 trillion due to large accumulated losses.

5. **Cash flows from the RCF represent the bulk of AMCON's income**. Proceeds from the RCF, amounting to N234 billion in 2018, represented more than 70.5 percent of AMCON's gross income in 2017, followed by 20 percent from asset recovery. The remaining cash flow is generated through reinvestment income and asset disposal, including the sale of AMCON owned banks.

B. Current Challenges and Implications for the Real Economy

6. **AMCON's status as temporary facility with a 10-year lifespan is not reflected in its funding arrangements, raising financial stability challenges**. Having an AMC that exists indefinitely and constantly acquiring bad assets from banks promotes moral hazard and careless behavior. This includes weak credit underwriting standards, bad governance, and excessive risk taking. Moreover, banks have large incentives to off-load bad assets from their balance sheets in return for government guaranteed, liquid assets that would also boost their regulatory capital. Despite this, AMCON continues to use its funding resources to acquire assets and bail-out banks—including the recent purchase of Skye Bank (transformed into Polaris bridge bank) in September 2018— rather than retiring its own outstanding debt and winding down its portfolio.

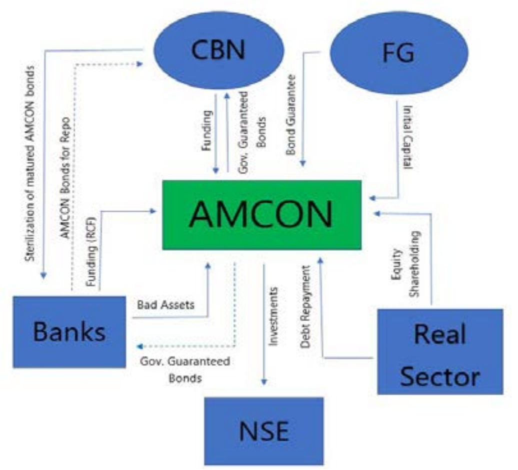
7. **The shift from AMCON's role in resolving troubled banks during the crisis to becoming a market player is contributing to further inefficiencies and complicating its asset recovery task.** AMCON's increased equity holding, through the use of equity-for-debt swaps with its debtors, created misalignment of incentives as it is less likely to vigorously enforce its creditor rights when it is a co-owner of a distressed company. Around 80 percent of AMCON's recoveries have been a result of either forfeiture or taking over businesses. It also holds equities in companies and runs corporates in a wide range of sectors. This further complicates its efforts in winding down its activities as it is not structured to run businesses, nor does it have the expertise to do so. Furthermore, many of its co-owned companies are in tightly regulated industries or sensitive to political pressures (e.g., aviation, agriculture, and oil and gas) which further complicates recovery efforts.

8. **AMCON disclosure practices and oversight can be improved**. AMCON reports to the CBN and MoF on quarterly basis and its act requires full publication of audited financial statements within six months following the financial year. However, while AMCON publishes its financial statements in the National Gazette, those statements are not available on AMCON's website except

for a summary of the 2015 results. Moreover, the CBN's regulatory framework for AMCON could be improved, including by reviewing AMCON's business strategy, and assessing its risk profile and ability to honor its bond obligations.

9. The close linkages between AMCON and the rest of the financial sector may pose a source of systemic risk. AMCON's funding, through the RCF, relies on central bank contributions and the size of banking sector. Its bonds — amounting to around 3.5 percent of GDP — are also fully guaranteed by the federal government. Nevertheless, the resulting contingent liabilities are not disclosed nor accounted for in the fiscal accounts of the federal government. The CBN's ownership and funding of AMCON exposes its balance sheet to the credit risk in AMCON's balance sheet.

Figure 1. AMCON's Sectoral Linkages



10. AMCON is also not isolated from macroeconomic developments and the real sector. AMCON's performance is largely correlated with economic growth and monetary developments due to its activities in the real sector and money markets. AMCON holds substantial equities and run large corporates in various industries including the Oil & Gas, Aviation, automobile, and agriculture. Obligors' ability to pay back debt tends to worsen during tighter business conditions, e.g., the recession in 2016, which affected recovery rates and increased delinquencies in restructured loans. Cash streams from the RCA, AMCON's main source of funding and debt repayment, is also a function of banking assets, which changes based on economic conditions.

C. Recommendations

11. It is important that AMCON immediately build and execute an exit strategy. It was created specifically for resolving stressed banks during the 2008/2009 crisis, and its mandate should be limited to this purpose. Immediate priority is to:

- **Earmark AMCON's cash flows for buying back bonds**. Bail-out pressures are already emerging in few banks. It is therefore important that the accumulated funds are clearly earmarked for paying outstanding bonds.

- **Immediate closing of the window for the acquisition of troubled loans**. AMCON should no longer purchase distressed assets, as was the recent case for Polaris bank. AMCON's continued acceptance of new loans leaves it exposed to pressures to engage in more debt-for-equity swaps with ailing industries and financially challenged public entities.

- **Setting annual disposal targets. AMCON should liquidate its loans and the absence of disposal targets is increasing the "warehousing" of acquired loans and the risk associated**

with it. It is therefore critical that AMCON sets annual targets for disposal of bad loans that strike an appropriate balance between ambition and realism with emphasis on frontloading the disposal in the first period of AMCON's remaining life. Experience in other countries suggests that a rapid offloading of problem loans is associated with lower overall resolution cost. AMCON should also explore the feasibility of delegating part of its portfolio to private AMCs, which will help accelerate the winding down of its portfolio. This would also be supported by a new resolution framework that provides powers to write down capital and resolve non-viable banks expeditiously.

- **Set a firm closing date for AMCON. Its lifespan has been extended for too long**. AMCs in many countries only lasted for seven years, e.g., Malaysia and Indonesia. The 2023 sunset of AMCON, which was aligned with the maturity date of AMCON's bonds, appears unlikely as AMCON continues growing its balance sheet including the recent issuance of 25-year bonds in 2018. It is strongly recommended to set an explicit and ambitious closing date for AMCON. The closing date should be formally included in AMCON's act to ensure commitment. In addition, an arrangement would have to be set up for how the residual assets will be dealt with, including whom they will be transferred to.

- **Quickly set and implement plans for divesting AMCON's interests in companies and banks**. This includes a plan for quickly selling the newly acquired Polaris bridge bank. The plan should also include other corporates that AMCON own or co-own such as Oil and Gas companies and Airlines.

- **Reinforcement of disclosure practices**. In line with the provisions in the AMCON act, AMCON should disclose its financial statements within six months of the end of the fiscal year. Financial statements should also be published on AMCON's website.

12. Pending AMCON's closing, the legal environment should be significantly strengthened to empower AMCON's collection power and recovery strategy. Through its act, AMCON already has more power than banks in seizing assets of distressed obligors and having access to debtor assets beyond collateral (including directors' assets). However, legal challenges remain large with more than 3000 cases currently disputed in court. The legal process is complex and lengthy and should be enhanced. AMCON's staff should also have adequate legal protection to exercise the needed actions during their asset recovery efforts. Proposed enhancement measures include (i) reversing the burden of proof such that it is the party alleging the wrongdoing that has to show bad faith rather than the relevant authority providing that the act or omission was done in good faith; (ii) raising the threshold for commencing legal action to that of gross negligence or willful misconduct; (iii) expanding the legal protection for AMCON to include its staff; and (iv) indemnifying AMCON's staff for defending legal action taken against them personally if they had taken the action in good faith. Importantly, these legal changes should be pursued in parallel to the winding down process and de-linked from the dissolution of AMCON.

13. CBN's ownership in AMCON should be discontinued. The involvement of banks in the funding of AMCON, as a resolution vehicle, is appropriate as the cost of resolution should be borne by the private sector to limit moral hazard. The central bank funding and ownership in AMCON, however, should be stopped or, at least transferred to the fiscal authority, to avoid conflicts with the CBN's mandate of supervising AMCON and the banking sector.

14. AMCON should be classified as a general government unit. The MoF and CBN are currently the shareholders of AMCON, which implies they have the ultimate control of its operations as they appoint its board of directors while its bonds are fully guaranteed by the government and held by the CBN. Consequently, and in line with best international practices, all AMCON's assets and liabilities should be classified under general government, implying that its bonds should also be recognized as public sector government domestic debt.

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HUMAN CAPITAL AND GENDER EQUALITY[1]

Education and health outcomes in Nigeria are among the weakest worldwide and are deteriorating in some parts of the country. Access to education is highly unequal across states and individuals' income and gender. Regional differences in health outcomes are vast. Estimations from a micro-founded general equilibrium model suggest that narrowing gaps in education between boys and girls and between individuals at different parts of the income distribution would boost productivity, decrease income inequality, and narrow gender gaps in labor force participation rates and earnings. Closing the gender gap in years of schooling in each income quintile alone would boost long-term GDP by 5 percent, with much higher effects for more ambitious scenarios that also include anti-discrimination policies. Improving health outcomes, in particular for children, will support education outcomes and boost productivity of the labor force. Increased and regular funding for the education and health sector will be critical for supporting a range of reforms that includes all tiers of government.

A. Introduction

1. **Building human capital to boost the work force's productivity will be essential to reap Nigeria's demographic dividend.** Nigeria's population is growing at more than 2½ percent annually and its youth accounts for more than half of the population. This presents tremendous opportunities. However, a larger population will also add pressure on public services and infrastructure, which are already under considerable strain, with Nigeria already hosting the largest number of out-of-school children worldwide and contributing 12 percent to the global under-five mortality. Experiences from other countries suggest that declining dependency ratios (increasing the ratio of the population of working age to those too young or too old to be in the labor market), provide an opportunity for a demographic dividend. To reap this dividend, however, investments in human capital need to increase to allow workers to enter into the labor market at higher wages and higher productivity employment (CR/18/64).

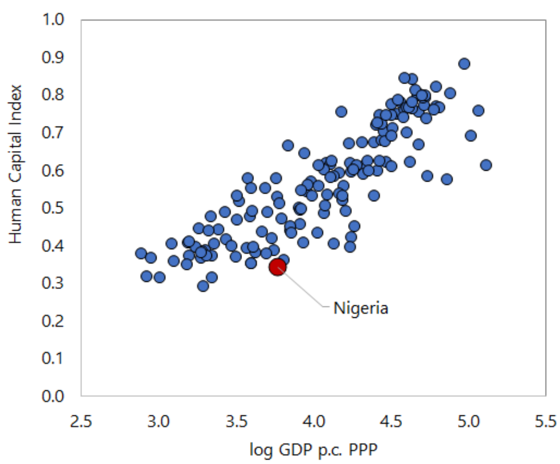
2. **In this context, this paper provides an overview of developments in health and education in Nigeria and their implications for the macroeconomy and offers policy options.** In particular, it first provides an overview of the state of human capital and access to health and education services in Nigeria and simulates the impact of a range of policies to close gaps in education on GDP, inequality of gender and income, and other labor market outcomes. After giving a summary of ongoing government initiatives, it offers a few policy options.

[1] Prepared by Vivian Malta (SPR) and Monique Newiak (AFR). This selected issues paper has benefited from comments received during presentations and discussions with government officials, in particular the Federal Ministry of Health and the Federal Ministry of Education, Ministry of Women Affairs and Social Development, and development partners (High Commission of Canada, UNICEF, the Norwegian Embassy and Plan International) in Nigeria, and comments by the World Bank (Muna Salih Meky). We also thank Claudia Berg, Lisa Kolovich and Brooke Tenison for valuable inputs. Policy recommendations on health, education and gender are aligned with recommendations made by the Nigeria development partners group.

B. Status Quo

3. Indicators of human capital development in Nigeria paint a worrisome picture. According to the World Bank's 2018 *Human Capital Index*, capturing the level and quality of education as well as health outcomes, Nigeria ranks among the bottom six countries worldwide. For the second year in a row, it also ranks last on Oxfam's *Commitment to Reducing Inequality Index*, to a large extent driven by the country's low social spending. Spending on education, at 1.7 percent of GDP, is well below the 4.7 percent average in sub-Saharan Africa.

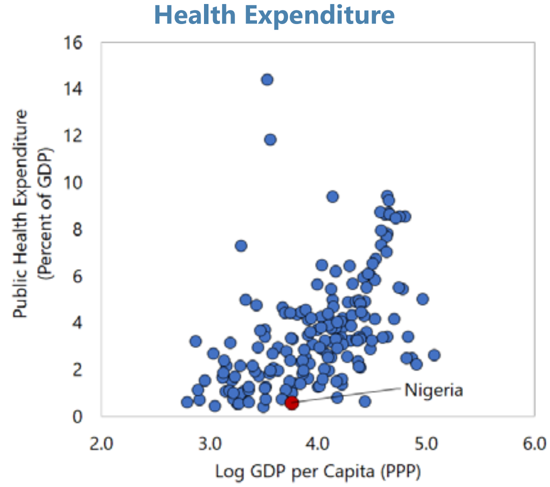
Figure 1. GDP per Capita (PPP) and Human Capital Index



Source: World Bank Human Capital Project; WDI.

Note: Global sample of countries.

Figure 2. GDP per Capita (PPP) and Public Health Expenditure



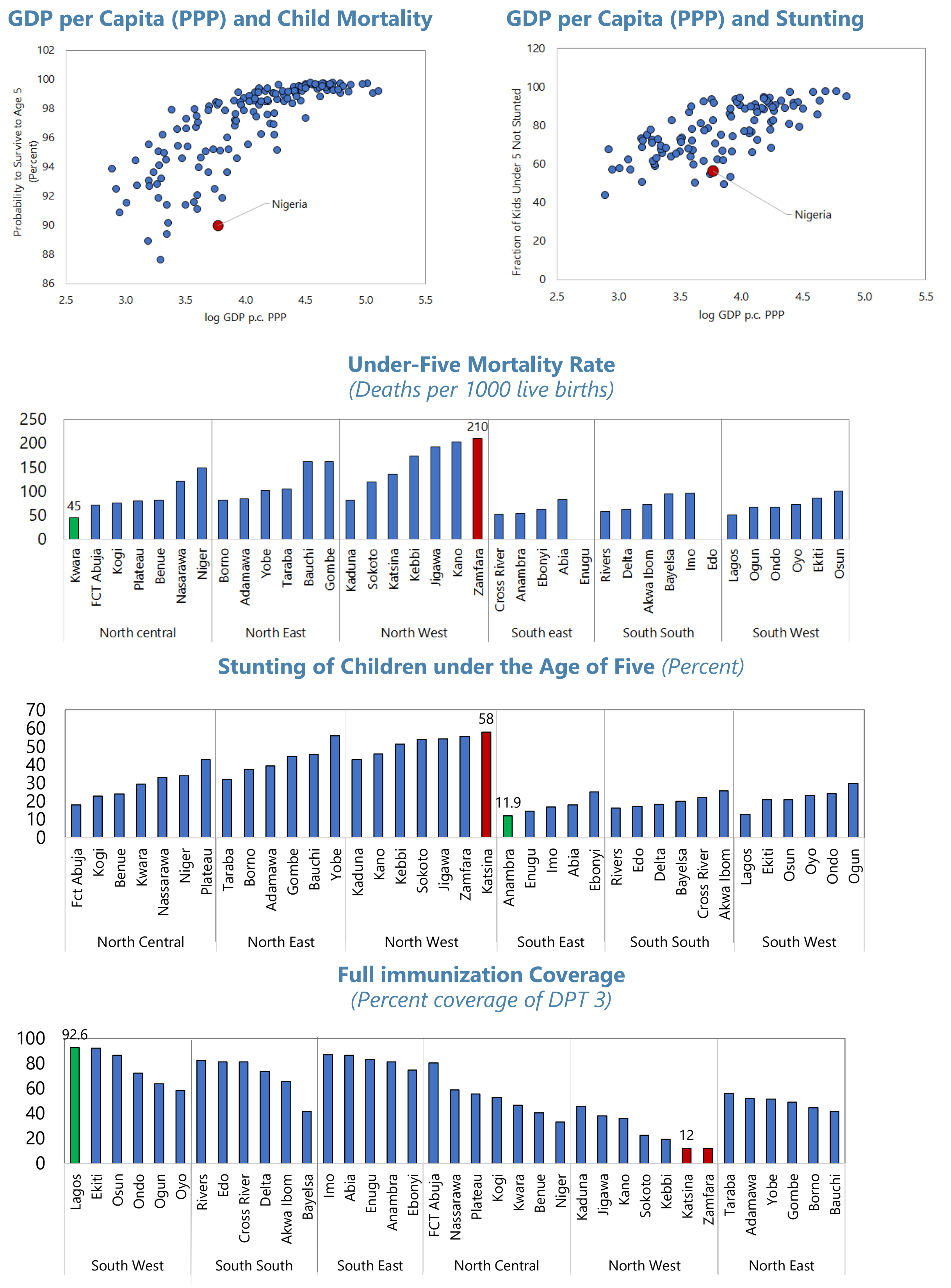
Source: World Bank Human Capital Project; WDI.

Note: Global sample of countries.

4. Health outcomes are poor, on average among the worst worldwide, with large variations across states (Figure 3). One in nine children dies before their fifth birthday in Nigeria (Figure 3, panel 1)—750,000 deaths each year—mostly from preventable and treatable causes. Almost one in five children in the poorest income quintile die before the age of five—twice the rate in Ghana and Senegal. About half of children this age suffer from stunting, one in three children suffers from chronic malnutrition. Malnutrition, in turn leads to slower brain and cognitive development, with some estimates implying a loss of two to three years of schooling, weaker school performance, lowered productivity in adulthood, and annual losses of GDP of 11 percent in Asia and Africa. Nigeria has the largest number of unimmunized children worldwide. Its maternal mortality is second highest globally (8 maternal deaths per 1,000 live births).

5. These averages mask wide variations and extreme outcomes in some regions of the country. For instance, every fifth child dies before reaching the age of 5 in Jigawa, Kano and Zamfara state (Figure 3, panel 3). More than half of children suffer from stunting in most North-Western states but also in Yobe in the North East (Figure 3, panel 4). Fewer than 20 percent of children are being immunized in some North-Western states, and full immunization is below 20 percent in Katsina, Kebbi and Zamfara states (Figure 3, panel 5). A woman in the North East is 10 times more likely to die related to childbirth than a woman in the South West.

Figure 3. Nigeria: Health Indicators



Source: Nigeria National Bureau of Statistics; World Bank Human Capital Project: NNHS, SMART (2015&2018).

6. Low spending on health and irregular release of funds complicate the implementation of necessary initiatives. At 0.6 percent of GDP, Nigeria's health spending is comparable to that in conflict affected countries, such as Afghanistan, the Central African Republic and Yemen, and insufficient to address the sector's vast challenges. In 2016, health expenditures accounted for only 7.1, 4.2 and 3.8 percent of budgets at the federal, state and local level, respectively. Funds are released irregularly and often with a significant lag, complicating the implementation of projects, and the utilization of funds. In 2016, e.g., only 64 percent of the health capital budget was released and only 54 percent subsequently used. Implementation of the Government's Second National Strategic Health and Development Plan is estimated to require funding of N4.3 to 7.3 trillion between 2018 and 2022 in different scenarios, a multiple of current spending in the sector (NSHDP II 2019).

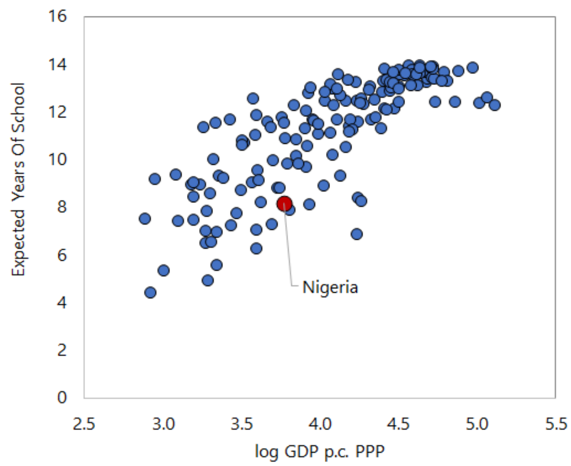
7. Quality issues in the education sector are impeding effective accumulation of human capital, and educational attainment varies strongly across states (Figure 4). The average Nigerian spends more than 8 years in school (Figure 4, panel 1) but there are substantial issues in the quality of education, halving the effective level of schooling. For instance, only 24 and 31 percent of teachers are able to score at least 80 percent on a 4th grade test in the language and mathematics curriculum, respectively, and four out of five persons that are 15 to 24 years old are not able to read a full sentence (World Bank 2018).

8. National averages are masking vast differences in educational attainment across states and the impact of conflict poses a major concern. Depending on the state, education can be almost universal (Lagos) or most of kids can be out of school (Bauchi) (Figure 5, panel 3). States' priority spending varies widely, with just around Naira 5,000 spent per person on education, health and public administration in Katsina and Sokoto, but more than Naira 44,000 in Bayelsa. The Ministry of Education reports that, over the past nine years, almost 2,300 teachers have been killed and 19,000 displaced in Borno, Yobe and Adamawa state, and, since 2014, an estimated 1,500 schools have been destroyed. More than half of children in the Northeast have never attended school.

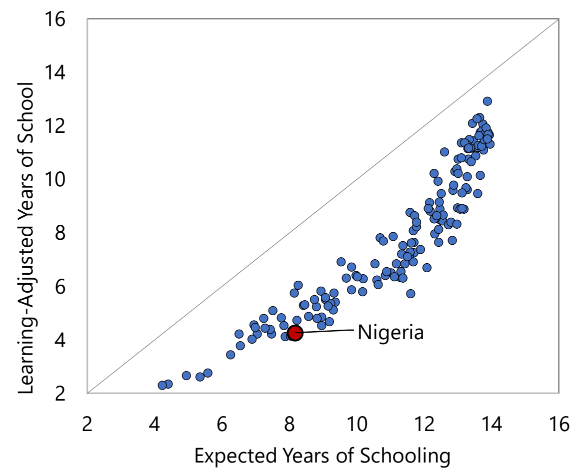
9. Access to education also varies strongly across individuals' incomes and gender (Figure 5). Among the 20 percent of the poorest in Nigeria, a child's probability to be out of school is more than 70 percent; it is 2 percent for the richest quintile (Figure 5, panel 1), contributing to Nigeria's high number of out-of-school children (a minimum of 10 million children). Literacy rates also vary strongly across income quintiles, with additional large gender gaps: in the bottom quintile, only one in ten women is literate, compared to one in three men. These gender gaps narrow with higher income, and are virtually closed for the richest 20 percent, with average years of education similar for men and women at that level (Figure 5, panels 2 and 3). The probability of completing upper-secondary education is particularly low for poor girls: 1 percent for the bottom quintile and 6 percent for the second quintile (Figure 5, panel 4).

Figure 4. Nigeria: Education Outcomes

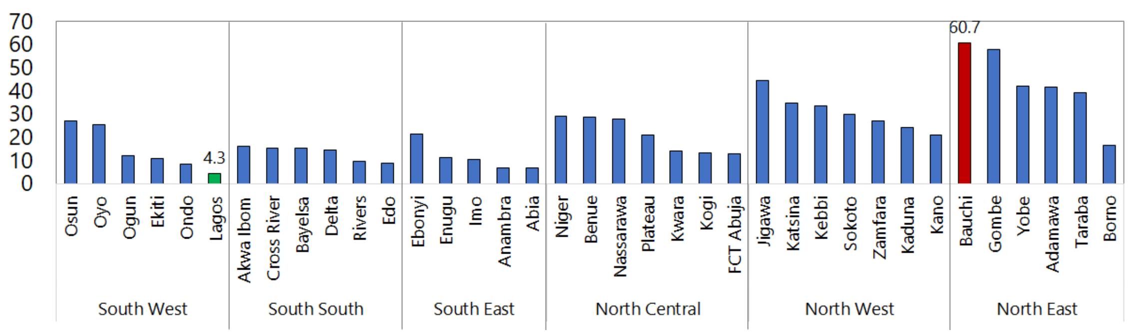
GDP per Capita (PPP) and Years of Education



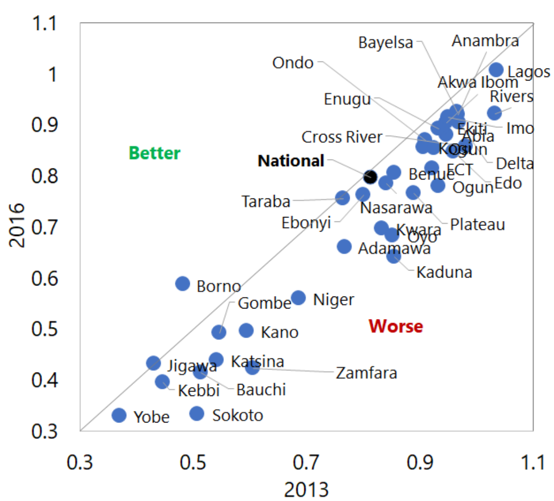
Expected Years of Education and Quality Adjusted Years of Learning *(Years)*



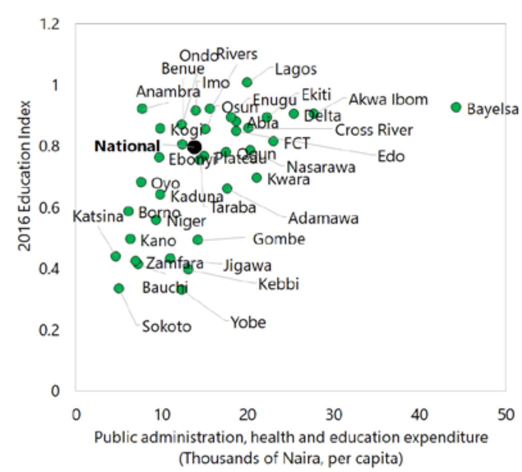
Children out of School *(Percent of Children of School Age)*



Education Index 2013 and 2016
(Higher levels, higher education)



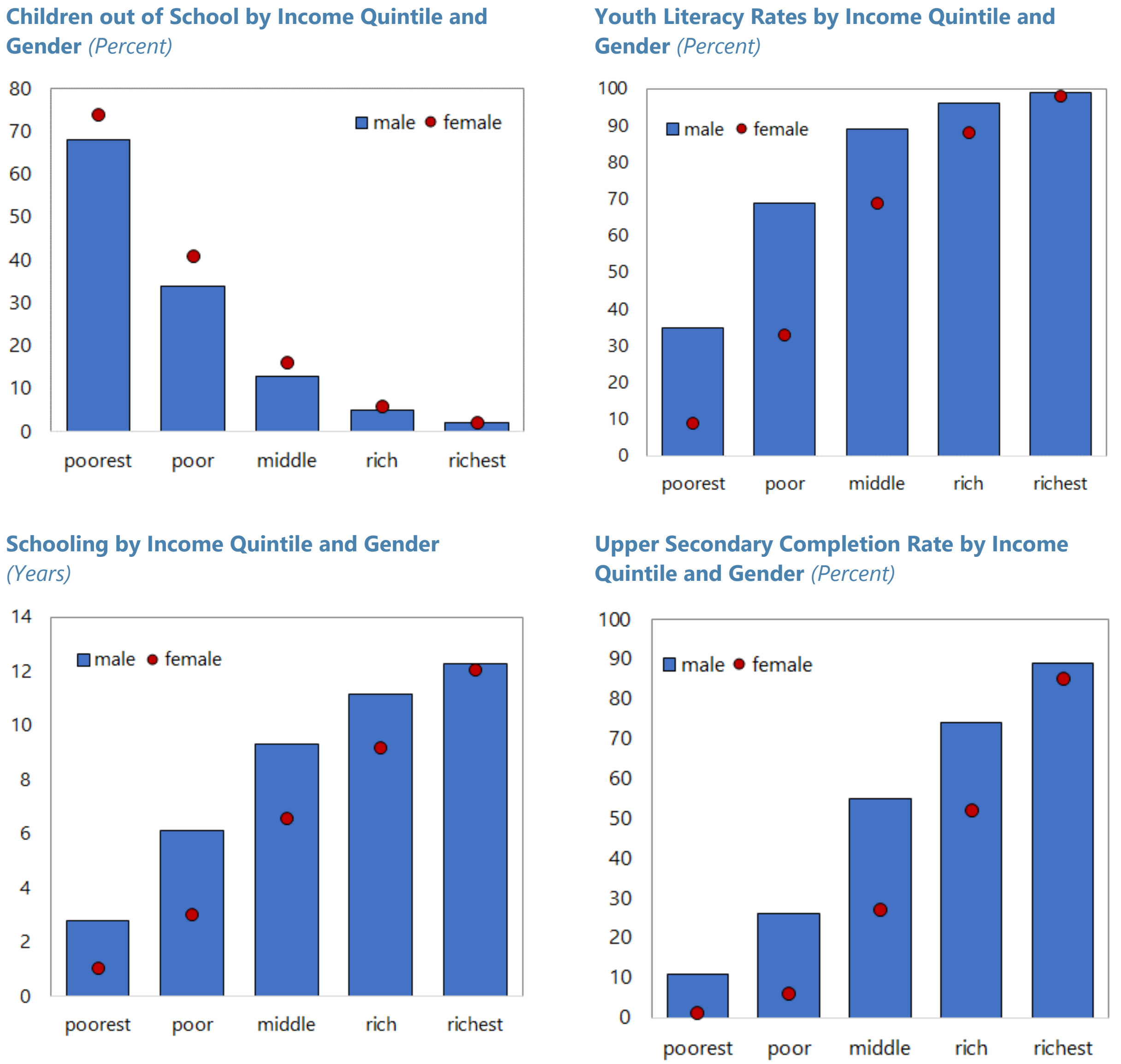
Spending on Education and Education Index 2016



Note education index includes mean and expected years of schooling (NBS 2016).

Source: Nigeria National Bureau of Statistics; World Bank Human Capital Project; Multiple Indicator Cluster Surveys (2016-17).

Figure 5. Nigeria: Inequality in Access to Education



Sources: DHS (2013); UNESCO.

C. Macroeconomic Gains from Equality of Opportunity

10. The above difficulties in health and education without doubt pose large development challenges and have macroeconomic implications. Improving health and education outcomes are development goals in themselves and part of the Sustainable Development Goals. In addition, a healthier and more educated labor force is more productive, yielding significant boosts for output and growth. While estimating the gains from improvements in health outcomes is beyond the scope of this paper, this section aims at providing gains from closing gaps in education based on a number of scenarios.

11. A micro-founded general equilibrium model with heterogenous agents quantifies the gains from narrowing education gaps. The model is part of a new wave of heterogenous agent models built by IMF staff that allow for the analysis of gender-related policies and their impact on macroeconomic outcomes. Simulations of different sets of policies using distinct versions of this framework so far have estimated to boost long-run GDP by 26 percent in Iran (narrowing the wage gap; IMF (2018)), more than 1 and 7 percent of GDP in Argentina (policies to reduce the tax-wedge and addressing reducing discrimination in the formal sector, respectively (IMF 2017)), and more than 8 percent of GDP in Senegal (for a policy that would ensure 5 years of schooling for everybody (IMF 2019)). Depending on the policy, a new steady state with changed policy scenarios with could be interpreted as being achieved within the same generation (when immediately impacting adults) or one generation (in the case of education as children need to grow up to join the labor market).

12. The model is calibrated to match the main features of the Nigerian economy. These features include labor market outcomes (participation, income), the distribution of income, and education (in years of schooling), gender inequality, and the government:

- *Households* live for three periods and consist of husband, wife and children, or only a husband and a wife (when children left home to form their own families). Men always work, only deciding how much labor to supply in the formal and informal sectors. Women can work, and whenever they decide to work the family incurs a cost (related to time spent in home production, including raising children and other household responsibilities traditionally performed by women, and social norms, including attitudes towards working women and the type of jobs women can perform). Children's future productivity and incomes depend on the amount of human capital accumulated, including education. Their level of education depends on government expenditures on education, households' income and the child's gender, calibrated in line with data presented in the last section.

- *Firms* produce formal goods, hire employees, and pay corporate taxes. Informal goods are produced by households.

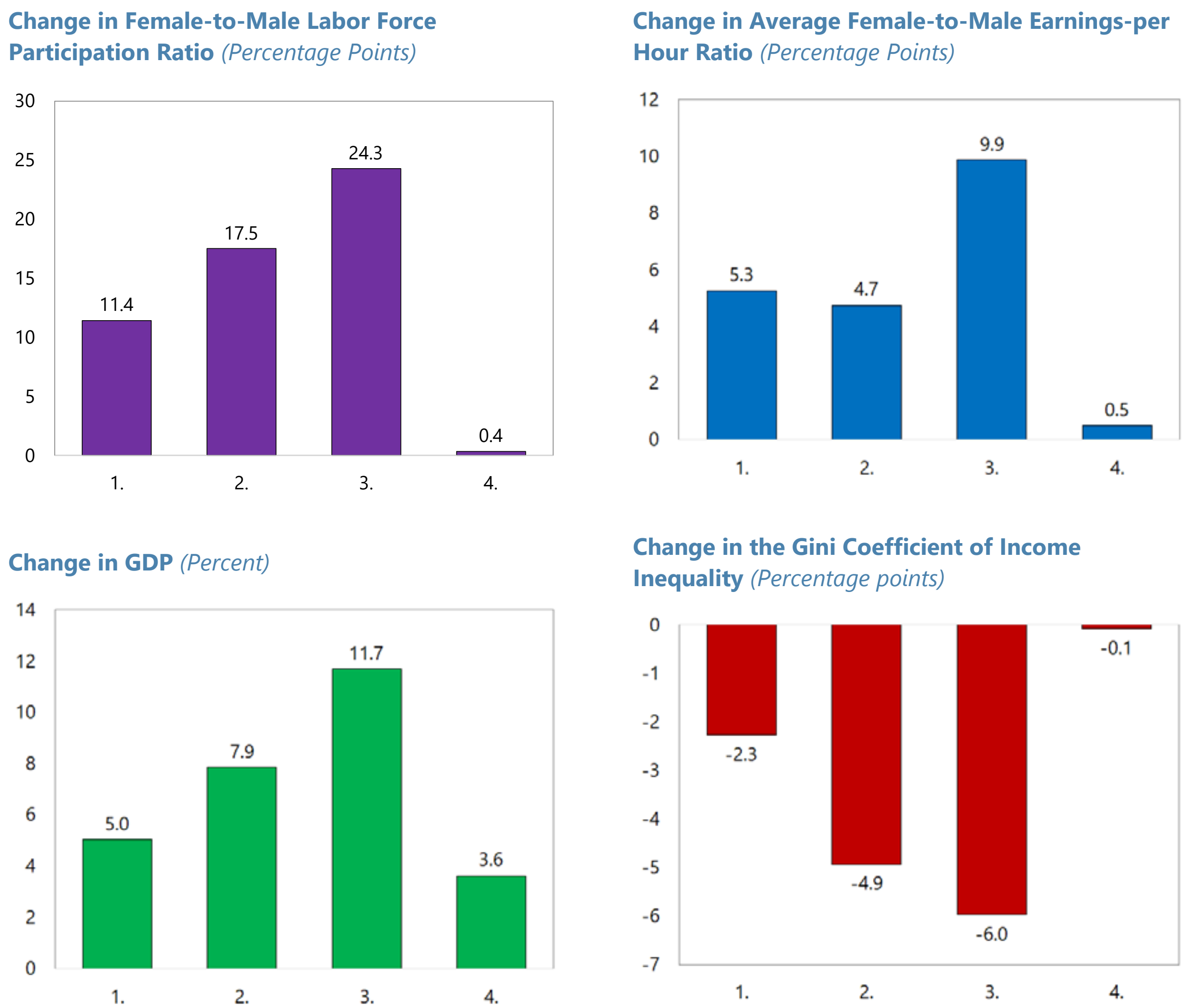
- *Labor markets.* Women (who work) and men decide how much labor to supply the formal and informal sector. They receive income and, in case they work for the formal sector, they pay labor taxes, mirroring Nigeria's tax system and information from the latest Living Standards Survey (LSS).

- *The government* provides education, buys formal goods, and taxes households (VAT, income tax) and firms, with a linear cost of providing an additional year of education.

13. Four scenarios give a gradual picture of possible gains from higher education, reaching up to 12 percent of GDP (and higher levels for more ambitious policies not shown here) (Figure 6):

a. *Scenario 1: Equalize the number of years of education for boys and girls within the same income percentile.* With more girls being educated, the ratio of female-to-male labor force participation rises from 76 percent to 87 percent, and increased productivity raises women's average hourly wages by more than eight percent. Male average hourly wages remain constant. The long-term level of GDP increases by five percent. With productivity increasing mainly at the lower end of the income distribution (where gender gaps are highest), income inequality, as measured by the Gini coefficient, decreases by two percentage points.

Figure 6. Nigeria: Impact from Different Education Scenarios



Scenarios:
1. Equalize the number of years of education for boys and girls within the same income percentile.
2. Each child benefits from at least the current median years of education for boys.
3. As 2., plus reduce women's disincentives to join the formal and informal labor market.
4. Increase in the efficiency of education to the level in sub-Saharan African's lower middle-income countries.

Source: IMF staff simulations.

b. *Scenario 2: Increase education for both boys and girls, so that each kid benefits from at least the current median years of education for boys.* This policy increases the ratio of female-to-male labor force participation to 93 percent as the boost in human capital disproportionately impacts girls. Without additional reforms in the tax system (for additional reforms, see accompanying staff report), government revenues increase only little (0.2 percent of GDP), mainly driven by additional activity of women of middle income in the formal sector, as most women will join the informal sector, not being subject to income or corporate tax. Earnings rise for both women (+10.4 percent) and men (+2.7 percent). GDP increases by almost 8 percent, higher than in scenario 1, as access to education and higher productivity spreads to a wider range of workers. The Gini coefficient decreases by 5 percentage points, as people in the lower half of the income distribution no longer differ in their level of education and gender gaps in education are closed.

c. *Scenario 3: After increasing education as in scenario 2, reduce barriers that pose disincentives to women to join the formal and informal labor market.* In this scenario, in addition to increasing education levels for boys and girls, the government addresses discrimination in the formal and informal labor sectors. Examples of such policies are, e.g., the implementation of equal pay for equal work rights, equal access to resources (including land and credit), policies that make it easier to balance work and household responsibilities and policies that address social norms and negative attitudes towards working women. In this simulation, average education increases to 9.8 years for girls and to 10.3 years for boys. With higher returns from labor, gender gaps in labor force participation would completely close, and women's average wages would increase 18.1 percent (+3.2 percent for men). Government revenues would increase marginally (+¼ percent of GDP) through higher incomes in the formal sector. GDP rises by 11.7 percent, on the back of higher productivity, including from removing distortions from the labor market. The Gini coefficient decreases by 6 percentage points as lower income households get more educated and women join the labor market in an environment with less obstacles or discrimination.

d. *Scenario 4: An increase in the efficiency education, i.e. increasing the quality-adjusted years of learning at the given years of schooling, by 16 percent (to the level in sub-Saharan African's lower middle-income countries)* boosts GDP by 3.6 percent through higher productivity for all kids. The impact on other outcomes discussed here are smaller, as relative gaps in education remain the same across individuals at different levels of the income and between boys and girls.

D. Government Initiatives

14. This section provides pointers to recent reforms in the education and health sector and policies to address gender inequality. The challenges in the health and education sector, including with respect to gender inequities, and the possible gains of addressing them motivate the question of recent policy initiatives by the government in these areas—a selective description of which is provided in the following.

15. The government has taken a number of recent initiatives to improve health outcomes.

- January 2019's launch of the *Second National Strategic Health Development Plan for 2018-22* is welcome and rightly identifies challenges, priorities and financing requirements for the sector. The strategy supports the objectives under the government's Economic Growth and Recovery Plan which targets to strengthen the availability, accessibility, affordability and quality of health services by expanding healthcare coverage to all local governments, providing sustainable financing for the health sector and reducing infant and maternal mortality rates.

- The government has enacted the *National Health Act* that is operationalized through the Basic Health Care Provision Fund that would provide additional domestic resources for primary healthcare, including through innovative financing mechanisms, such as decentralized facility financing and performance-based financing. The inclusion of the 1 percent commitment into the 2018 and 2019 budgets is also welcome.

- The government also ratified the *Social Protection Policy* and increased the annual allocation to the social investment program to N 500 billion for 2016-2018.

- *Malaria control* has increased the share of children under 5 that use treated nets to 49 percent in 2016 (World Bank 2018). Nigeria is about one year away from *eradicating wild polio*.

16. There have been several initiatives of varying scale by the government to improve education outcomes. The government has developed and launched a Human Capital Vision document in collaboration with state governments and development partners. A number of targeted programs are ongoing, for instance:

- The *National Home-Grown School Feeding and Health Program* aims at schooling by improving the nutritional and health status of children is now implemented in 26 states. The Federal Ministry of Education reports that more than 95 thousand community cooks in 47 thousand public primary schools are feeding about 9.3 million pupils.

- The *Safe School Initiative* relocates students from conflict affected areas to safer federal government colleges in other states.

- A number of smaller programs support education by women and for girls. Establishment of *School Based Management Committees and Mothers' Associations* to empower mothers through income generating activities to positively influence the schooling of their children. The Federal Ministry of Education and UNICEF have organized training through the *Girls for Girls* strategy to mentor girls to enroll and complete their education in Northern States. Grants of N250,000 ($690) per year are being provided to primary and pre-primary schools with functional school-based management committees, and female teachers in service can receive a scholarship of 50,000 ($138) per year to receive the Nigeria certificate in education.

- *Efforts are also being made at the state level.* For instance, *Lagos* adopted the use of a low-cost digital device with large amounts of stored learning materials, for students in the primary and secondary levels of public schools. *Kaduna State* embarked on mass training of teachers in 2015, relieved teachers in 2018 that did not pass the test when reassessed and replaced with qualified teachers (World Bank 2018).

17. The government also put in place a number of policies to promote gender equality, including to promote women's education and economic empowerment. The National Strategy to End Child Marriage in Nigeria (2016) aims at changing harmful practices and contributing to improved access to education. The government developed National Action Plan on Gender, a gender policy for the Nigeria police sector, including police stations equipped to address gender base violence, and a National Gender Action Plan for the Agricultural Sector (2018). Improving education for girls is one of the three strategic priorities of the Ministry of Women Affairs and Social Development.

E. Policy Recommendations[2]

18. A comprehensive reform to improve quality and efficiency of services in the education sector needs to be supported by improved health outcomes, in particular for children Addressing Nigeria's vast education challenge will without doubt require increasing resources to invest these priority sectors. However, it will also require other reforms and a reorientation of the education system, including through a package of the following reforms (World Bank 2018). These reforms include, for instance:

- *Operationalizing and implementing policies to reach the targets under the Human Capital Vision document.*
- *Improving and institutionalizing collection of administrative data on the education system.* Such data would include schools' geo-coordinates and student learning assessment data.
- *Improving the quality of teachers to raise the efficiency of education.* Needed reforms concern *recruitment, deployment, training, and higher teacher salaries.*
- *Measuring the performance of the Universal Basic Education Intervention Fund and Tertiary Education Trust Fund based on results, such as better learning environments, teacher numbers and effectiveness, and student learning.*
- *Pursuing evidence-based interventions,* including demand-side interventions that enable poor and vulnerable populations to demand services, supply side interventions targeted at building capacity and strengthening resource management, and result-based financing to improve performance incentives.
- *To ensure better learning outcomes for children and increase the productivity of the labor force, improvements in health outcomes is also critical.* Here, higher and regular funding will be essential help execution of planned projects, to operationalize the Basic Health Care Provision Fund, and to fund the government's National Strategic Health Development Plan II (NSHDP II).

[2] Drawing heavily findings and policy measures by the Department for International Development, the World Bank, UNICEF, UN Women and other development partners.

19. Policies to address gender gaps should be a critical element in improving health and education, including to ensure improvements to access in services benefit all. Selected policy recommendations include:

- Passing the "*Gender and Equal Opportunities Bill*" into law at national and state levels and domesticating and implementing the *Children's Rights Act*, the *Violence against Persons Prohibition Act* and *Disabilities Act* at state levels remains critical.

- *Enforcing civil and criminal law when customary law* is in contradiction with non-discriminatory policies will be critical. e.g. by working with traditional leaders and local governance and provide paralegal services for women, strengthen the Legal Aid Council, and institutionalize Alternative Dispute Resolution Mechanisms.

- *Addressing gender-based violence* by strengthen existing national databases to track prevalence, patterns and efficacy of gender-based violence responses and championing effective response mechanisms.

- *Continuing to take leadership on the Call to Action on Protection from Gender-Based Violence in Emergencies.* Strengthen programs that reduce vulnerability of women and girls is important, including through adequate and safe access to water and sanitation facilities the lack of which poses a disproportional risk to women and girls. These measures would also help narrowing gender gaps in education attainment, especially in the North.

- *Introducing training programs to reduce gender gaps* in particular occupations, implementing programs to shift norms against women working in specific professions and empowering adolescent girls to pursue various career tracks.

- *Providing gender-responsive health services*, including by addressing the social norms that inhibit access and decision making for women and standardised, regular provision of menstrual hygiene supplies, including to support girls' school attendance.

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MACRO-STRUCTURAL OBSTACLES TO FIRM PERFORMANCE: EVIDENCE FROM 2,640 FIRMS IN NIGERIA[1]

A recent World Bank enterprise survey examines firm characteristics in Nigeria and identifies access to finance as the top constraint to Doing Business. In this context, the objective of this paper is to: (i) study firm characteristics associated with more access to finance and export diversification; and (ii) quantify the impact of these structural obstacles on firm performance. Results suggest that (i) larger and export-oriented firms are about 40 percentage points less likely to report access to finance as a business obstacle, while firms perceiving access to finance as a constraint are, on average, about 10-40 percentage points less likely to be export-oriented diversified firms; and (ii) better access to finance and export diversification can help firm employment —as much as 80 percent higher— and capacity utilization. Results are largely robust to different specifications and estimation methods.

A. Introduction

1. **Allowing the private sector to become an engine of growth requires understanding the key constraints to Doing Business**. To this end, the latest World Bank Enterprise Survey (WBES)[2]—conducted in 2014-15 and covering a sample of 2,640 private firms in the manufacturing and services sectors in 19 states in Nigeria—asked firms about various dimensions of the business environment they experience as well as information on individual firm characteristics. Out of a menu of options, around one-third of the interviewed firms cited access to finance as the top business obstacle. This was followed, although to a lesser extent, by electricity and corruption.

2. **The objective of this study is two-fold**. First, is to study firm characteristics associated with more access to finance and export diversification. Second, is to quantify the impact of access to finance and export diversification on firm performance.

3. **Firms with more export diversification have, on average, seen better performance**. Survey results suggest that only larger firms have been able to recently invest in improving their research and production methods. Higher employment and capacity growth rates have been observed in firms with some degree of export diversification. Empirical results suggest:

- **The easier the access to credit the more diversified**. Larger and export-oriented firms are, on average, about 40 percentage points less likely to report access to finance as a business obstacle, compared to smaller and non-export-oriented firms. Younger, domestic-owned firms with access to finance constraints are associated with less diversified exports. Specifically, firms

[1] Prepared by Amr Hosny (SPR).

[2] The full questionnaire, sampling methods, and data are accessible at http://www.enterprisesurveys.org/. WB (2009a; 2009b) outline the general survey methodology, WB (2015) reports the Nigeria enterprise survey questions, and WB/IFC (2015) summarizes Nigeria country responses.

perceiving access to finance as a constraint are, on average, about 10-40 percentage points less likely to be export-oriented diversified firms. Results shed light on firm characteristics that view access to finance as a constraint, which in turn hinders their efforts at diversifying their exports.

- **Better access to finance and export diversification improves firm performance**. Using several model specifications and estimation methods, better access to finance and export diversification are found to be associated with better firm performance, all else equal. For example, results suggest that firms who perceive access to credit as a constraint to their business have, on average, around 80 percent lower employment growth and around 30 percent lower capacity utilization growth, compared to firms where access to finance is not perceived as a constraint. Robustness of results is confirmed using an endogenous treatment regression approach that corrects for potential endogeneity and allows causal interpretation.

B. An Initial Look at the Data

4. The WBES covers a representative sample of formal private sector firms in Nigeria. According to WB (2015) and WB/IFC (2015), private firms need to satisfy certain criteria to be included in the survey. Firms need to be formally registered, have employees,[3] and operate in the manufacturing, retail or other services sectors.[4] Firms with 100 percent state ownership are excluded. Firms are chosen through random sampling, stratified by industry, size and region. This led to a sample of 2,640 private firms in Nigeria. Figure 1 shows the geographical distribution, Figure 2 the sectoral distribution and Figure 3 the size distribution of surveyed firms. Most surveyed firms are single ownership (Figure 4), with their sales directed toward the domestic market (Figure 5) and are mostly domestically owned (Figure 6).

[3] Firm size is defined as micro (less than 5 employees), small (5-19), medium (20-99), and large (more than 99 employees).

[4] Agriculture, fishing and extractive industries, utilities and some services sectors, (such as financial services, education and healthcare) are not included in the survey.

Figure 1. Surveyed Firms are Distributed over Different Cities

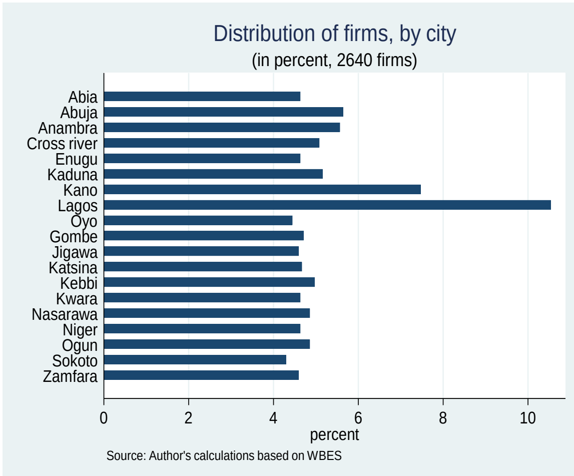


Figure 2. Surveyed Firms are Distributed over Different Sectors

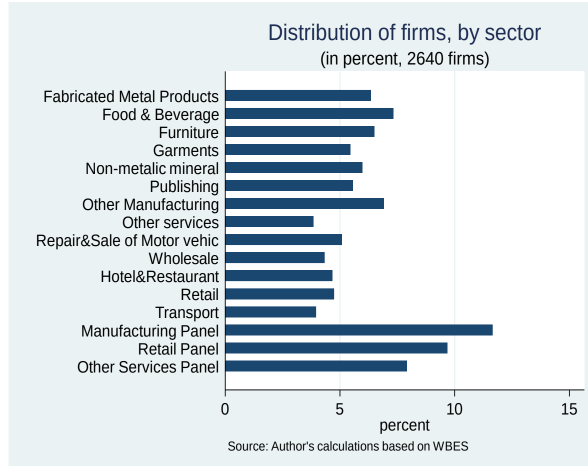


Figure 3. Most Surveyed Firms are Small

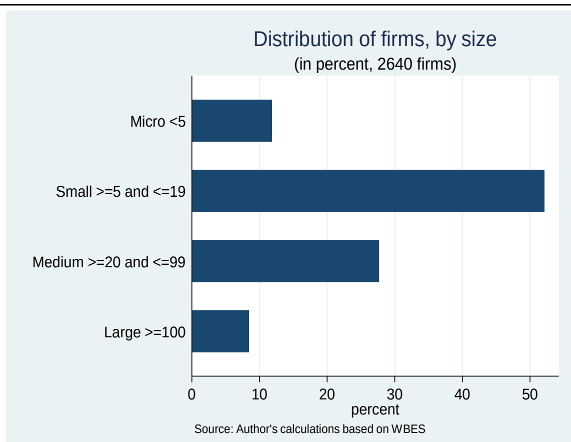


Figure 4. Most Surveyed Firms are Sole Ownership

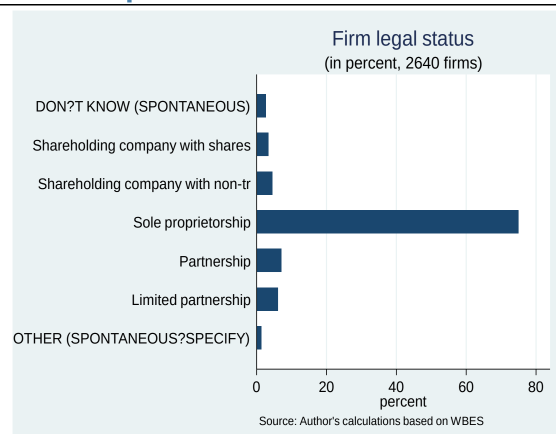


Figure 5. Most Firms Sell to National Markets; Larger Firms Have Bigger Export Shares

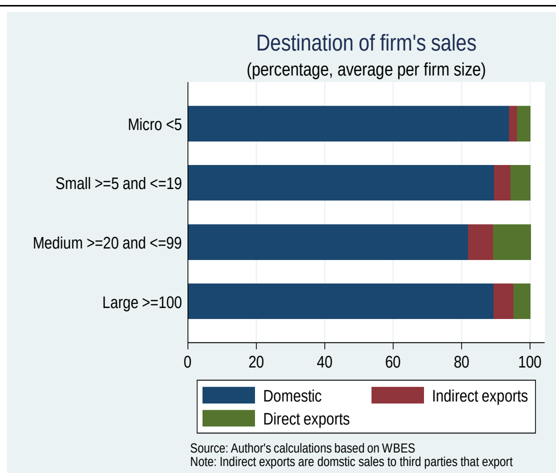
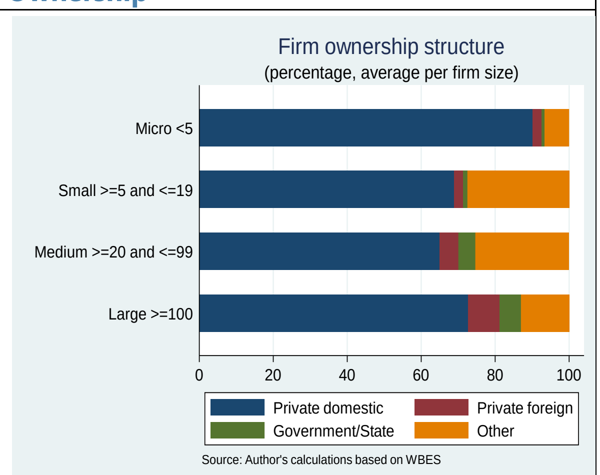


Figure 6. Most Firms are Domestically Owned; Larger Firms Report More Foreign Ownership



5. Some other characteristics are emerging from the sample:

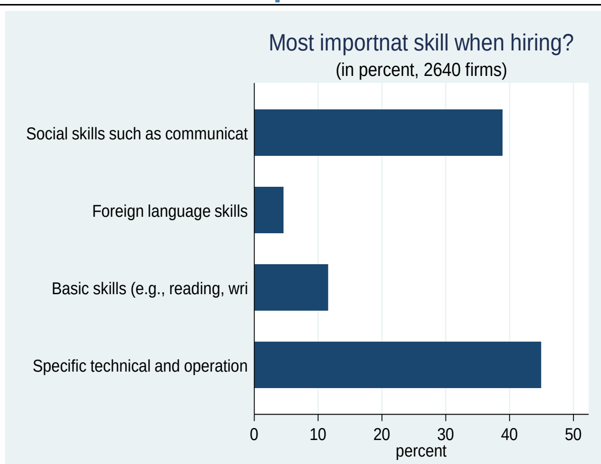
- On average, firms reported around 16 years of operations, ranging from an average low of 14 years in small firms to a high of 27 years in large firms (Figure 7).

- Specific technical skills are the most important when making hiring decisions, followed by social skills (Figure 8), while skills are not a constraint to hiring women in more than 60 percent of cases (Figure 9).

Figure 7. Firms, on Average, are 16 Years Old

Source: Author's calculations based on WBES

Figure 8. Technical Skills are the Most Important



Source: Author's calculations based on WBES

Figure 9. Skills Is Typically Not a Constraint in Hiring Women

Source: Author's calculations based on WBES

- **Performance, in terms of growth of employment and capacity utilization, varied across surveyed firms**. Micro-sized firms appear to have experienced the highest growth in both their employment and capacity utilization rates (Figure 10).

- **Access to finance is identified as the top obstacle to firm operations in almost one-third of the surveyed firms**. Almost 1 out of every 3 of surveyed firms cited access to finance as the top business obstacle (Figure 11). Electricity and corruption came in second and third place. By firm size, access to finance appears to be the top obstacle in micro and small firms, while electricity is more of a binding constraint in medium and large-sized firms (Figure 12).

Figure 10. Performance Varied Across Firm Sizes

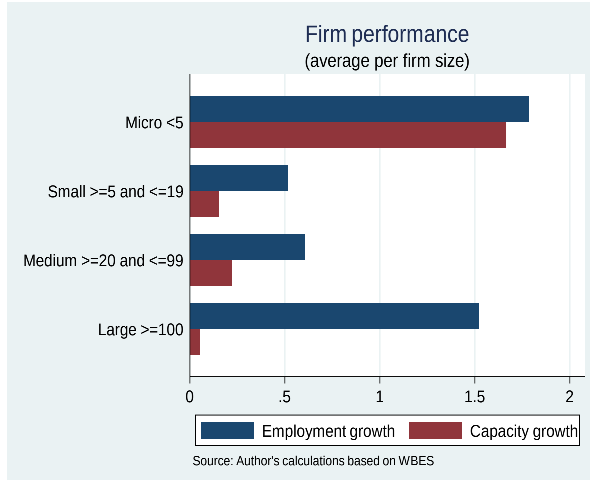


Figure 11. Access to Finance is the Top Obstacle to Firm Operations

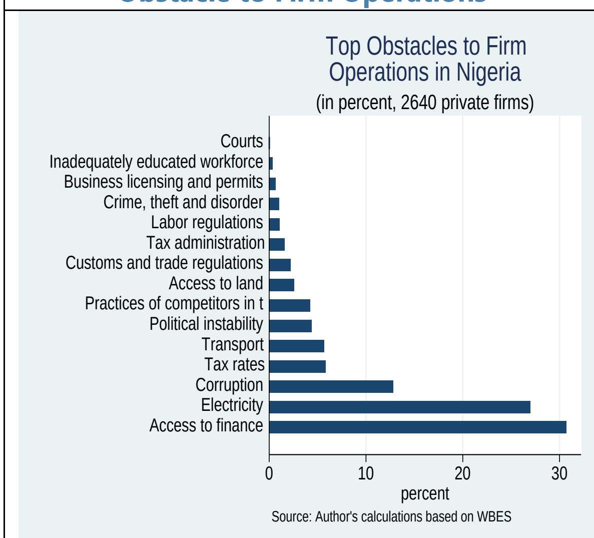
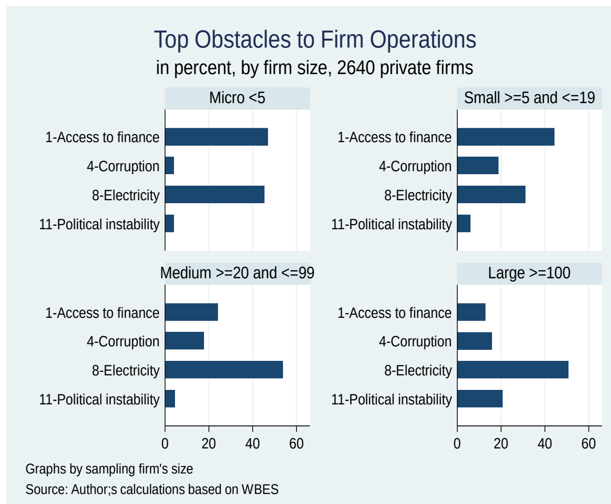


Figure 12. Especially in Smaller Firms



- **Investments in research and production methods is rather limited**. Over 80 percent of surveyed firms did not spend on formal research and development activities over the last 3 years (Figure 13), especially so in smaller firms. Using a measure of export diversification linked to R&D,[5] survey implies that firm performance is better in firms with higher export diversification

[5] Our measure of export diversification is an interaction variable of each firm's export orientation (whether exports are above 10 percent of sales) multiplied by a measure of diversification (spending on R&D or improved production methods). Results are broadly robust to altering this definition.

(Figure 14). Regarding production methods, only large firms seem to have marginally invested in improving their underlying methods for production or supply of products (Figures 15 and 16).

Figure 13. Most Firms Did Not Spend on Research and Development Recently

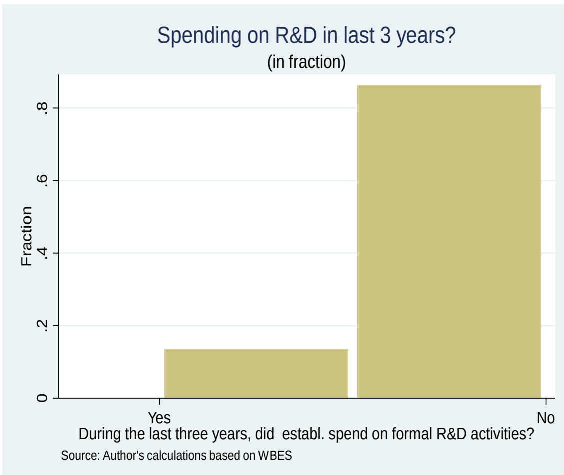


Figure 14. Better Firm Performance with More Export Diversification

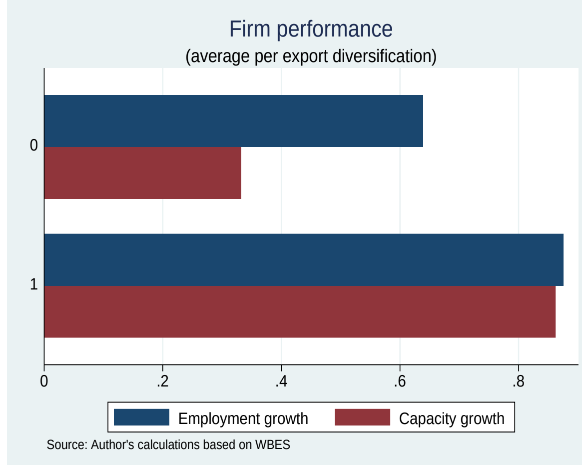


Figure 15. Half of the Sample Only Recently Improved Production Methods

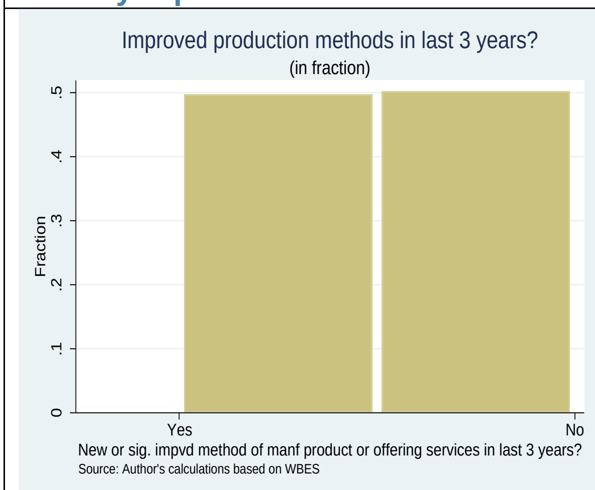
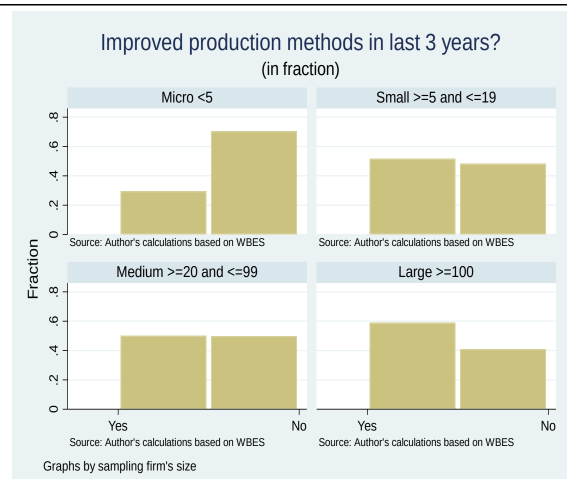


Figure 16. Especially in Large Firms



C. Empirical Methodology and Results

Access to Finance and Firm Characteristics

6. An ordered logit/probit model is estimated to study which firms perceive access to finance as a constraint to business. The dependent variable is "Access to finance" constructed from the ordinal[6] responses to the question: "To what degree is access to finance an obstacle to the current operations of this establishment?". Responses ranged from "No obstacle" (taking a value of

[6] An ordinal variable is a variable that is categorical and ordered.

0) to "Very severe obstacle" (a value of 4). Independent or control variables are firm characteristics, which include export diversification. The estimation of the following ordered logit/probit is done by maximum pseudo-likelihood:

$$Accesstofinance_{ist} = f(X_{ist}, ExportDiversification_{ist})$$

where the dependent variable $Accesstofinance_{ist}$ of firm *i* in sector *s* at time *t* is a function of X_{ist} a set of control variables representing firm characteristics. $Accesstofinance_{ist}$ would range from 0 ("No obstacle" to 4 (very severe obstacle") in the ordered logit/probit. Firm characteristics, independent variables, come from survey questions covering aspects such as firm age, export status, size, ownership structure, and manager experience and education levels. Importantly, we are also interested in $ExportDiversification_{ist}$, as defined above. The choice of explanatory variables builds on recent work by Kuntchev et al (2012), EBRD/EIB/WB (2016), Hosny (2017) on a sample of MENA countries, and Hosny (2018) on Egypt.

Results of the model imply:

- **Larger, export-oriented firms are less likely to report access to finance as a business obstacle** (table 1, models 1-3). Coefficients attached to firm size (higher value implies larger firm) and export orientation (firms with exports representing 10 percent or more of sales) are negative and statistically significant.[7] Results suggest that larger and export-oriented firms, on average, are about 40 percentage points less likely to report access to finance as a constraint compared to smaller and non-export-oriented firms. These types of firms usually have stronger balance sheets and access to collateral, which leads to easier access to credit.

- **Higher manager education levels (models 1 and 3) and foreign firm ownership (model 2) show some evidence of easier access to credit**. For example, foreign firms, on average, are around 30 percentage points less likely to report access to finance as a constraint compared to domestic-owned firms, which could possibly be explained by their easier access to foreign sources of credit.

- Surprisingly, results suggest that **export diversification has an inconclusive impact on access to credit**. This could be explained by the fact that the statistically significant coefficient on export orientation is already capturing some of this aspect, or by reverse causality—that access to credit influences export diversification rather than the other way around. We return to this point in the section on export diversification below.

Results largely hold using a binary logit/probit model (table 1, models 4-6). Suppressing the dependent variable into a simpler binary indicator, it would take the value of 1 if responses are "major constraint" or "very severe constraint", while it takes a value of 0 if the response is "no

[7] As robustness checks, we replace the 10 percent exports dummy (Y/N) with the ordered exports variable, as well as foreign ownership dummy (Y/N) with the ordered foreign ownership variable. Results are largely unchanged.

obstacle", "minor obstacle" or "moderate obstacle".[8] Binary models allow easier interpretation of results and can be used as first step regressions in treatment-effect estimators as explained below. Firm size, export-orientation and foreign ownership continue to show the same negative and statistically significant correlation with obstacles to accessing credit, while export diversification is not statistically significant. Female managers seem to encounter more obstacles in accessing credit (model 4). Firm age seems to matter in one specification, as younger firms seem to suffer more in accessing credit (model 6).

Table 1. Determinants of Access to Finance: Ordered and Binary Logit/Probit

	Ordered Logit/Probit			**Binary Logit/Probit**		
Dep. var.: Access to finance	(1)	(2)	(3)	(4)	(5)	(6)
	Logit	Probit	Logit	Logit	Probit	Logit
Firm size	-0.273*	-0.182**	-0.259	-0.441**	-0.27***	-0.436
	(0.162)	(0.086)	(0.168)	(0.184)	(0.096)	(0.281)
Young firm (Y/N)	0.015	0.091	-0.014	0.341	0.410	1.349*
	(0.472)	(0.297)	(0.481)	(0.473)	(0.309)	(0.782)
Manager experience, in years	-0.005	-0.005	-0.004	0.006	0.003	-0.000
	(0.012)	(0.006)	(0.012)	(0.013)	(0.008)	(0.024)
Foreign ownership (Y/N)	-0.306	-0.314*	-0.114	-3.522***	-1.81***	-3.40***
	(0.326)	(0.188)	(0.345)	(0.891)	(0.422)	(1.020)
Manager education level	-0.123*	-0.009	-0.130*	-0.112	0.001	0.017
	(0.069)	(0.045)	(0.069)	(0.091)	(0.054)	(0.158)
Exports oriented firm (Y/N)	-0.41**	-0.335**	-0.195	-0.566*	-0.56***	-0.144
	(0.204)	(0.135)	(0.177)	(0.296)	(0.174)	(0.531)
Top manager female (Y/N)	0.174	0.246	0.178	0.603*	0.406	
	(0.356)	(0.189)	(0.362)	(0.364)	(0.282)	
Export oriented * Improved methods			-0.79**	-0.194	-0.171	-0.137
			(0.353)	(0.449)	(0.245)	(0.741)
Export oriented * R&D			0.779**			-1.036
			(0.379)			(1.187)
Observations	2498	2498	2447	2471	2471	759
City/Region FE	Yes	No	Yes	Yes	No	No

Standard errors in parentheses. Estimation is done using survey weights. Constant and dummies not reported. *** p<0.01, ** p<0.05, * p<0.1

[8] Results are largely similar if we define the new binary variable as taking the value of 1 if responses also include "moderate obstacle", while taking the value of 0 for "no" and "minor" obstacles only.

What Drives Firm's Export Diversification?

7. An important point is to understand the determinants of export diversification at the firm level. We estimate a binary logit/probit where the dependent variable is the binary export diversification indicator, as defined above. We include typical firm characteristics and access to finance as explanatory variables.

8. Results show that younger, domestic-owned firms with access to finance constraints are associated with less diversified exports (models 7-8). Table (2) shows results using a binary logit and probit, using both the ordered and the binary variable on access to finance defined above. It suggests that younger firms are, on average, 40-75 percentage points less likely to report diversified exports. Foreign ownership also seems to be associated with more diversified exports. Importantly, access to finance is associated with lower export diversification. Specifically, firms perceiving access to finance as a constraint are, on average, about 10-40 percentage points less likely to be export-oriented diversified firms.

Table 2. Determinants of Export Diversification: Binary Logit/Probit

Dep. var.: Export diversification	(7) Logit	(8) Probit
Young firm (Y/N)	-0.753*	-0.396*
	(0.457)	(0.202)
Manager experience, in years	0.00516	0.000507
	(0.0116)	(0.00597)
Foreign ownership (Y/N)	1.971***	1.150***
	(0.700)	(0.423)
Manager education level	0.149	0.0598
	(0.172)	(0.0708)
Access to finance obstacle, ordered	-0.107*	
	(0.0584)	
Access to finance obstacle, binary		-0.382*
		(0.198)
Observations	2,539	2,539
Size FE	YES	YES

Standard errors in parentheses. Estimation is done using survey weights.
Constant and dummies not reported. *** p<0.01, ** p<0.05, * p<0.1

Access to Finance and Firm Performance

9. Does access to finance affect firm performance? In what follows, the dependent variable is firm performance as in the following specification:

$$Y_{ist} = f(X_{ist}, Accesstofinance_{ist}, ExportDiversification_{ist})$$

where the dependent variable Y_{ist} is a measure of firm performance (growth of employment and capacity utilization) of firm *i* in sector *s* at time *t*. Independent variables include X_{ist} a set of control variables representing firm characteristics as identified in the previous section. Our variables of interest are $Accesstofinance_{ist}$ and $ExportDiversification_{st}$, defined as in the previous section.

10. The perception of access to finance can be endogenous to firm performance where an unobserved variable affects both firm performance and access to finance. In our context, the objective is to study the effect of access to finance on firm performance. But suppose that a third variable (for instance, political connections) affects both the treatment (perception of access to finance) and the outcome (firm performance), then we have an endogeneity problem.[9] As a result of this endogeneity problem, OLS estimates could suffer from a selection bias problem. To address this issue, we use an endogenous treatment-regression model originating from the program evaluation literature that allows the estimation of a linear regression which includes an endogenous binary treatment variable.

11. We use treatment-effects estimators to extract experimental-style causal effects from observed data. In simple terms, the objective is to use non-experimental data to obtain a causal interpretation of the results. To do this in our context, each firm's probability to receive a binary treatment is estimated (with a probit or logit) as a function of observables, that is firms' characteristics. Firms with similar probabilities are matched. When firms have similar probabilities, their assignment to the treated group is largely random with respect to the relevant covariates, and thus mimics a controlled experiment, allowing identification of causal effects. Specifically, the estimator compares between treated (firms who perceive access to finance as a business constraint) and control (firms who do not) units and measures the average treatment effect on the outcome (firm performance), conditional on a set of observables (firm characteristics).[10] Results are reported in Table 3.

12. Better access to finance can have positive causal effects on firm performance. In all models of Table (3), using both measures of firm performance, the relevant coefficient on access to finance shows the expected sign and is statistically significant. This gives confidence in interpreting the results as casual effects, after controlling for endogeneity. Results imply, for example, that firms who perceive access to credit as a constraint to their business have, on average, around 80 percent lower employment growth and around 30 percent lower capacity utilization growth, compared to firms where access to finance is not perceived as a constraint. Moreover, the coefficient on export diversification is positive and statistically significant. Other results suggest that better firm performance is associated with certain firm characteristics such as ownership structure and firm age.

[9] Similarly, suppose we wish to know the effect of a job training program on employment, and suppose that a third variable (for instance, motivation) affects both the treatment (participation in job program) and the outcome (employment). We have an endogeneity problem since we cannot observe motivation.

[10] Estimation is done by MLE. Heckman (1976, 1978) introduced the model, and Maddala (1983) derived the maximum likelihood (MLE) estimator. Cameron and Trivedi (2005) and Wooldridge (2010) introduced the endogenous treatment-effects model.

13. The treatment effects model corrects for endogeneity. In all reported models, the likelihood-ratio test (LR test for independent equations) indicates that we can reject the null hypothesis of no correlation between the treatment-assignment and outcome errors. Furthermore, the estimated correlation between the treatment-assignment errors and the outcome errors, ρ, is positive in all models, indicating that unobservables that raise firm performance tend to occur with unobservables that raise the perception of effect of access to finance on firm operations. This proves the importance of using the treatment effects estimator as it corrects for such endogeneity bias. Model (10) and (12) are preferred as they report lower -LogLikelihood and AIC.

Table 3. Endogenous Treatment Regression: Firm Performance

Dependent variable:	**Employment growth**		**Capacity utilization growth**	
	(9)	(10)	(11)	(12)
Independent variables:	MLE	MLE	MLE	MLE
Access to finance obstacle?	-0.780**	-0.868***	-0.24***	-0.28***
	(0.363)	(0.301)	(0.069)	(0.059)
Young firm (Y/N)	-0.106	0.217	0.043	0.029
	(0.545)	(0.500)	(0.041)	(0.034)
Foreign ownership (Y/N)	-0.411	-1.705**	0.028	0.019
	(0.713)	(0.831)	(0.097)	(0.066)
Top manager female (Y/N)	0.126	0.143	0.042	0.053**
	(0.432)	(0.347)	(0.033)	(0.026)
Exports oriented firm (Y/N)	0.670		0.009	
	(0.444)		(0.046)	
Manager experience, in years	0.007	0.009	0.001	0.001
	(0.017)	(0.015)	(0.001)	(0.001)
Education of manager	-0.200**	-0.117	-0.001	-0.02***
	(0.078)	(0.080)	(0.009)	(0.005)
Export oriented * R&D		1.020*		-0.015
		(0.571)		(0.048)
Export oriented * Improved methods		-0.389		0.073**
		(0.326)		(0.031)
Observations	895	884	978	965
Rho	.0123	.0209	.526	.579
LR test for independent equations	219.40***	220.48***	10.13***	20.47***
Log likelihood	-3441.283	-3403.866	-595.496	-590.481
AIC	6914.566	6845.732	1222.992	1218.963
BIC	6991.316	6936.637	1301.16	1311.534
Size FE	NO	YES	NO	YES

Linearized standard errors in parentheses. Estimation is done using survey weights. Constant and dummies not reported. *** p<0.01, ** p<0.05, * p<0.1.

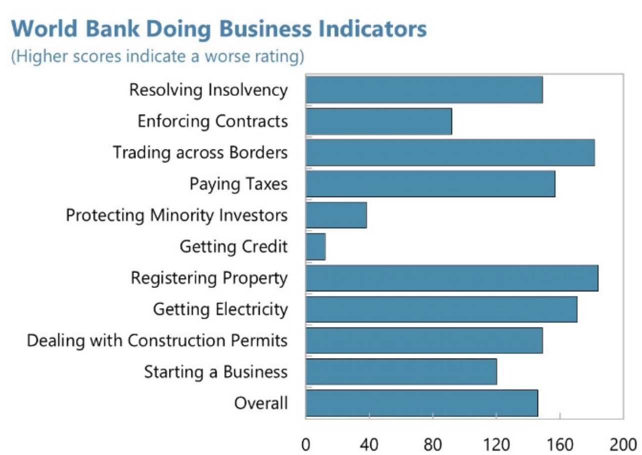
D. Conclusion and Policy Implications

14. The goal of this paper was to understand firm's characteristics and performance in relation to finance, export diversification, and their characteristics and performance. Empirical results suggest that larger, export-oriented firms are less likely to report access to finance as a constraint, while younger, domestic-owned firms with access to finance constraints are associated with less diversified exports. This highlights the important interconnection between access to finance and firm export diversification. Results hold under different specifications and estimation techniques. Results also indicated that access to finance and export diversification can help firm performance.

15. Increasing access to finance—as also argued in the authorities' Economic Recovery and Growth Plan (ERGP)—is key for diversification. Hence, the initiatives taken by the government to improve access to credit information and collateral registry are important, as it gives borrowers the legal right to inspect their credit data from credit bureaus, as well as the 2017 Secured Transactions in Movable Assets Act (collateral registry) which enables micro, small and medium enterprises (MSMEs) to obtain credit using movable assets as collateral instead of traditional fixed assets. However, more efforts are needed to ensure banks make full use of the National Collateral Registry and to increase credit registry coverage (which is Nigeria as a percentage of adults stood at 0.1% compared to OECD's average of 63.7%).

16. Other constraints to access to finance also need to be addressed. Nigeria's "getting credit" sub-component of the overall ease of doing business index, is among the highest in the world (Figure 17),[11] reflecting a supportive legal environment for access to credit, yet there are macro and micro impediments to accessing credit. From a macro perspective, banks' lending to the private sector is limited by high risk aversion, which along with high-yield risk-free government and CBN bills, are not conducive for lending given fear of credit risk. From a micro perspective, accelerating the implementation of the government's financial inclusion strategy, including by reforming the regulatory framework and leveraging the potential for mobile payments, would help boost access to credit in more remote areas (see Annex VII).

Figure 17. Ease of Doing Business



Sources: World Bank Doing Business Indicators, 2018 Report.

[11] These indicators should be interpreted with caution due to the limited number of respondents, limited geographical coverage, and standardized assumptions on business constraints and information availability. See http://www.doingbusiness.org/methodology for further details on the Doing Business methodology. See IMF (2017) for a recent application of the same database.

17. Addressing longstanding structural challenges that hamper growth and inhibit economic diversification remains urgent. Beyond efforts to strengthen the business environment through the Presidential Enabling Business Environment Council (PEBEC), overcoming structural constraints requires: increasing public investment efficiency; accelerating the implementation of the Power Sector Recovery Plan; implementing the government's updated financial inclusion strategy; stepping up efforts to improve education and health outcomes; and strengthening governance, transparency and anti-corruption initiatives. These reforms are in line with the ERGP's objectives and several reforms already initiated must continue.

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