



NIGERIA

SELECTED ISSUES PAPER

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SELECTED ISSUES

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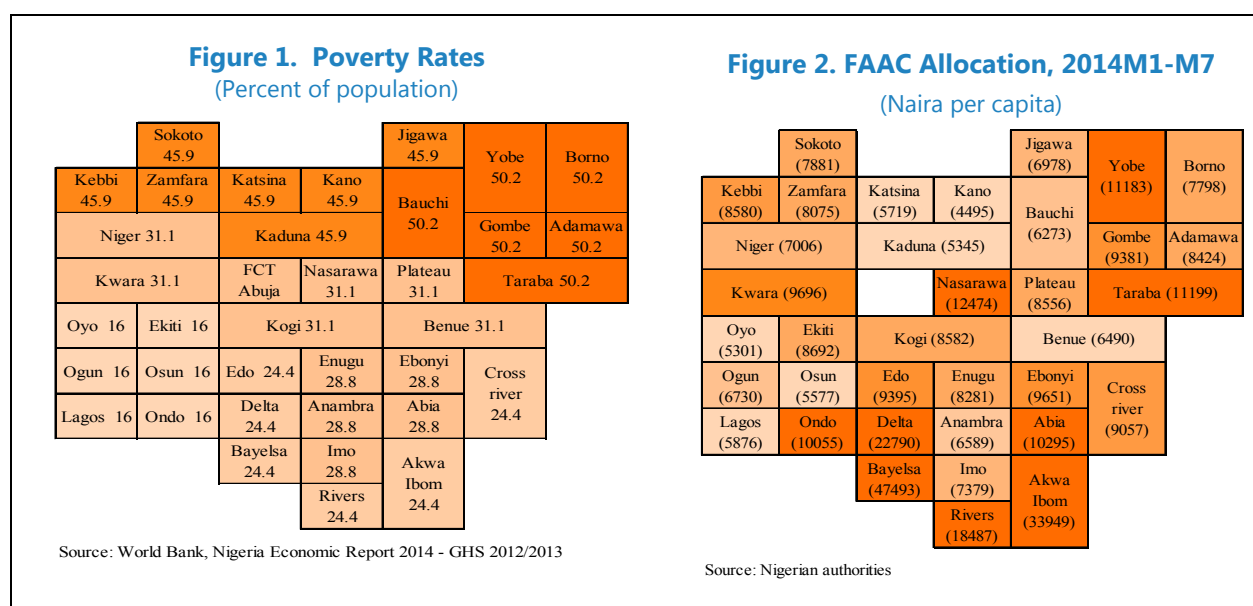
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PROMOTING ECONOMIC TRANSFORMATION

Nigeria's long-term potential is keyed on promoting economic transformation. This implies taking stock of initial conditions (regional developmental disparities and the enabling environment—capital and social infrastructure deficits), assessing long-term financing capacity, and evaluating the policies and reforms to be implemented to meet the long term vision. The recent fall in prices has highlighted the challenging but compelling need to address remaining development challenges. This chapter discusses some of these development imperatives – current regional disparities and ongoing policy initiatives; capacity to finance infrastructure needs, promoting domestic saving through developing financial inclusion, and the opportunity cost of quasi-fiscal activities; fostering regional integration to stimulate non-oil exports; and building a data platform for enhanced decision-making.

A. Regional Disparities

1. Regional disparities are acute. The national average poverty rate was 33.1 percent in 2012/2013, but varied between 16 percent in South-West to 50.2 percent in North-East (Figure 1). Average expenditure per capita in the South-West is nearly three times that in the North-East, and there are also significant variations in education and health care outcomes across regions (Table 1); and revenue allocations from the shared portion of the Federation Account differs among states (Figure 2).



2. Fiscal federalism provisions can help in reducing regional disparities. Socio economic outcomes depend on many factors beyond expenditure, often involving a mix of environmental, behavioral, and policy decisions. Nevertheless, a review of the revenue sharing provisions could be helpful in addressing regional inequalities. One important aspect in Nigeria is that the distribution of oil revenue is heavily influenced by derivation—a sharing principle that distributes revenue based on

where it is originated. Of every dollar of oil revenue, 13 cents are allocated exclusively to the eight oil-producing states, 44 cents to the Federal Government, and 43 cents are shared among the State, Local, and Federal Capital Governments.¹ Across states, distribution of the 43 percent statutory allocation reflects population and regional redistribution objectives, with the lower income regions (North) receiving slightly more statutory allocations than their share of population (Table 1). In contrast, the allocation for derivation is distributed in proportion to oil production and is thus concentrated in the South-South—five of the eight oil producing states are in this region. Including derivation, of every dollar of oil revenue allocated to the states, 25 cents goes to the South-South, which has only 15 percent of the population and where the per capita expenditure is 25 percent higher than the nationwide average.

Table 1. Selected Indicators and FAAC Distribution, by Region

	Population (thousand)	Annual monthly expenditure per capita (naira)	Net attendance ratio		Infant mortality rate	Access to improved sources of water	Net monthly FAAC distribution per capita in 2014 (naira)
			Primary	Secondary			
North Central	24,214	4,571	73	48	52	50	1,097
North East	22,270	3,531	42	34	71	38	1,232
North West	41,826	3,512	48	25	82	50	890
South East	18,932	5,781	89	73	49	71	1,156
South South	24,569	7,246	89	73	49	67	3,170
South West	32,483	9,740	87	74	28	70	953
Nigeria	164,295	5,722	71	55	56	57	1,351

Sources:
 Population :National Bureay of Statistics, 2013, Social Statistics in Nigeria, Part III, Page 71.
<http://www.nigerianstat.gov.ng/pages/download/170>
 Indicators: National Bureay of Statistics, 2013, Millennium Development tGoals Performance Tracking Survey Report 2012. Available at: <http://www.nigerianstat.gov.ng/pages/download/161>
 Net Monthly FAAC distribution: OAGF, FAAC Monthly Reports, Available at: <http://oagf.gov.ng/>

B. Current Initiatives to Support the Economic Transformation Agenda

3. A number of initiatives are ongoing:

- **Growth Enhancement Support Scheme (GESS):** A system that helps ensure farmers can access fertilizer subsidies directly through the introduction of the Electronic Wallet (e-Wallet) scheme for farmers. Objective is to cut out the middlemen and rent seekers who for decades have disempowered farmers. GESS put an end to the government operated system of direct purchase

¹ SURE-P expenditure (the flagship program to develop the social safety net and promote infrastructure development) is allocated in the same way as oil revenue, including derivation. In contrast, VAT revenue is distributed 50 percent to the states, 36 percent to local governments and FCT Abuja, and 14 percent to the Federal Government.

and distribution of fertilizers that took place for four decades. The e-wallet has been a remarkable success. Within two years, the system has reached over 8 million farmers directly through the mobile phone farm input delivery system. This has helped to improve the food security of 40 million persons in rural farm households. The scheme has also empowered women farmers, who never got seeds and fertilizers under the old system. The system represents a policy and pragmatic shift within the existing fertilizer market stabilization program and it puts the resource constrained farmer at its center through the provision of series of incentives to encourage the critical actors in the fertilizer value chain to work together.

- **YouWin Program:** The main objective of the Youth Enterprise with Innovation in Nigeria (YouWiN) Program is to generate jobs by encouraging and supporting aspiring entrepreneurial youth in Nigeria not older than 35 years to develop and execute business ideas that will lead to job creation. The program will provide aspiring youth with a platform to showcase their business acumen, skills and aspirations to business leaders, investors and mentors in Nigeria. It is intended to attract ideas and innovations from young entrepreneurial aspirants from universities, polytechnics, technical colleges, and other post-Secondary institutions in Nigeria. This program provides a onetime equity grant for 1,200 selected aspiring entrepreneurs to start or expand their business concepts and mitigate start-up risks. The target is to generate 40,000 to 50,000 new jobs for currently unemployed Nigerian youth over the three years during which the three cycles will be implemented; and provide business training for up to 6,000 aspiring youth entrepreneurs spread across all geo-political zones in Nigeria. The YouWiN! Program will be implemented in partnership with Nigeria's private sector, which will be requested to provide funding support.
- **National Enterprise Development Program:** The National Enterprise Development Program (NEDEP) is designed to focus on the provision of business development services, entrepreneurship training, access to affordable finance and core craft skills acquisition. It will tackle unemployment, through technical and vocational training and the empowerment of the unemployed by providing access to start-up funds. The program, which is aimed at generating an estimated 5.0 million direct and indirect jobs between 2013 and 2015, is focusing on skills acquisition, entrepreneurship training/Business Development Service (BDS) and access to finance. The entrepreneurship training/business development service component is being implemented under the One Local Government One Product (OLOP) platform while the access to finance component is being handled by the Bank of Industry (BOI) and the skills acquisition by the Industrial Training Fund (ITF).
- *Skills Acquisition and Training:* In partnership with the Industrial Training Fund's (ITF); National Industrial Skills Development Program (NISDP). NEDEP will focus on reducing the identified technical and vocational gaps in Nigeria. With five ITF training locations (Abuja, Kano, Lokoja, Lagos and Jos) and 10 Master craftsmen centers. Presently, 48,000 students are trained in skills acquisition per location per annum. The program will expand the master craftsmen training program to all 36 states and to create 5 additional industrial core skills training centers (ISTC) in the South West, South East, and South-South geo-political zones.

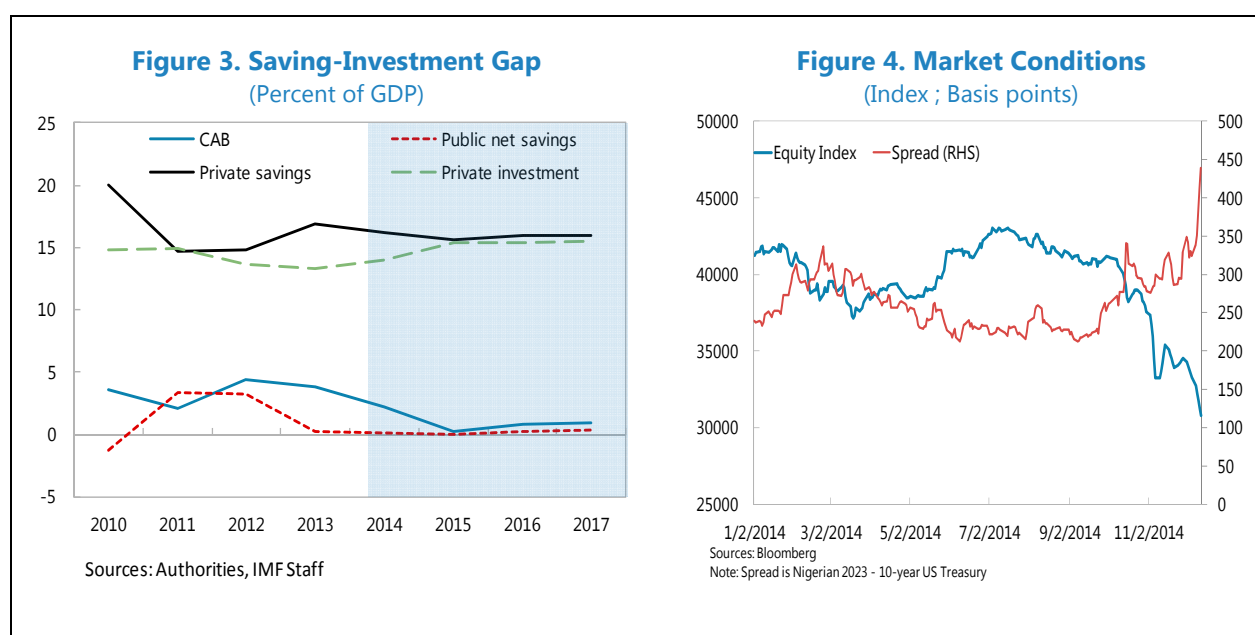
- *Business Development:* In partnership with Small- and Medium-Enterprises Development Agency of Nigeria (SMEDAN), NEDEP provides business development services and entrepreneurship training to small and medium enterprises, cooperatives and individuals in order to create more jobs and increase MSMES's sustainability in Nigeria with the main objective of revitalizing the rural economy, improve employment opportunities and alleviate poverty in states and rural areas by developing local government areas with products of competitive and comparative advantages with products in the marketplace.
- *MSME Financing Facilities:* In partnership with NEDEP, the Bank of Industry (BoI) Nigeria will provide financing to existing businesses, start-up micro enterprises as well as co-operatives and individuals whose businesses add value to the natural resources of the state and local governments where they are located. The focus is placed on businesses that have high growth potential, the ability to reach a large number of deemed poor Nigerians and can demonstrate as well as guarantee, repayment of the financial facilities to be granted, and have potential for creativity and innovation that will foster business growth.
- **National Broadband Plan:** The broadband vision for Nigeria is one of a society of connected communities with high speed internet and broadband access that facilitate faster socioeconomic advancement of the nation and its people. The project reflects the socio-economic importance of broadband services to national development and has galvanized the recent drive to ensure that the infrastructure necessary to provide ubiquitous broadband services is available and accessible to all citizens at affordable rates. The transformative benefits of having broadband available to all include improved learning, increased job creation, better community and civic engagement, improved trade and commerce, and a positive impact on GDP.
- **Automotive Industry Development Plan:** The objective of the Automotive Industry Bill is to revive and develop a sustainable and competitive automotive industry in Nigeria. It is designed to confer pioneer status, provide tariff incentives and income tax relief on automobile and automotive components, as well as specify federal government's assurances and guarantees to the automobile and tire enterprises under the Nigerian Automotive Industry Development plan. The bill seeks to create an environment to allow existing assembly plants to compete and attract other original equipment manufacturers; as well as facilitating a sustainable automotive industry that encourages the formation of joint ventures between multinationals and local companies through foreign direct investments.

C. Financing Gap

4. Fulfilling the objectives set out in the National Infrastructure Investment Plan (NIIP) will require investment of N 5 - 8.4 trillion (\$30-50 billion) a year. This also implies an increase in investment from 15 percent to 17 percent of GDP.

5. Assuming that savings rates do not change, this implies a substantial financing gap, especially once the additional investment required by the private sector is taken into account (Figure 3). Under the current structure of savings, domestic sources might generate up to

N2.2 trillion a year (or a third of anticipated financing needs under the NIIP) to meet these demands. This is estimated by assuming that the current pool of domestic savings of N15.5 trillion (or 14 percent of GDP) will grow at the nominal growth rate of 14 percent. Domestic saving of N15.5 trillion takes into account savings in pension funds (N4.4 trillion), collective investment schemes (N0.5 trillion), insurance premiums (N0.7 trillion), and bank deposits (N10 trillion). More credit could be released from the banking sector if the loan-to-deposit (LTD) ratio increased (which is relatively low at 57 percent). For example, an increase in the LTD to 70 percent would release an additional N1.3 trillion. However, this could be challenging in the current environment given the deterioration in the outlook for non-performing loans (NPLs) and additional pressures on capital in light of Basel II/III. And while current initiatives to expand the formal savings sector—by bringing additional savings from the informal sector—could be successful, this is likely to be a gradual expansion.



6. External financing will be needed to fill the remaining gap, and this has become more expensive. However, current conditions are not conducive to attracting foreign investor flows (Figure 4). Sovereign spreads—which effectively set the floor on private sector borrowing costs—have widened 200 basis point since the year’s low and 123 basis points since the OPEC meeting. Similarly, although the equity market recovered somewhat in the last two weeks of 2014, it closed the year 24 percent down relative to its peak. And the prospect of exchange rate depreciation has underpinned negative sentiment generating significant portfolio outflows. Consequently, although there may be scope for additional borrowing from multilateral and bilateral sources, external financing will prove more expensive than it has been (not least because Nigeria would now be borrowing on commercial terms even through the IDA window). In addition, more needs to be done to improve the enabling environment and reduce further the costs of doing business in Nigeria.

7. Therefore to minimize risks to debt sustainability, implementation of the NIIP should be carefully prioritized and planned to ensure the maximum return on the investment and to minimize implementation delays and associated costs.

D. Financial Inclusion

8. Poverty remains high in Nigeria. Despite the non-oil and consumption-led growth, Nigeria trails peers in Sub-Saharan Africa in reducing poverty. The World Bank estimates using the General Household Survey (GHS) that the poverty rate declined slightly from 35.2 percent in 2009/10 to 33.1 percent in 2012/13, but with significant variation across states: the South West region is the lowest at 16 percent in 2012/13, while the North East region is as high as 50.2 percent and the rate has increased by 3.1 percentage points between the two periods. Moreover, the vulnerability to poverty is high, implying a minimal shock can easily bring those living little above poverty back to poverty. For the country as a whole about 60 percent of the population still lives below 140 percent of the poverty line (or \$2 per capita per day), but in the North West, almost 80 percent of the population live below \$2 per capita per day while about 40 percent in the South West (Molini et al. 2014).²

9. Nigeria's financial penetration rate is low compared to peers, but about a third of adult population now has an account in the formal banking system. Available surveys on the status of financial inclusion in Nigeria (such as Carlson and Saito, 2014)³ show, with some variations, that financial penetration rate is about a third of adult population, though seems to be improving. The World Bank Findex survey conducted in 2011 shows that about 30 percent of adult population has an account in the formal banking system. This coverage is low compared to 50 percent for the world average, 54 percent in South Africa, 42 percent for Kenya, and only a little above the average of 24 percent for developing countries in Sub-Saharan Africa. Nigeria-based survey studies, the Enhancing Financial Innovation and Access survey (EFInA, 2012) also show similar numbers: only 32.5 percent (2012 survey) and 30 percent (2010 survey) of adult population has a bank account respectively.⁴

10. Access to credit especially for Micro-, Small- and Medium-Sized Enterprises (MSMEs) is low, limiting growth potential. Only 2 percent of adult population had loans from a financial institution in the past year according to Findex survey. This is far below the world average of 9 percent (Kenya and South Africa are at 9 percent). The 2010 Enterprise Survey (based on 3,157 enterprises interviewed) shows that credit to enterprises on average is slightly higher: about 14 percent had either a line of credit or loans (or both) in 2008. But in terms of financing of working

² Molini, Vasco, Gbemisola Oseni, and Paul Corral, 2014, "No condition is permanent: The dynamic story of poverty and the emerging middle class in Nigeria."

³ Stacy Carlson, Era Doblá-Norris, Mika Saito, and Yu Shi, 2014, "Household Financial Access and Risk Sharing in Nigeria."

⁴ Survey results for 2008, 2010, and 2012 are available from <http://www.efina.org.ng/>.

capital for individual firms, bank loans play a small role (only about 2 percent of working capital financing for SMEs). A large proportion of working capital is therefore managed by either internal funds or retained earnings (about 70 percent) or credit from suppliers (close to 30 percent). The role of bank loans is also limited for purchasing fixed capital and, given that credit from suppliers is also limited for new investment, firms rely solely on retained earnings.

11. Nigeria has been promoting financial inclusions for several years. Based on an EFINA survey in 2010, Nigeria launched a national financial inclusion strategy in 2012. The strategy aims to bring the exclusion rate of 46.3 percent of adult population (those with neither formal nor informal financial services) in 2010 to 20.0 percent by 2020. Access to credit is targeted to reach 40 percent of adult population. The strategy seeks to address five major barriers to financial inclusion : (i) income, (ii) physical access, (iii) financial literacy, (iv) affordability, and (v) eligibility. The major tools for driving the Strategy include: transform the existing *Know-Your-Customer (KYC)* requirements to simplified risk-based tiered framework that allows individuals that currently do not have the required formal identifications to enter the banking system; improve *agent banking* by articulating and implementing the regulatory framework; improve *financial literacy* by defining and implementing a framework to increase awareness and understanding of the population on financial products and services; implement a comprehensive *consumer protection* framework to safeguard the interest of clients and sustain confidence in financial services; enhanced *mobile-payment system* and other *cash-less policy* efforts to lessen the cost of and ease of financial services transactions; and credit enhancement schemes programs to MSMEs.

12. Financial access could help alleviate negative shocks to household consumption and micro household businesses. Public policy typically recognizes that particular groups or sectors might be more vulnerable than others to downturns, as well as to the adverse effects of tight macroeconomic policies. For example, the sector-specific development banks are used to promote growth of specific sectors, or microcredit institutions to promote small household businesses to alleviate poverty and reduce income inequality. Indeed, there are several credit enhancement schemes programs to empower micro-, small- and medium-sized enterprises (MSMEs) in Nigeria. The effectiveness and the success of these schemes however depend on the sensitivity of consumption to changes in income and roles that formal and informal financial institutions play at the micro level.

13. Households with access to finance should be better able to weather shocks, and thus should see consumption respond less to a given shock than those without access. Further, those who live in poverty and are vulnerable to fall back into poverty could benefit from a reliable consumption smoothing mechanism. Staff examined the role of household financial access on the extent of risk-sharing in Nigeria. More specifically, using two data points in the GHS-panel, i.e., wave 1 (2009/10) and wave 2 (2012/13), one can observe for each household the change in income, the change in consumption, and financial attributes of whether the household had access to savings, borrowing, both, or neither. It is also possible to observe whether the financial access was with formal sector (e.g., banks), informal sector (an informal group such as Rotating Saving and Credit

Associations (ROSCAs), money lender, friends, or family), or with semi-informal sector (cooperative, savings association, or microfinance institution).

14. The impact of access to different sources of finance on consumption smoothing is examined using the following difference-in-difference (DID) specification:

$$C_{ijt} = \alpha + \mu_i + \beta \cdot Shock_{ijt} + \gamma \cdot FinUse_{ijt} + \delta \cdot (Shock \cdot FinUse)_{ijt} + \eta \cdot X_{ijt} + \xi \cdot (Shock \cdot X)_{ijt} + \theta_{jt} + \varepsilon_{ijt},$$

This specification follows closely Jack and Suri (2013), Gertler and Gruber (2002), and Gertler, Levine, and Moretti (2006, 2009) and uses information at the “location” level, which can be interpreted as some geographical region larger than a village. C_{ijt} is log monthly per capita consumption for household i in location j and period t ; μ_i are household fixed effects; $Shock_{ijt}$ is a binary indicator of whether a household reports experiencing a negative shock in the current or preceding year; $FinUse_{ijt}$ is a binary indicator of whether household i in location j and period t reports using a given source of finance; X_{ijt} is a vector of controls; and θ_{jt} are location-time fixed effects. Note that an indicator is used for a reported shock rather than a measure of the change in income to minimize measurement errors in income, which tend to be more severe than those in consumption. Household fixed effects control for any unobserved but fixed household characteristics that may impact consumption, while location-time fixed effects control for location-wide aggregate shocks. Control variables included in X_{ijt} are household size; years of education and age of the household head; household net worth; household occupation; and a dummy for whether or not the household received remittances. The interaction term between the indicator of negative shocks and the set of control variables takes into account the possibility that these controls have an impact on a household’s ability to smooth consumption. β indicates the impact of negative income shocks on consumption for those who do not use a given source of finance, while γ measures the effect of usage of finance on consumption conditional on not experiencing a shock. δ indicates the impact of financial access on consumption smoothing.

15. The key findings and policy implications are as follows:

- Those households with some financial access are better able to smooth consumption than those without. Those with financial access who experience a negative income shock see consumption fall by 15 percentage points less than those without access.
- This result is mainly driven by households with *informal* financial access (i.e., access to an informal group, money lender, friends, or family) and is also mainly driven by *savings*, rather than borrowing.
- Given that formal and semi-formal financial access have not been as effective in smoothing negative shocks as the informal channel, promoting financial inclusion mostly through formal institutions need to be thought through more carefully going forward. As well as addressing lack of capacity and capital, better understanding of the disconnect between access and usage is needed.

16. Financial inclusion efforts going forward could have a more regional focus, addressing region-specific needs and bottlenecks. The study finds that improved access in recent years has not delivered consumption smoothing, especially in the North. For instance, having access to semi-formal financial institutions (i.e., access to cooperative, savings association, or microfinance institution) was more effective in smoothing negative shocks in the South than in the North. Moreover, informal borrowing was more effective than savings in absorbing shocks in the North East. Regional focus and lessons drawn from other regions could potentially be beneficial.

E. Quasi-Fiscal Activities

17. Whether a central bank plays a role as an agent of fiscal policy or not is a policy choice. The cost and the size of quasi-fiscal activities (QFAs) should be assessed relative to the overall general government balance, relative to fiscal objectives, and the effectiveness in implementing those objectives.

18. Knowing the size of the QFAs is important since they have implications on the overall public sector balance and allocation of resources. The central bank of Nigeria (CBN) and other public financial institutions (PFIs) play a role as agents of fiscal policy in Nigeria. These activities affect the overall public sector balance without affecting the FGN budget balance. Key QFAs quantified are: (i) implicit export taxes and import subsidies generated by the spread between the official DAS exchange rate vis-à-vis the IFEM rate; (ii) implicit subsidies associated with subsidized lending through the CBN and PFIs; and (iii) size of explicit contingent liabilities associated with various loan guarantee programs.

19. Implicit subsidies (and taxes) by maintaining the DAS rate below the IFEM rates are estimated at N71 billion (and N197 billion) in 2014. A DAS rate below the IFEM rate implies that every transaction simultaneously involves a tax on the exporter, who is forced to surrender earnings at an appreciated rate, and subsidy for the importer, who benefits from the same appreciated rate. Staff estimates of export tax and import subsidies in 2014 are N197 billion (about \$1.2 billion) and N71 billion (\$45 million), respectively: they are equivalent to 3 percent of gross oil revenue and 13 percent of fuel subsidies estimated for the 2014 budget (Table 2).

20. The implicit subsidies associated with subsidized lending (or on-lending) through the CBN are about 17 percent of the capital expenditure of the federal government (FGN). According to the monthly reports of the Development Finance Department of the CBN, the commercial agriculture credit scheme (CACCS) extended credit of N239 billion since inception at a maximum interest rate of 9 percent and the agricultural credit support scheme (ACSS) extended credit of N876 million at 6 percent. Moreover, the total sum of N360 billion at 10 percent (2 percent below MPR) had been released to the Bank of Industry (BOI) from the CBN to refinance and restructure banks' existing loan portfolios to manufacturers under the refinancing and rediscounting scheme (RRF). Finally, N234 billion at maximum 7 percent had been released to the BOI from the CBN under the power and aviation intervention fund (PAIF). Implicit subsidies computed as the maximum lending rate minus subsidized interest rate times the credit extended since inception

sums to N140 billion (\$90 million). This is equivalent to about 17 percent of the FGN's capital expenditure for 2013 (Table 3).

Table 2. Implicit Export Tax and Import Subsidies from the IFEM-DAS Differential				Table 3. Implicit Interest Subsidies (Billion naira)				
	2012	2013	2014p	Max lend. rate	Subsidized rate	Amount outstanding	Interest subsidies	
(1) Oil-related inflows to CBN (\$ bn)	42.6	37.0	38.6	CACS	25.8	9.0	239.0	40.0
(2) Fuel imports (\$ bn)	19.2	15.1	13.9	ACSS	25.8	6.0	0.9	0.2
(3) IFEM (naira per dollar)	158.8	159.3	163.5	RRF	25.8	10.0	360.7	56.8
(4) DAS rate (naira per dollar)	157.5	157.3	158.4	PAIF	25.8	7.0	233.6	43.8
(5) Export tax = ((3)-(4))*(1) (N bn)	57.1	71.7	197.2	Total				140.8
(6) Import subsidy = ((3)-(4))*(3) (N bn)	25.7	29.4	71.2					

Sources: CBN, EIA, and Staff estimates.

Sources: CBN and Staff estimates.

F. Impact of Regional Trade Agreements

21. Regional trade agreements (RTAs) provide opportunities for Nigeria to stimulate non-oil exports by becoming integrated into global supply chains. However, RTAs also pose challenges. We focus on two arrangements: The Common External Tariff (CET) of the Economic Community of West African States (ECOWAS), which entered into force on January 1, 2015, and the Economic Partnership Agreement (EPA) of ECOWAS with the European Union (EU), agreement on which is still pending.

22. The ECOWAS, already a free trade area, is now a customs union applying a CET. The main impact with respect to the previous arrangement is thus the potential simplification of trading relationships with partners outside the bloc. The CET consists of tariff bands ranging from 0 percent to 35 percent depending on the type of good (Table 4). Participants will have leeway to deviate from CET rates by up to 70 percent during a transition period.

23. A World Bank study of product-level data suggests that upon full adoption of the CET, Nigeria's weighted average tariff rate would increase slightly to 11.3 percent, from 10.5 percent at present. Thus, the CET would be likely to raise the amount of revenue collected at the border but lower imports (Table 5).

24. In addition to tariffs, Nigeria applies import levies, miscellaneous surcharges, and outright bans; these are mainly applied to grains, sugar, alcohol, tobacco, textiles, iron, and steel. The same World Bank study examines the effects of lowering these barriers, and found that such measures would lead to a significant revenue loss (Table 2), offset in part by increasing imports. However, these policy changes could bring more informal imports into formal trade, especially in categories that currently face high effective barriers, which could further increase imports and partially cushion the revenue impact.

25. The EPA would replace the EU's previous preferential regime which was not WTO-compliant. ECOWAS products would have duty-free, quota-free access to the EU market. In turn, ECOWAS would open its markets without tariffs to 80 percent of exports from the EU over a 20-year period, and the EU would provide €6.5 billion (\$8.8 billion) in compensatory support during 2015-20.

Table 4. Structure of the ECOWAS CET, 2013

Category	Description	Average duty rate	Number of tariff lines
0	Essential social goods	0%	85
1	Goods of primary necessity, raw materials and specific inputs	5%	2,146
2	Inputs and intermediate goods	10%	1,373
3	Final consumption goods	20%	2,165
4	Specific goods for economic development	35%	130

Source: de Roquefeuil, 2013.

Table 5. Impact of CET on Imports and Revenue
(Impact of reform, in percent)

	CET implementation		CET plus removal of bans and levies	
	Low elasticity	High elasticity	Low elasticity	High elasticity
Total imports	-0.3	-0.6	2.7	5.3
Tariff revenue	5.1	4.4	10.3	13.8
Total revenue collected at border	2.9	2.5	-16.7	-14.3

Source: von Uexkall and Shui, 2014.

26. The EPA has been under negotiation at the ECOWAS-level since 2002 and was endorsed by ECOWAS heads of state in July 2014, but parliamentary ratification of the agreement is pending. Nigeria has notified other ECOWAS members that it would not ratify the accord in its current form. Concerns are centered on the impact on nascent Nigerian industries of opening the market to competing EU goods, and non-tariff hurdles to increasing Nigerian exports to the EU:

- After refined petroleum products, imports are concentrated in machinery and equipment, processed food and beverages, and inputs for manufacturing industries (Table 6). The impact on Nigerian firms competing directly in these industries should be weighed against the improvement in competitiveness of firms in industries using these products as inputs. A World Bank study suggests that the EPA would lower Nigeria's tariff revenue by at least 16 percent (about 0.1 percent of GDP), but could be higher if trade in products with high tariffs is liberalized. As with the CET, the impact would be higher if other levies were also lowered. Given the long time frame for implementation, the initial impact on tax revenue would be small, but over time other revenue sources would need to be identified to compensate (see Section J).
- Oil and natural gas comprise the vast majority of Nigeria's exports to the EU, and already enter with zero tariffs (Table 7). A large share of non-oil exports consists of agricultural goods and other raw materials, and likewise the tariffs applied to these products are generally low. Issues

such as harmonizing labeling and sanitary regulations are seen as the key hurdles to increasing exports.

27. The CET and EPA represent opportunities to increase integration in global supply chains but present challenges. Implementation of the CET could be used as a springboard to deepen integration among ECOWAS members, especially by increasing coordination in border management and streamlining customs procedures. Reducing the cost of imports would lower government revenue, but help improve the competitiveness of domestic manufacturers. Other measures to facilitate trade such as harmonizing regulations and simplifying rules of origin could have at least as much of an impact as lower tariffs, and should be a major focus of negotiations with the EU and any future RTAs. Finally, supporting domestic policies, such as improvements in logistics and the business climate, are critical in supporting an increase in exports across a broad range of industries.

Table 6. Imports from European Union, 2013

(Million U.S. dollars)

Total	15,588
Petroleum products	5,727
Machinery and equipment	4,472
Food and beverages	1,556
Manufactured inputs	1,210
Percent of GDP	3.0
Percent of imports	43.1

Sources: United Nations, Comtrade Database; and IMF staff calculations.

Table 7. Exports to European Union, 2013

(Million U.S. dollars)

Total	38,050
Petroleum and products	34,397
Natural gas	2,342
Non-oil, of which:	1,312
Coffee/tea/cocoa/spices	489
Leather manufactures	223
Metal ores and scrap	141
Rubber	95

Non-oil exports:

Percent of GDP	0.25
Percent of non-oil exports	28.9

Sources: United Nations, Comtrade Database; and IMF staff calculations.

G. Efforts to Enhance Data and Statistics in Nigeria

28. Macroeconomic data are broadly adequate for surveillance, and although significant progress has been made, gaps remain to fully exploit the potential for supporting decision-making. The establishment of the National Bureau of Statistics (NBS) in 2007 heralded better coordination and information-sharing among data producing and collecting agencies, as well as the compilation of timely and internally consistent data. The recent completion of the rebased national accounts, the new General Household Survey, and the ongoing preparation for business and agriculture censuses are examples of the continuing effort to improve further the production and compilation of data. Nevertheless, more needs to be done to continue to enhance the quality and dissemination of data.

- **Price statistics:** The official monthly consumer price index (CPI) is available on a timely basis. The index has been revised using the results of the 2003/04 Nigeria Living Standard Survey (NLSS) and the consumption expenditure data were re-valued to November 2009, which is the base period for the revised CPI. Further refinements are needed to reflect international standards and best practices, including the need to address issues related to the index structure, pricing samples, elementary index formula, index calculation system, and to develop new weights consistent with rebased GDP.
- **Government finance statistics (GFS):** Fiscal data compilation is complicated, not only by the federal structure but also by a multiplicity of off-budget funds, and lack of ownership. The responsibility for GFS is not specifically assigned and constitutional restrictions on the federal government limit the availability of data for the subnational governments, which comprise almost one-half of total government expenditure. There is a need to formalize the publication of government accounts on a monthly or quarterly basis and to expand the coverage of data.
- **Monetary and financial statistics:** The Central Bank of Nigeria (CBN) compiles the depository corporations survey (DCS) in accordance with the MFSM and began reporting of financial soundness indicators (FSIs) in 2014. The CBN have immediate plans to: i) expand the institutional coverage of the other depository corporations (ODCs) survey to include microfinance banks and primary mortgage institutions, ii) introduce the new MBR300 report form for collecting ODC data; and iii) collect data from insurance companies and pension funds for inclusion in the coverage of the other financial corporation's subsector. However, further enhancements in data quality and consistency are needed, in particular with respect to the interbank positions between the CBN and the ODCs to ensure imbalances are reduced.
- **Balance of payments:** Considerable efforts to improve the compilation of Nigeria's balance of payments data have been made in recent years. There is good progress in improving the survey frame and response rate related to collection of cross-border private capital flows and stocks data (SOFAL) and in developing a usable data management system. In addition, reporting by enterprises in the free trade zones (FTZs) has also improved following previous efforts by the CBN to strengthen coordination with the Nigerian Export Processing Zone Authority. However, large errors and omissions persist in the balance of payments, which add uncertainty to the assessment of external sustainability. Compilation of the BOP according to the sixth edition of the Balance of Payments and International Investment Position Manual (BPM6) is also planned.

29. The National Bureau of Statistics (NBS) corporate strategy for 2015-16 recognizes these challenges. It places a renewed focus on developing the capacity of State Statistical Agencies (SSAs), increasing data coverage and dissemination, expanding computerization and the use of information technology, and providing support to evidence-based policy making in Nigeria. Given their central role in data production, the NBS is engaging SSAs to enhance along a number of tracks: adoption of the same data standards and compilation methodologies, provision of training and staff exchange programs, and enhancing cooperation among SSAs through holding regular meetings among sector heads at the federal and state level. Moreover, plans to cover new areas include the expansion of trade statistics to include international trade in service data and an informal cross

border trade survey, computing multiple trade-related indices, constructing a labor cost index, and conducting the Harmonized Nigeria Living Standard Survey (HNLSS) and the expanded general household and multiple indicator cluster surveys. Additional focus is placed on data production in key social areas (health and education) and economic sectors (agriculture, finance, power, and water).

30. Development partners continued support will further enhance NBS efforts to improve data quality. Collaboration will be important, a prime example being the technical assistance provided by the World Bank, IMF, and AfDB on the GDP-rebasing exercise. The World Bank 2014-17 Country Partnership Strategy (CPS) for Nigeria places emphasis on developing social and poverty indicators and state and local government statistics, while the IMF, supported by UK's DFID will continue to provide support in national accounts, price statistics, balance of payments, and the compilation of cross-border financial flows and stocks.

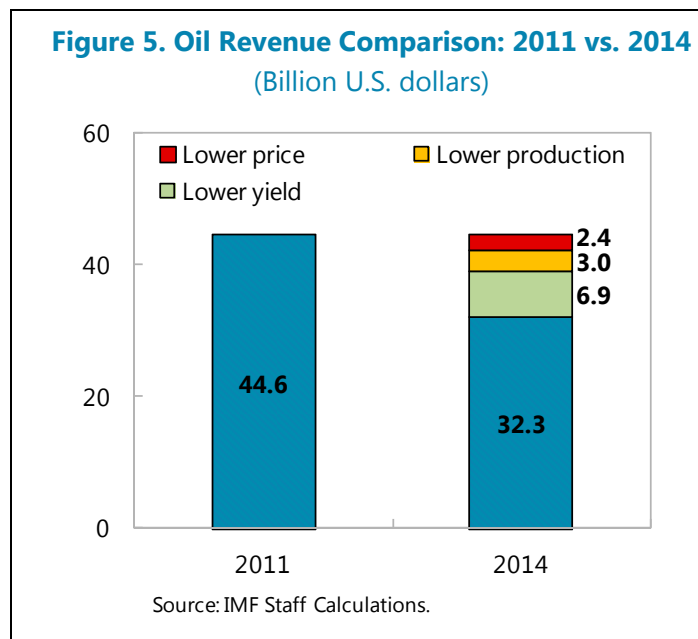
31. Going forward, the authorities are encouraged to adopt the recommendations of the G-20 Data Gaps Initiative (DGI). The 2008 financial crisis exposed a significant lack of information as well as data gaps in advanced economies on key financial sector vulnerabilities relevant for financial stability analysis. Some of these gaps affected the dynamics of the crisis, as markets and policy makers were caught unprepared by events in areas poorly covered by existing information sources, such as those arising from exposures taken through complex instruments and off-balance sheet entities, and from the cross-border linkages of financial institutions. In April 2009, the IMF and the Financial Stability Board (FSB) were asked by the G-20 to explore information gaps and provide appropriate proposals for strengthening data collection. Initiatives under the DGI are not necessarily exclusive to the G-20 economies and several non-G-20 countries participate in the implementation of various DGI recommendations.

OIL SECTOR DEVELOPMENTS AND IMPACT ON ECONOMY

The recent fall in prices has compounded a secular decline in investment and production of oil, and highlighted the vulnerability of fiscal revenue and foreign exchange to high oil-dependency. In 2015, oil revenue shared across the different tiers of government is projected at just 3.9 percent of GDP (down from 6.4 percent projected in October WEO), limiting fiscal spending, especially on needed infrastructure and social development. The cuts in public investment and reduced consumption demand can reduce the growth rate in 2015 by about 1½ percentage point (from 6.1 percent in 2014). The oil price shock underscores the need to mobilize non-oil revenue, including through VAT and CIT reforms, as well as addressing declining oil production (through the PIB and reducing sabotage), increasing internally generated revenue of subnational governments, and improving the efficiency of expenditure.

H. Factors Behind the Recent Evolution of Oil Revenue

32. Even before the recent drop in oil prices, fiscal proceeds from oil were gradually dropping. Revenue received by the Federation from crude oil sales, petroleum products taxes (PPT), and royalties (after subsidies provided by NNPC and cash calls) went from \$45 billion in 2011 to \$32.3 billion in 2014 (Figure 5).



33. The drop in oil revenue over 2011-14 was larger than expected from the evolution of oil prices and production. Between 2011 and 2014, oil lifting fell from 2.38 to 2.19 mbpd (7½ percent decline), largely attributed to stoppages associated with pipeline vandalism. Over this period, oil prices also declined by 6½ percent (from \$109 to \$102 pb). The direct impact of these two factors reduced revenue by about \$5.5 billion in 2014 relative to 2011. The observed drop in revenue was much larger (about \$12.5 billion), implying a fiscal yield (relative to the market price)—the ratio of oil revenue to the market value of oil lifting—that declined from 47.2 percent to 39.5 percent over 2011-14 (Table 8).

Table 8. Lifting and Oil Revenue Yield by Fiscal Regime, 2011-14

	2011	2012	2013	2014	Change 2011-14
<i>Lifting by regime (million barrels per day)</i>					
Total lifting	2.38	2.37	2.19	2.19	-0.18
JV and AF	1.44	1.29	1.10	1.10	-0.34
o/w NNPC lifting domestic account	0.45	0.44	0.43	0.42	-0.03
NNPC lifting export	0.36	0.27	0.21	0.24	-0.12
Company lifting	0.63	0.57	0.46	0.44	-0.19
PSC	0.78	0.88	0.85	0.87	0.08
Other	0.15	0.20	0.24	0.22	0.07
<i>Fiscal revenue by regime (percent of market value of lifting)</i>					
Total	47.2	42.4	40.6	39.5	-7.7
JV and AF (NNPC liftings)	57.0	42.5	45.2	45.4	-11.6
Other	42.1	42.3	38.8	36.9	-5.1

Source: IMF Staff Calculations.

34. The main drivers contributing to the 7.7 percent decline in fiscal yields are a shift in the lifting profile away from the onshore joint venture and alternative funding regimes (JV), lower revenue from NNPC JV/AF lifting, and increasing costs in PSC and other regimes.

- *Shift away from JV lifting.* Behind the headline drop in oil production is a reallocation of the lifting profile away from JV (on-shore) toward other fiscal arrangements (often used for off-shore lifting). Over 2011-14, JV lifting dropped by about 0.34 mbpd, while lifting by other regimes increased by 0.15 mbpd. Increased vandalism, which affects on-shore more than off-shore lifting, seems to be accelerating a secular trend. The share of oil lifting by JV in total lifting went from 76 to 61 percent over 2006-11 and declined further to 50 percent by 2014. This trend reduces the yield from oil production by shifting production away from higher yield lifting (JV) to other lifting typically associated with higher capital and operational costs (i.e., off shore). For example, in 2011 the Federation oil receipts amounted to 57 percent of the market value of the NNPC lifting (domestic and export NNPC JV accounts, net of subsidies and cash calls) compared to 42 percent for other lifting. Overall, the shift away from JV explains about 0.5 percent of the 7.7 percentage point decline in oil revenue yield over 2011-14 (Table 9).

Table 9. Drivers of the Change in Oil Revenue Yield, 2012-14

	2012	2013	2014	Total 2012-14	Estimated loss of revenue in 2014 (Percent of GDP)
Change in oil production yield (percentage points)	-4.8	-1.7	-1.1	-7.7	1.1
Due to:					
Change in JV/AF lifting share of total lifting	-0.6	0.0	0.1	-0.5	0.1
Change in JV/AF-NNPC lifting yield (subsidies and production losses)	-4.4	0.8	0.1	-3.6	0.5
Change in other lifting yield	0.2	-2.5	-1.3	-3.6	0.5

Source: IMF Staff Calculations.

- *Lower yield from NNPC JV lifting.* This explains about 3.6 percentage points of the decline in oil revenue yield over 2011-14. First, since cash calls are not directly linked to lifting (equivalent to a fixed cost in the short term), reductions in production would reduce its fiscal intake. Second, of the total NNPC JV allocation, each year about 0.445 mbpd are directed to the NNPC domestic account to provide subsidized fuel—explaining why NNPC lifting for export declined by more than NNPC lifting for the domestic account. At current levels of subsidies, the Federation receives only 0.55 cents of each dollar value of this allocation, compared to a full market value from NNPC JV lifting for export. As production declines, a larger share of the lifting is used to pay for subsidies (estimated at about 0.7 percent of GDP in 2014) (Table 10). Third, for any level of lifting, vandalism results in production losses and additional maintenance to pipelines connecting terminals to refineries. These account for a loss in revenue of 0.4 percent of GDP in 2014, seemingly in a declining trend from the 0.9 percent of GDP observed in 2012.

Table 10. Uses of JV/AF NNPC Lifting, 2011-14
(Percent of GDP)

	2011	2012	2013	2014	Change 2011-2014
Market value of JV/AF NNPC lifting	7.7	6.2	4.9	4.4	-3.3
Net revenue to Federation	4.4	2.6	2.2	2.0	-2.4
Cash calls	1.6	1.6	1.3	1.3	-0.3
Implicit subsidies	1.5	1.1	0.9	0.7	-0.8
Losses related to sabotage, pipeline maintenance, and other	0.3	0.9	0.5	0.4	0.2

Source: IMF Staff Calculations.

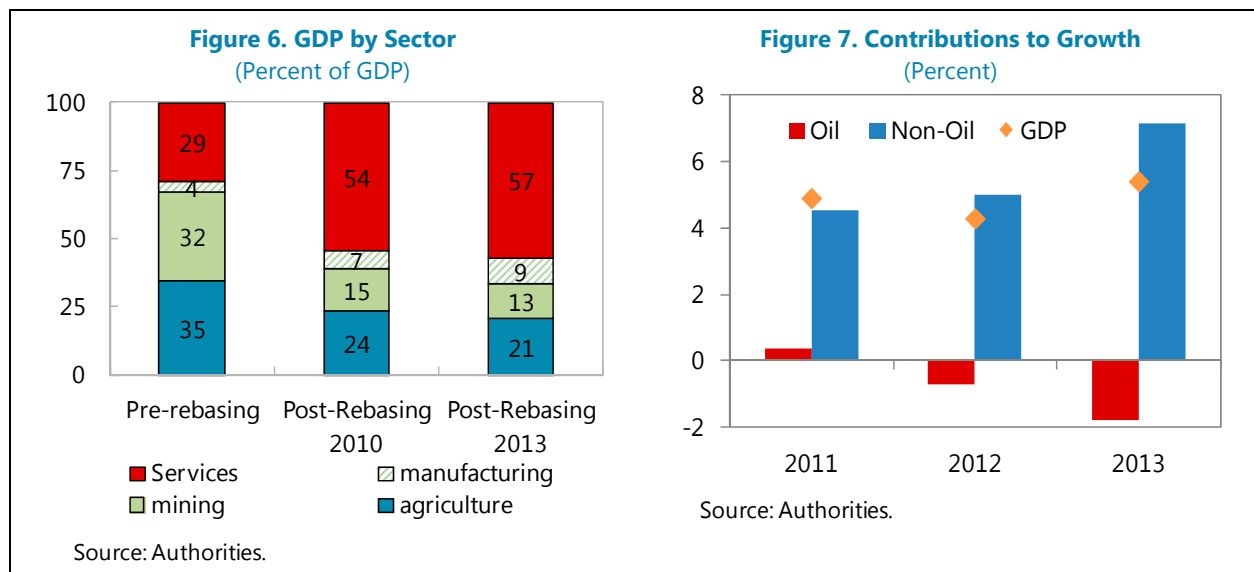
- *Lower yields in PSC and other regimes.* As a share of the market value of lifting, revenue from PPT and royalties—related to oil lifting other than the NNPC JV allocation—declined from about 42 percent in 2011 to 36.9 percent in 2014. This decline reflects higher capital and operational costs, part of which can be attributed to vandalism and production disruptions. These factors reduced the oil revenue yield by 3.6 percentage points (estimated as a residual), equivalent to a loss of about 0.5 percent of GDP in oil revenue in 2014.

35. These issues reflect the structure of the industry. Passage of a sound Petroleum Industry Bill, improved oil revenue management, continued efforts to reconcile oil revenue collections (Nigeria is Extractive Industries Transparency Initiative (EITI) compliant), completion of subsidy reform, a reduction in sabotage and oil theft have been acknowledged as policies that could help (2013 Article IV Staff Report).

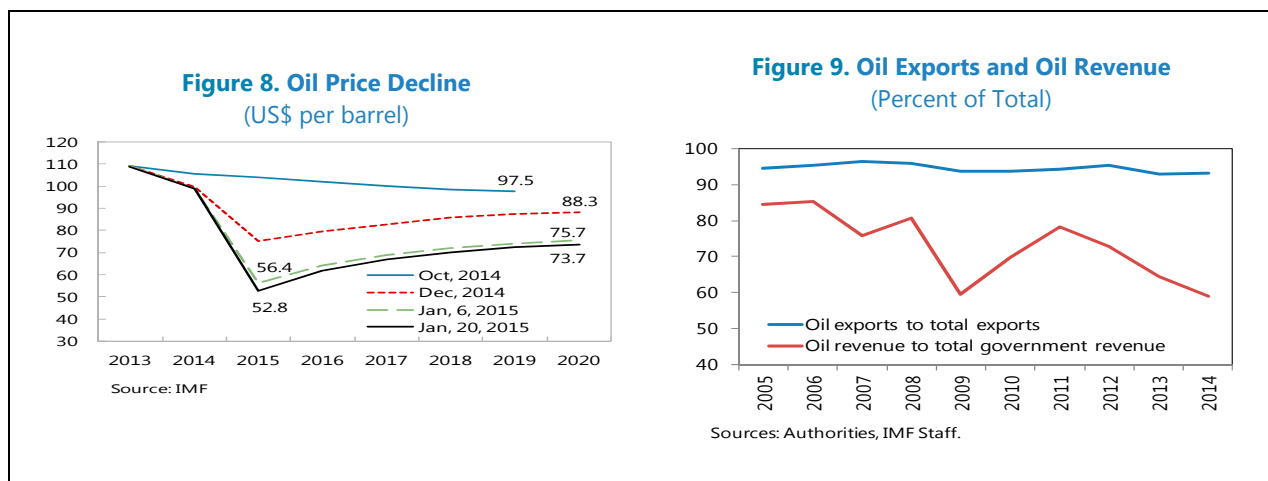
I. Impact of Oil Price Shock

36. The role of oil in aggregate economic activity has diminished. The economy is more diverse, with services accounting for over 50 percent of GDP in 2013 compared to about 13 percent for oil (Figure 6). Although Nigeria has grown by an average of 6.8 percent over the past decade, the

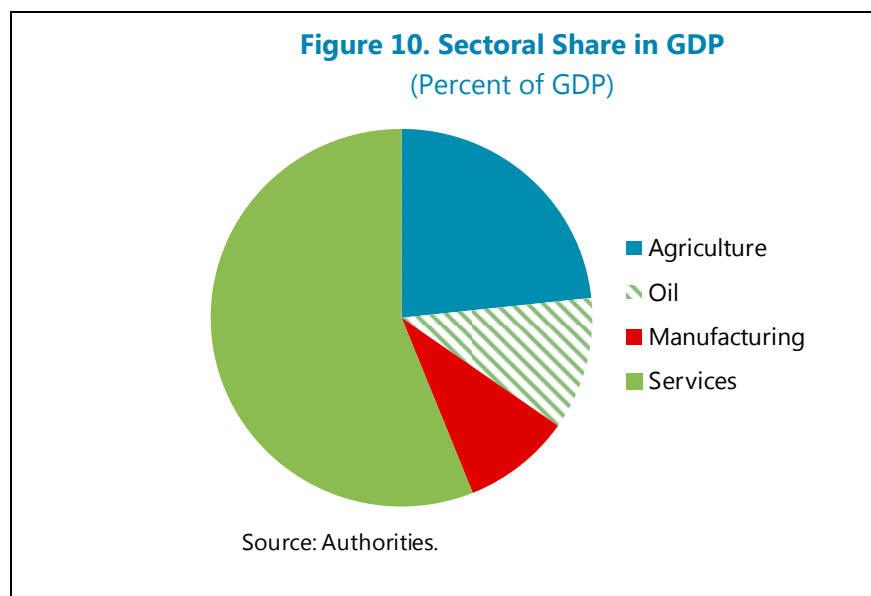
non-oil sectors have been the dominant drivers, averaging 6.5 percent over the last three years (Figure 7). In 2013, services accounted for about 70 percent of non-oil growth (retail and wholesale trade, real estate, hotels, and information and communication account for 50 percent), and manufacturing (food, beverages, and textiles are the largest contributors) about 15 percent; agriculture, traditionally a key growth driver, contributed a small fraction to growth in 2013. In terms of final expenditure, private consumption is about 70 percent of aggregate demand, with public consumption contributing an additional 10 percent



37. Despite the relatively low (recently negative) contribution to aggregate activity, hydrocarbon exports are still a key source of foreign exchange and fiscal revenue (Figures 8 and 9). With oil and gas exports representing 95 percent of exports and 70 percent of government revenues, a sustained reduction in oil prices would impact significantly the external current account and fiscal revenues and stymie the recent growth momentum.



38. The main channels of transmission through which lower oil receipts affect non-oil activity are: (i) lower government spending, particularly capital expenditure; (ii) lower disposable income for private sector expenditure; and (iii) consequent exchange rate effects. The relative impact of each channel depends on intersectoral linkages and sectoral shares in activity (Figure 10).



39. Based on an input-output (I-O) multiplier model analysis, a 38 percent decline in export receipts and a decline in public investment spending of about half a percent of GDP could reduce GDP by 1.3 percentage points.⁵ More specifically, impact of a decline in exports and public investment were calculated separately.

40. To assess the magnitude of the impact of a decline in oil exports and public investment on oil and non-oil GDP, Staff constructed a preliminary Input-Output (IO) Table (Table 11) based on the preliminary supply and use table (SUT) recently compiled by the National Bureau of Statistics (NBS).⁶ A simplified version of the IO Table⁷ shows, for example, that the oil sector uses N1.7 trillion of intermediate inputs from the oil sector and the N6.7 trillion from the non-oil sector; it also generates significant final demand, the largest component of which is export demand (N10.7 trillion). Similarly,

⁵ Input-output multiplier models capture the inter-sectoral linkages within an economy and can be used to estimate the economy-wide effects of a change in final demand. These models, however, typically assume time-invariant technical (production) coefficients, constant returns to scale, and no supply constraints. Thus, the underlying model parameters do not capture economic agents' behavioral responses to the initial shock, an issue that is more poignant for medium-to-long term projections. Further, the results are conditional on the accuracy of the input-output coefficients and how well the model captures the structure of the economy.

⁶ The IO Table presented here is short of a complete IO table.

⁷ It is a simplified version because this exercise is done for 32x32 IO Table.

the non-oil sector generates intermediate demand as well as final demand, the largest component of which is consumption demand (N38.1 trillion). We use the IO Table to assess the transmission of the shock from the oil sector to the non-oil sector.

	1. Oil	2. non-oil	GDP at Market Prices						Gross output (X)
			C	G	I	E	-M	T&S	
1. Oil	1,711	6,752	36	0	11	10,749	-16	-2	19,242
2. non-oil	2,469	27,771	38,146	5,057	9,149	2,724	-9,839	-855	74,621
GDP at basic prices	8,455	46,158							
Output at basic prices	12,636	80,681							

Sources: NBS, and IMF Staff estimates.

41. Staff then decomposed value added⁸ for each sector (N8.4 trillion for oil and N46.1 trillion for the non-oil sectors) by “types of final demand” that are generating value-added to each sector. Types of final demand are consumption (C), investment (I), government consumption (G), Exports (E), Imports (M), and Taxes and subsidies (T&S). This is used to identify how much of value-added (in particular wage income) is generated by investment demand or oil export demand. The exercise takes the following steps.

- First, gross output is expressed as the sum of final and intermediate demand as follows:

$$\begin{bmatrix} X_1 \\ X_2 \end{bmatrix} = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \cdot \begin{bmatrix} X_1 \\ X_2 \end{bmatrix} + \begin{bmatrix} F_1 \\ F_2 \end{bmatrix} = A \cdot \begin{bmatrix} X_1 \\ X_2 \end{bmatrix} + \begin{bmatrix} F_1 \\ F_2 \end{bmatrix} \quad (1)$$

- Second, by solving the equation for the column vector of gross output X , we estimate gross output needed to meet a column vector of final demand F :

$$\begin{bmatrix} X_1 \\ X_2 \end{bmatrix} = (I - A)^{-1} \begin{bmatrix} F_1 \\ F_2 \end{bmatrix} \text{ or } X = (I - A)^{-1} F \quad (2)$$

where I is a 2x2 identity matrix. By multiplying value-added shares in gross output to gross output X_1 and X_2 , one can calculate value-added generated to meet final demand. Value added shares in gross output for the oil and non-oil sectors are 0.67 (= 8,455/12,636) and 0.57 (= 46,158/80,681), respectively. For example, by replacing the column vector F with investment demand (11, 9,149)',

⁸ Value added comprises wage compensations, operating surpluses, consumption of fixed capital, and taxes net of subsidies, but this note focuses on the first two largest components.

one could obtain value added generated by investment demand = (221, 8,939). Similarly, by replacing the column vector F with oil export demand (10,749, 0)', one could obtain value added generated by oil export demand = (8,831, 1,918). These results are summarized in Table 12.

		1. Oil	2. non-oil
income generated different types of final demand:	C	2,813	35,369
	G	164	4,892
	I	221	8,939
	E	9,344	4,129
	o/w oil	8,831	1,918
	M	-1,343	-8,512
	T&S	-61	-796
	residual	-2,683	2,137
	GDP at basic prices	8,455	46,158

Sources: NBS, and IMF Staff estimates.

Using Table 12, Staff estimated the effects of (i) a fall in public investment on GDP, (ii) its multiplier effect by reducing consumption demand, and (iii) a decline in consumption demand generated by oil export receipts.

42. A decline in public investment. Most of the fiscal consolidation in 2015 will come from reductions in capital expenditure. FGN capital expenditure is projected to decline from N582 billion in 2014 to N381 billion in 2015 according to the Medium-Term Expenditure Framework (MTEF), with the budget reference oil price set at \$65 per barrel (Table 13). With the projected inflation rate, 9.6 percent for 2015, this decline translates to about a 40 percent decline in public investment. With public investment accounting for about 8 percent of total investment (fixed capital formation and changes in inventories), we assume investment will decline (at least initially) by about 3 percent (40 percent of 8 percent).

Table 13. Assumptions

(a) Share of public investment in total investment (2014)			0.08
(b) % change in public investment = ((iv)/(i)-1)x100			-31.0
(i) capital expenditure (FGN) 2014, billion naira			507
(ii) capital expenditure (FGN) 2015, billion naira			381
(iii) CPI inflation rate projection 2015, percent			9.0
(iv) capital expenditure (FGN) 2015 @ 2014 prices = (ii)/(1+(iii)/100)			349
(c) Share of compensation of employees in value added			0.27
(d) Share of consumption in GDP			0.69
(e) Share of imports in GDP			0.18
(f) % change in purchasing power of oil export receipts (% change in (v))			-38.5
		2014	2015
(i) oil price (\$ per barrel)		100.6	52.8
(ii) oil production (million barrels per day)		2.2	2.3
(iii) exchange rate (naira per dollar)		157.0	193.5
(iv) CPI index		158.8	173.1
(v) purchasing power = (i)x(ii)x365x(iii)/(iv)		79,935.1	49,122.7

43. A decline in public investment by 40 percent is estimated to reduce GDP by about ½ percent, or equivalently, 6 percent growth in 2014 will decrease to 5.5 percent in 2015 (Table 14). The change in value-added generated by meeting public investment demand is calculated by multiplying column (2) by the share of public investment in total investment, 0.08 and -40.3 percent. Value added in column (2) is taken from investment row in Table 2. The impact on the oil sector will be much smaller than that on the non-oil sector, as a relatively small fraction of oil GDP is generated by meeting investment demand (only N221 billion out of N8,455 billion). In contrast, because of the relative large fraction of non-oil GDP generated by meeting investment demand (N8,939 billion out of N46,158 billion), the impact on the non-oil sector is larger.

Table 14. Effects of a Fall in Public Investment

	(1)	(2)	(3)	(4)
	Value Added (VA), 2010, bn naira	VA generated by investment, 2010, bn naira	Change in VA = (2)x(a)x(b)/100	% change in VA = (3)/(1)x100
GDP	54,612	9,160	-227	-0.4
oil GDP	8,455	221	-5	-0.1
non-oil GDP	46,158	8,939	-222	-0.5

Source: IMF Staff calculations.

44. A decline in public investment by 40 percent would reduce GDP by about 2/3 percent, or equivalently, 6 percent growth in 2014 will fall to 5.4 percent in 2015, if the multiplier effect on consumption is also taken into account. A rough estimate of disposable income is estimated by considering only the wage compensation part of value added by multiplying the share of compensation of employees in value added to value added generated by investment demand (column (5)). Changes in total consumption are then calculated by multiplying consumption's share in GDP by assuming that consumption falls proportional to income (first row in column (6)).⁹ Changes in total consumption (-N55 billion) are then distributed to changes in value added in the oil and non-oil sectors by information provided in Table 2. For example, 0.93 percent ($= 85,368/(2,813+85,368)$) of changes in total consumption demand (-N51 billion) are distributed to changes in value added in the non-oil sector, and the rest to the oil sector. The mitigating effect of a reduction in imports on GDP is calculated in column (7) in a similar manner.¹⁰ The multiplier effect on consumption is small, but is mostly absorbed in the non-oil sector as consumption demand is generating mostly non-oil GDP rather than oil-GDP.

Table 14. Effects of a Fall in Public Investment (concluded)

	(5)	(6)	(7)	(8)
	Change in wage compensation = (3)x(c)	Change in consumption = (5)x(d)	Change in imports = (5)x(e)	% change in VA = ((6)-(7))/(1)x100
GDP	-53	-37	-10	-0.1
oil GDP	-3	-3	-1	0.0
non-oil GDP	-51	-34	-8	-0.1

Source: IMF Staff calculations.

45. A decline in oil export receipts. A decline in the oil price would not necessarily reduce oil production (or the volume of oil exports), but would have a real impact through reducing consumption demand for domestic goods and services generated by oil earnings. Staff estimates the purchasing power (number of units of domestic consumption) of oil receipts in terms of domestic goods and services ((f) in Table 3) by dividing dollar-earnings of oil production (converted to naira) by CPI index. The decline in the purchasing power of oil earnings from 2014 to 2015 is estimated at about 23 percent.

46. A decline in the purchasing power of oil earnings of 38 percent is estimated to reduce GDP by about 1 percent, or equivalently, 6 percent growth in 2014 will decrease to 5.0 percent in 2015. To

⁹ This is equivalent to assuming income elasticity of 1.

¹⁰ The income elasticity with respect to imports is also assumed at 1. Note that only income effects are taken into account here.

estimate the impact of this decline in purchasing power on consumption, only the wage compensation portion of value added generated by oil export demand is considered (column (3) in Table 15). Changes in total consumption (net of total imports) are then calculated by multiplying consumption share in GDP (net of import share) by assuming that consumption and import falls proportional to income (first row in columns (4) and (5)). Note that total change in imports includes not only income effects (which capture a decline in imports from a decline in disposable income) but also price effects (which capture additional decline in imports owing to an increase in relative price of imports). Total changes in consumption and imports are then distributed by shares of final demand generating respective sector's GDP. Only a small fraction of value added or more importantly wage compensation in the non-oil sector are generated by oil export demand, but because a large fraction of consumption demand generates value added in the non-oil sector, the impact on the non-oil sector is nontrivial.

Table 15. Effects of a Fall in Export Receipts

	(1)	(2)	(3)	(4)	(5)	(6)
	Value Added (VA), 2010, bn naira	VA generated by oil exports, 2010, bn naira	Change in wage compensation = (2)x(f)/100x(c)	Change in consumption = (3)x(d)	Change in imports =(3)x(e)+(i)xM	% change in VA = ((4)-(5))/(1)x100
GDP	54,612	10,749	-1,810	-1,253	-773	-0.9
oil GDP	8,455	8,831	-1,641	-92	-105	0.2
non-oil GDP	46,158	1,918	-169	-1,160	-668	-1.1

Source: IMF Staff calculations.

47. The sum of three effects considered is about 1½ percent for the whole economy, with slight decline in the oil sector and about 1½ percent decline for the non-oil sector. Given that the 2014 growth rate is projected at 6 percent, the 2015 growth rate is projected at about 4¾ percent, with about a -2 percent and 5.5 percent for the oil and non-oil sectors, respectively.

48. Caveats. The supply-side shock, in particular an increase in the cost of imported inputs, is not considered in this analysis, but is treated as a downside risk. The exchange rate channel is likely to have the largest impact on the manufacturing sector, depending on the extent to which businesses rely on imported intermediate inputs, their ability to pass-through the increased cost to the end-consumer, and capacity to sustain lower profit margins. Staff's assessment, based on discussions with the private sector, suggests that businesses, in order to maintain their market shares, will likely absorb, at least over the short run, a large share of the increased cost through a reduction in their operational surplus. However, the overall effect on GDP growth will be contained, given manufacturing accounts for about 9 percent of total GDP. Various initiatives to support the sector, including credit schemes offering subsidized credit to medium- and small- enterprises, could also mitigate some of the impact.

49. Another caveat to this analysis is in the magnitude of the oil shock on the purchasing power of oil earnings. How much of the 38 percent decline in the purchasing power of oil earnings will be compensated by an increase in purchasing power from remittances is uncertain. The size of informal

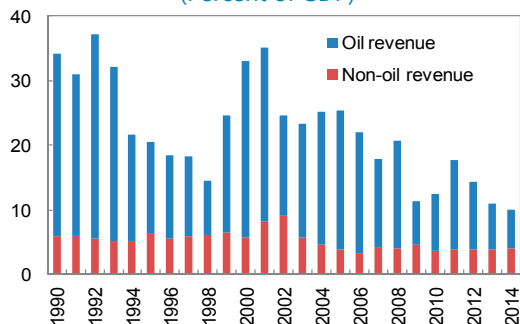
sector and their consumption patterns are also unknown. The size of managers receiving bonus income and their consumption patterns are also unknown. The fraction of wage compensation in value added for the whole economy also seems small, possibly underestimating the impact through the consumption channel. The method used is thus only a 'proxy' or an approximation to the consumption effect. Moreover, a sharp decline in the purchasing power of oil earnings was also observed in 2008-09, but the non-oil GDP growth rate was hardly affected. This may be because a sharp decline was preceded and followed by a sharp increase in purchasing power. The estimate above therefore should only be used as a benchmark.

J. Raising Non-Oil Revenue

50. The recent drop in oil prices is a reminder of the relatively high volatility of oil revenue. The dependence of oil revenue on fluctuating oil prices—the annual standard deviation of the price per barrel of oil is about \$30—makes oil revenue highly volatile. This explains why oil revenue has been much less stable than oil proceeds (Figure 11). In particular, oil revenue has an annual standard deviation of 7.4 percentage points of GDP, compared to 1.4 percentage points of GDP for non-oil revenue. The high volatility of oil revenue poses challenges to fiscal management and planning, particularly to avoid large (and often welfare-reducing) swings in public expenditure. In the presence of sizeable revenue derived from oil, best practice indicates that fiscal management could be improved by introducing stabilization mechanisms (part of what the Excess Crude Account aims to achieve, in principle) and diversifying the revenue base by tapping into more stable, non-revenue sources.

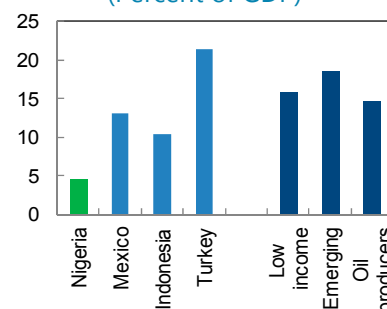
51. However, Nigeria is yet to mobilize non-oil revenue from its diversified economy. Although the oil and gas sector contributes only about 12 percent of GDP, it represents over 60 percent of total general government revenue. This disconnect reflects the low tax effort compared to other countries. For example, non-oil revenue to non-oil GDP reached 4.6 percent of GDP in 2013 compared to over 15 percent for low-income economies and 18.5 percent for emerging economies (Figure 12). Even among other oil producers Nigeria performs poorly in non-oil revenue mobilization, only surpassing Bahrain, Kuwait, and Saudi Arabia.

Figure 11. General Government Revenue, 1990-14
(Percent of GDP)



Source: IMF Staff calculations.

Figure 12. Tax Revenue
(Percent of GDP)¹

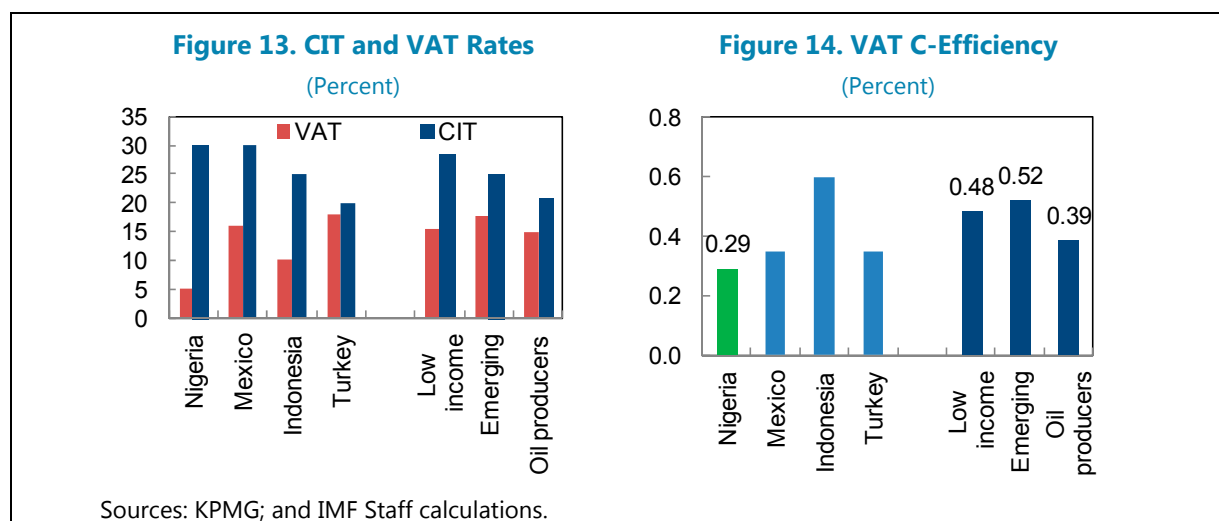


Source: IMF Staff calculations.

¹ For oil producers, including Nigeria, the figure shows the ratio of non-oil tax revenue to non-oil GDP.

52. The relatively low non-oil revenue reflects a combination of tax rates, exemptions, and enforcement issues.

- Value-Added Tax (VAT).** At 5 percent, Nigeria has one of the lowest VAT rates in the world (Figure 13).¹¹ In addition, there seem to be issues related to the design and implementation of the VAT. One way to measure this is to estimate the ratio (C-efficiency) of VAT receipts to the product of final consumption and the standard VAT rate. A ratio of 1.00 will indicate perfect collection of VAT applied to all final consumption. In Nigeria the C-efficiency of the VAT, although comparable to that of Mexico and Turkey, is relatively low (0.29) compared to an average of (0.48) for low-income and (0.52) for emerging economies (Figure 14).¹² Part of the low C-efficiency is due to exemptions for basic food and agriculture, without which the C-efficiency would increase to 0.58. The remainder (0.42) indicates a gap that is related to compliance issues. Staff estimates that by increasing the VAT rate to 10 percent, tightening exemptions, and increasing compliance, VAT receipts could increase from 1.0 percent to 3.5 percent of non-oil GDP. The increase in the rate should be accompanied by other measures to promote investment and facilitate VAT enforcement, including allowing input credits for capital goods and services, phasing out MDA's VAT withholding at source, and introducing minimum threshold for registration. These could offset the gains in revenue VAT by about 0.5 percentage points of GDP.

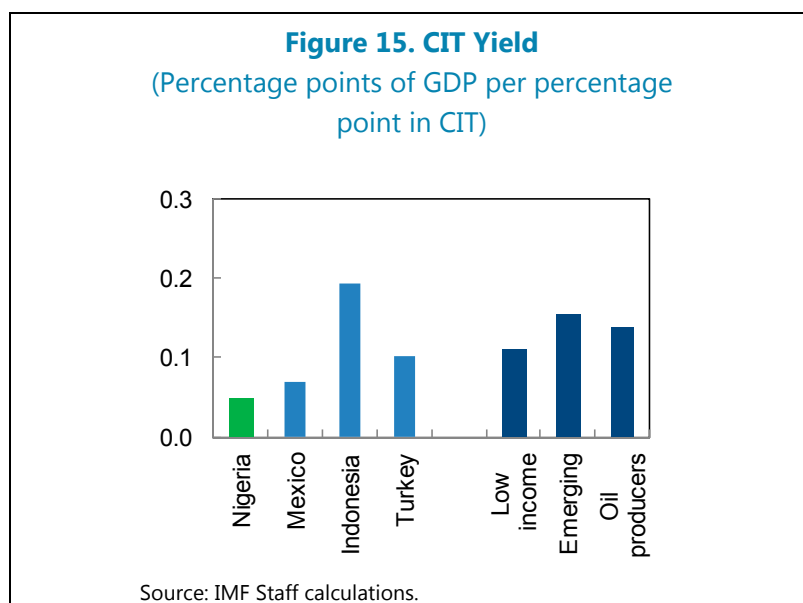


- Corporate Income Tax (CIT).** The CIT rate of 30 percent is slightly above comparators (CIT rate is 25 percent in Indonesia and 20 percent in Turkey), but its revenue is much lower (1.5 percent

¹¹According to the 2014 *Corporate and Indirect Tax Rate Survey* by KPMG, only Aruba has a lower standard VAT rate among a sample of 109 countries with VAT.

¹²The VAT efficiency is computed as the ratio of actual VAT receipts to the product of final consumption and the standard VAT rate.

of GDP compared to an average of 3 percent in Indonesia, Mexico, and Turkey), suggesting *low tax efficiency*. A similar conclusion is obtained from a larger sample. Only 23 countries out of a sample of 86 countries have similar or higher rates. However, this higher rate does not translate into higher revenue—only 15 out of a sample of 86 countries have lower CIT revenue to GDP. Staff estimates that for every point of CIT, Nigeria raises less than 0.05 percent of GDP, less than half of the yield of CIT in other low-income and emerging economies (Figure 15). The wide *use of exemptions* is an important factor explaining the relatively low CIT collection. Among these, the most notable are those related to the pioneer status, which provides a three-year CIT tax holiday (usually renewable), and covers a wide range of industries. Exemptions seem to be provided liberally, with the CIT law providing discretion to the Federal Executive Council to override tax laws and provide exemptions. Staff estimates that curtailing these exemptions could raise CIT by more than 0.5 percent of GDP. In addition, efforts to enhance control and compliance should continue.



53. These arguments suggest that apart from enhancements in tax administration, there is an urgent need to accelerate tax reform. The tax code could be modernized with the more diversified and dynamic economy in mind. In particular, VAT and CIT reforms should aim to raise revenue while promoting growth-inducing investment. It would be also important to ensure the fairness and equity of the overall fiscal framework, particularly to lower-income segments of the population. In conjunction with tax reform, this could be done, for example, by strengthening targeted conditional transfer programs as envisaged by the authorities.