March 2016

Nigeria: Looking beyond Oil

pwc

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Executive summary

Nigeria is the largest economy in Africa and 22nd globally. We project that the economy could rise through the world rankings to top 10 in 2050 with a projected GDP of US$6.4 trillion, surpassing Germany, the United Kingdom, France and Saudi Arabia. To achieve this however, diversification from the economic over dependence on crude oil is required. Nigeria's intrinsic potential lies beyond oil; harnessing this potential has become an imperative given the expectations of lower for longer oil prices. Based on recent trends, our report reviews the impact of low oil prices on key economic indicators and the real sector through an industry survey. In addition, this report addresses the question of priority sectors that Nigeria should target for diversification efforts.

Our analysis identifies Agriculture, Petroleum (Petrochemical and Refining), Retail, and ICT as priority sectors with the most dominant transmission links to the overall economy. These sectors in the medium-to-long term are key to boosting other sectors like manufacturing. Forward linkages to agro-processing and other services such as logistics as well as backward integration to input supply sectors could improve farm incomes, increase employment and improve domestic food security. Potentially, Nigeria's global agriculture exports could take-off at a rate similar to Brazil's, with US$59 billion in export revenues by 2030. Similarly, value added to Oil and Gas output needs to urgently improve by implementing diversification within the sector. This requires investments across the downstream sector to develop petrochemicals, fertilisers, methanol and refining, industries relevant in both industrial and consumer products which Nigeria currently imports.

Consumer spending is the largest driver of the economy, accounting for c. 70% of GDP and we expect that this will be the boost for the retail sector growth even as population continues to expand. Thus, as incomes rise along with rapid urbanisation, we project that household consumption expenditure could reach US$1.1 trillion by 2030, from US$317 billion in 2014, which implies a growth of 9% through 2030. With teledensity at 107.87[1], a large population of young urban people and massive scope to improve internet broadband penetration, Nigeria is likely to see accelerated growth of its digital economy. More importantly, the opportunity to leverage technology to generate improved social and economic outcomes across other sectors has been created.

However, the transition to a non-oil economy will not be an easy task. Based on a 2016 PwC interview of foreign companies across Nigeria, four concerns stand out as challenges with the business environment: corruption, inadequate infrastructure, low skill levels, and macroeconomic uncertainty. In the 2016 Ease of Doing Business ranking, Nigeria ranks 169th (2015:170th) out of 189 economies surveyed. Interestingly, Rwanda jumped through the rankings from being 143rd in 2009 to 62nd in 2016. Over that same period, Nigeria's ranking worsened as it moved from 102nd to 169th. This emphasises that the economic and regulatory environment needs to be more conducive for business. This means simplifying complex regulation and processes, and eliminating the hurdles that stand in the way of a bigger and more productive private sector.

Our survey highlights the exchange rate as one of the top challenges facing industries in recent times. Capital controls, FX rationing, and restrictions on the importation of certain items are measures the CBN has implemented to preserve the foreign reserves and maintain currency stability. Considering the outlook for the oil price is a lower for longer scenario,

1 Data from NCC as at December 2015

we think these measures if sustained over a prolonged period are negative for the economy as detailed in the first part of this report. Limitations to capital flows, the lack of transparency, liquidity and price discovery in the official foreign exchange market could deter competitiveness, limiting FDI and consequently growth. Sustaining the wide premium between the official and black market rates as well as ingenuity to circumvent economic restrictions could further breed corruption and revenue leakages with massive costs to the economy. The argument has gone beyond the need for an adjustment, to a more urgent need to re-liberalise capital flows for a resurgence in foreign investments which Nigeria needs to buffer its foreign reserves.

Significant reforms across the labour market, business environment and fiscal management will be required. A skilled workforce is critical to improving Nigeria's productivity and efficiency. Considering the services sector is projected to be the key driver of the Nigerian economy going forward, measures have to be implemented to improve the value-add of labour in this sector. A comprehensive approach is needed; sound and quality education provides a solid foundation to develop the relevant skills for the workplace. In addition, a collaboration among all stakeholders to design and implement education and training tailored to market needs is required.

Nigeria needs to ensure sustainable fiscal management that is resilient to global oil price cycles. Improving tax collection and administration have become imperative for achieving national growth objectives. Nigeria is a low-taxed economy compared to its peers; in addition, challenges with arbitrary exemptions and enforcement have further constrained tax receipts. The framework for tax exemptions should be reviewed and approvals targeted at growth inducing sectors as the government improves collection. Efficiency in government spending has to improve; there is room for substantial savings in capital outlays and operating expenditure across the three tiers of government. In addition, the government needs to be deliberate about increasing fiscal savings through a higher accretion to the Sovereign Wealth Fund which has investment objectives of diversification and improving long term economic prospects.

Nigeria

34 solid minerals

84 million hectares of arable land

9th largest gas reserve

177 million people

2.7% growth rate

18 average age

Urbanisation rate **3.5%** per annum

Economic facts 2015

US$ 478bn GDP

US$ 2,702.15 GDP per capita

Future

Economy by 2050

Potential to be a top 10 global economy

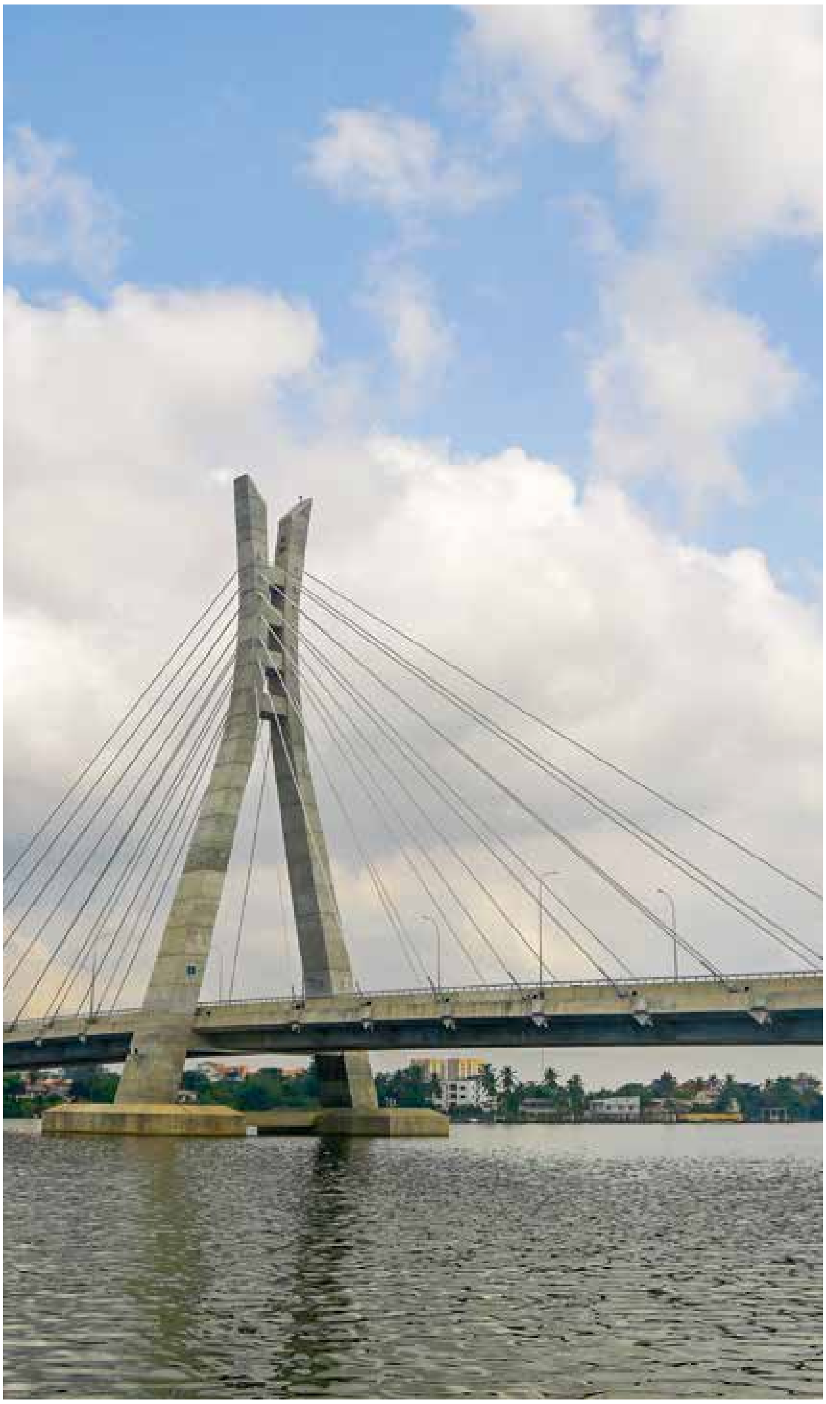
US$ 6.3tn GDP

6.6% Real growth rate per annum

Economic background

Nigeria is the largest economy in Africa with US$478[2] billion and is one of the fastest growing economies in the world with a long-term average growth of 7.7%. As the world's 7th most populous country, Nigeria is home to about 177 million people and is Africa's largest market, with a young, growing and vibrant population. Since mid-2014, the price of oil has declined sharply by c.70% from US$114.60/bbl in June 2014 to under US$30/bbl by February 2016, owing to excess supply.

Supply has increased significantly following strong growth in non-OPEC production whilst oil consumption has weakened with slower economic growth in China and Europe. We estimate that the government could have lost around US$18 billion in oil revenues in 2015 forcing the introduction of raft measures to shore up revenues, maintain currency and foreign reserves stability as well as support the economy through fiscal policy. Crude petroleum accounts for c.75-80% of revenues with several transmission channels into incomes and economic output. In this chapter, we examine the impact of the oil price decline on Nigeria's economic variables.



2 Data as at 2015. NGN/USD: 199, CBN rate

Despite slowing significantly, Nigeria's economy remains driven by the non-oil sector which recorded growth of 3.7%y/y (2014: 7.1%y/y) as the oil sector continues to underperform.

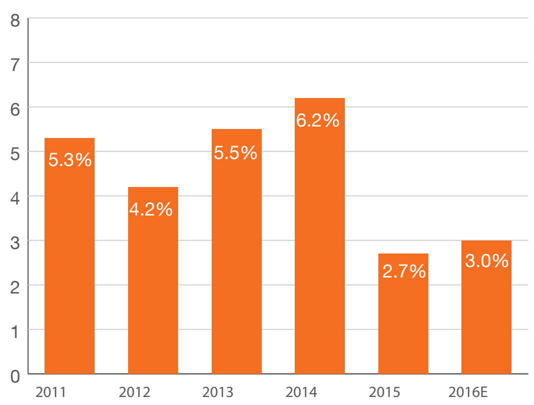
GDP has slowed, driven by lower oil sector growth and a weaker non-oil sector

Nigeria's economy grew by 2.7%y/y in 2015, which represents the slowest growth in the past five years, much lower than the 5-year real GDP average of 4.8%y/y. Real growth decelerated sharply to 2.1%y/y in Q4'15, reflecting the weakest quarterly performance following a contraction in growth across industries and moderation in the services sector (77% of GDP).

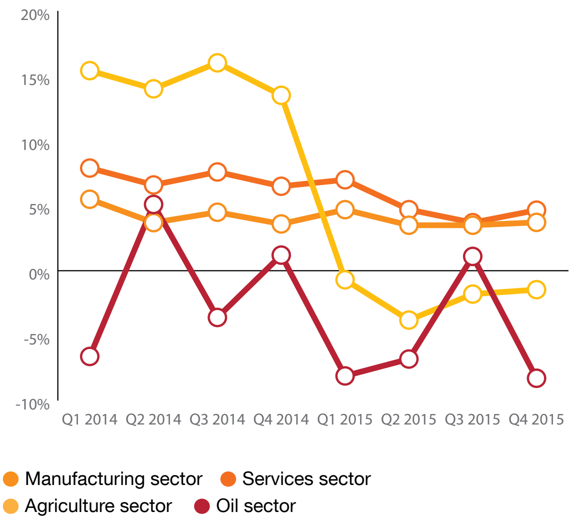
Despite slowing significantly, Nigeria's economy remains driven by the non-oil sector which recorded growth of 3.7%y/y (2014: 7.1%y/y) as the oil sector continues to underperform.

Real growth in the crude petroleum and natural gas sector was -5.4%y/y in 2015, even as oil exports declined c.49%y/y in 2015. Excluding this sector, the performance of the manufacturing sector was unimpressive with real growth at -1%y/y (2014:15%y/y) with the sector plagued by the deteriorating operational and macro backdrop; largely the impact of Foreign Exchange (FX) unavailability on raw materials and intermediate inputs.

Real GDP growth rate (2011-2015)



Sector real GDP growth rate (Q1'2014 - Q4'2015)



Source: PwC, NBS and CBN

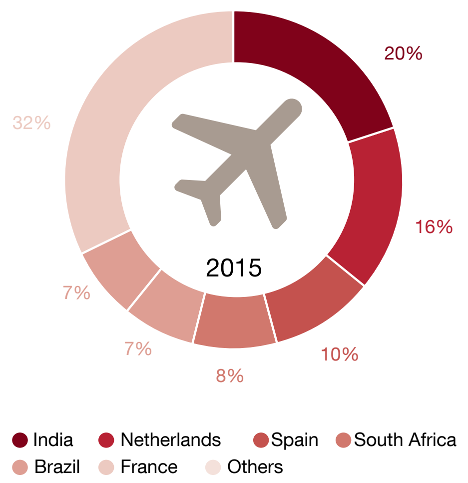
Crude oil production waiting on sector reforms

The impact of the low oil price in terms of production has been relatively capped but remains high risk. Anecdotal evidence suggests the cost of production for most of the upstream companies to be around US$25-US$30/bbl as such, at current oil prices, many companies will be loss making especially where there are huge overheads and finance charges. With revenue projections underperforming and inadequate to meet payment obligations, such companies are unable to proceed with CAPEX plans which could potentially impact production volumes.

Probably, the most important challenge to note with respect to oil production is the massive amount of investment being prevented by the delayed reform of the Petroleum Industry as envisaged in the Petroleum Industry Bill (PIB) and the uncertainty that the new fiscal terms could mean for the industry. Interestingly, the U.S. which had historically been the largest buyer of Nigeria's crude now accounts for only 3% of exports with India now the largest importer at 20%.

Crude oil export destination Dec 2011

Crude oil export destination Jan - Dec 2015



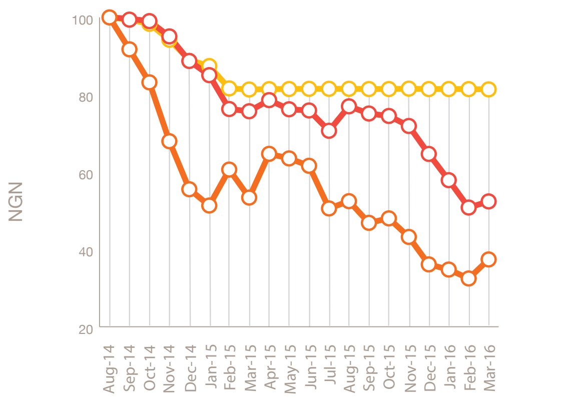
Source: PwC Calculations based on data from the NNPC

Balance of payments: Current account moves to deficit

The latest available data[3] shows Nigeria recorded a trade deficit in Q1'2015 for the first time since 1998 owing to a 56%YtD decline in crude oil export earnings, following the sharp decline in the price of crude oil. Imports on the other hand fell sharply, 39%YtD as the tightness in the Foreign Exchange (FX) market continue to hamper importation. In addition, the Central Bank of Nigeria (CBN) imposed administrative controls in the FX market which has limited accessibility to US Dollars through the official window thus causing imports to contract. Importers of 41 items including rice are unable to access FX at the official rate. The alternative is the parallel market which has traded at a 30%-100% premium to the official rate of NGN199/USD since the start of 2016. The decline in imports has been positive for the current account with the trade deficit at US$1.7 billion. If imports had remained at the same pace as at 2014, the deficit could have been as large as US$25 billion with implications for foreign reserves. Foreign Direct Investments as well as Foreign Portfolio Investments have taken a hit largely as a result of the policies around capital mobility which have come across as controls. The Balance of Payments (BOP) report as at Q3'2015 shows a 28% and 73% decline in FDI and FPI respectively to US$2.5 billion and US$1.4 billion.

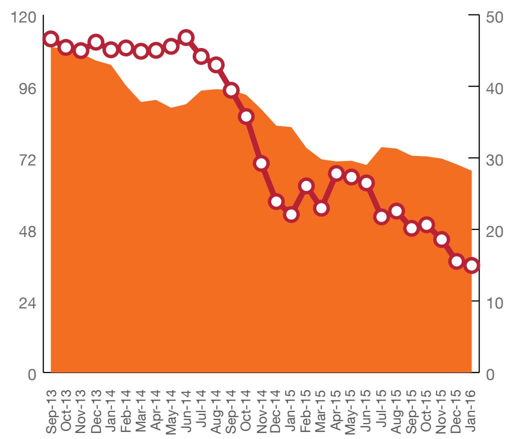
NGN / USD vs oil price

(August 2014 - March 2016, August 2014 = 100, monthly averages



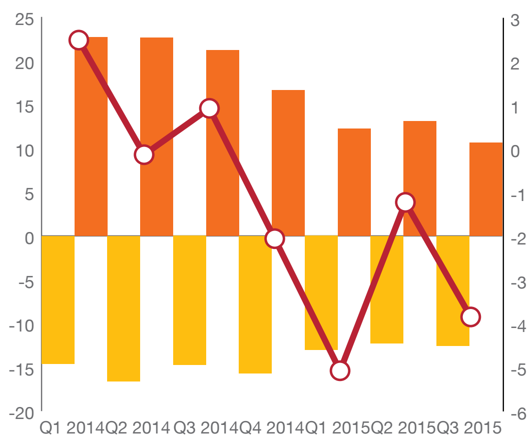
Brent NGN / USD (black market) NGN / USD (official)

Foreign reserves & Brent crude



Foreign reserves (US$ bn) Brent crude (US$/bbl) - RHS

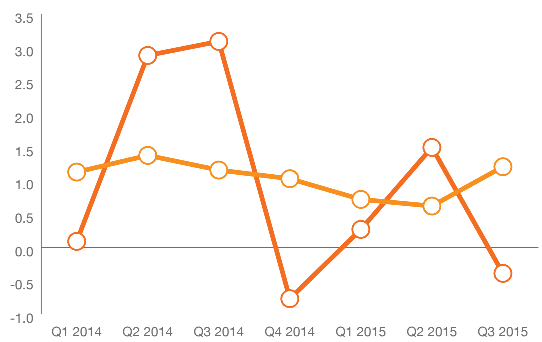
Imports Exports C/A balance



Imports Exports

Current account balance as % of GDP

Foreign Direct Investment and Foreign Portfolio Investment



Foreign Direct Investment (US$ bn)

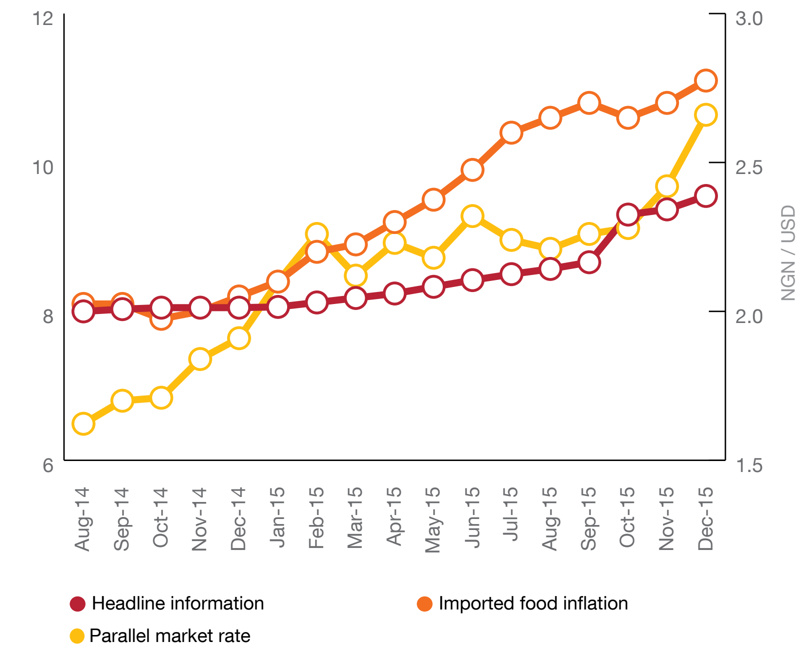
Foreign Portfolio Investment (US$ bn)

Source: PwC Calculations based on data from the CBN

3 CBN Q3 2015 Quarterly Statistical Bulletin

Headline inflation vs Imported food inflation vs Parallel exchange rate

(August 2014 - December 2015, August 2014 = 1, monthly averages



Source: PwC Calculations based on data from the CBN

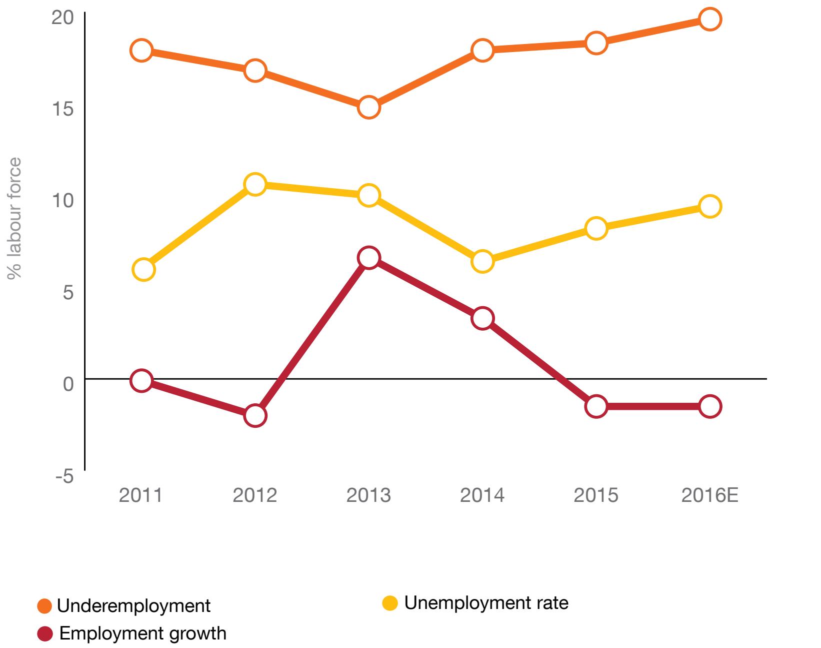
Headline inflation inches higher on imported inflation

In 2015, headline inflation averaged at 8.6%y/y relative to 8%y/y recorded in 2014, driven by a sharp acceleration in imported inflation and tighter domestic food and fuel supplies. Food inflation accelerated sharply reaching a peak of 10.6% in December 2015 influenced by rising imported food inflation. At 10.3%y/y, food inflation peaked at a 34-month high with the impact of tight dollar supply pushing imported food prices higher and offsetting the impact of the early harvest on domestic food prices. There have been other risks to inflation; the second and third quarters of 2015 were laden with intermittent fuel scarcity which pushed core inflation higher although this was offset by the impact of weaker aggregate demand on the CPI. However, there have been some recent relief from the decline in the oil price to the US$30/bbl levels, which has reduced the landing cost of Premium Motor Spirit (PMS) to tolerable levels. But, this reverses very quickly if the price of oil starts to climb or the currency is further devalued.

Increasing unemployment in the formal sector

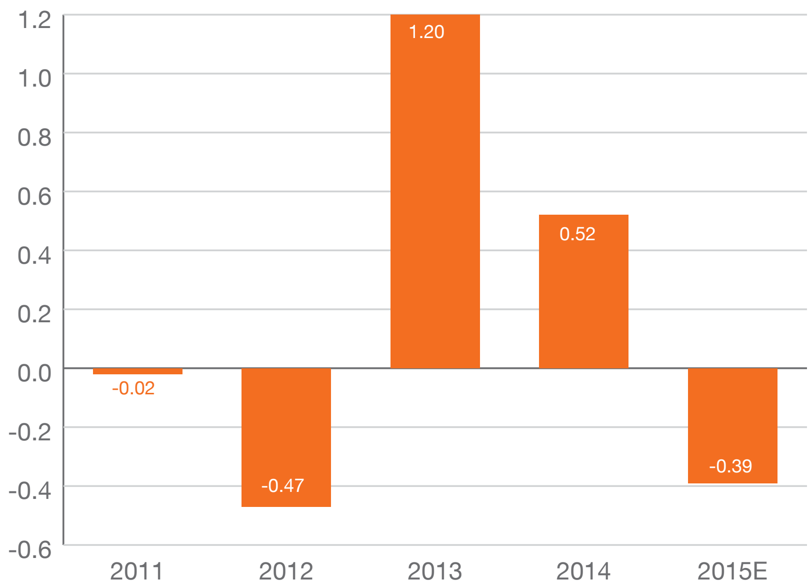
We expect unemployment to rise from 6.4% in 2014 to 9.4% in 2016 given the recent trends in the labour force. Similarly, we estimate underemployment will increase for the second consecutive year to 19.6% in 2016 from 14.8% in 2013. Whilst growth in the labour force has averaged 2.6% in the past 5 years, employment growth has lagged behind, averaging 1.3% despite an average real GDP growth rate of 5.3%. Clearly, economic growth has been unable to create sufficient jobs to fully absorb the growing labour force, suggesting that employment elasticity with respect to output is low. Whilst it is true that as an economy grows, employment elasticity may fall (assuming growth is led by capital intensive sectors), in Nigeria, that is not entirely the case - services represents a sizeable portion of the GDP contributing c.53%. Other factors affecting unemployment and underemployment include the presssure on the formal sector due to urbanisation, high churn out (relative to rate of job growth) of graduates from the Universities, and layoffs on slower economic growth.

Labour force statistics



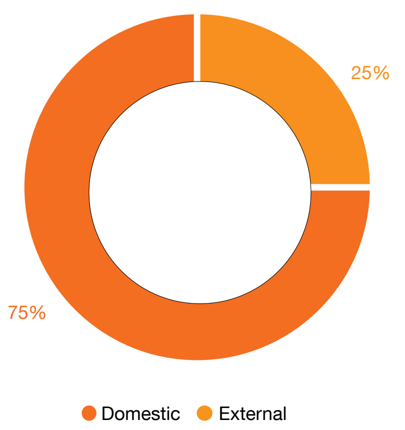
Source: PwC Calculations based on data from the NBS

Employment elasticity



Source: PwC Calculations based on data from the NBS

State government debt stock breakdown 2015



Source: PwC Calculations based on data from the DMO

State governments continue to be vulnerable

The downside of lower oil price on state government finances has been quite severe as most states have reportedly fallen back on wages owed to their workers due to lower revenues. Although total state government debt accounts for c.2% of 2015 GDP, debt service on both domestic and external debts have significant implications for the Budget. Total domestic debt outstanding by the states as at 31 December 2015 amounted to US$13.2 billion – most debt issuances by states are backed by the Irrevocable Standing Payment Order (ISPO) which serves as a first line charge on statutory revenues, leaving states with limited revenues after deductions are made on a monthly basis. In addition, states with external debt exposure could find it difficult to finance scheduled interest repayments owing to Naira devaluation.

Captains of Industry Survey

Evaluating the impact of a challenging economic landscape

70 companies across 18 industries

68.6% c-suite executives

17% multinational

83% indigenous

61% experienced declining sales over the past 12-18 months

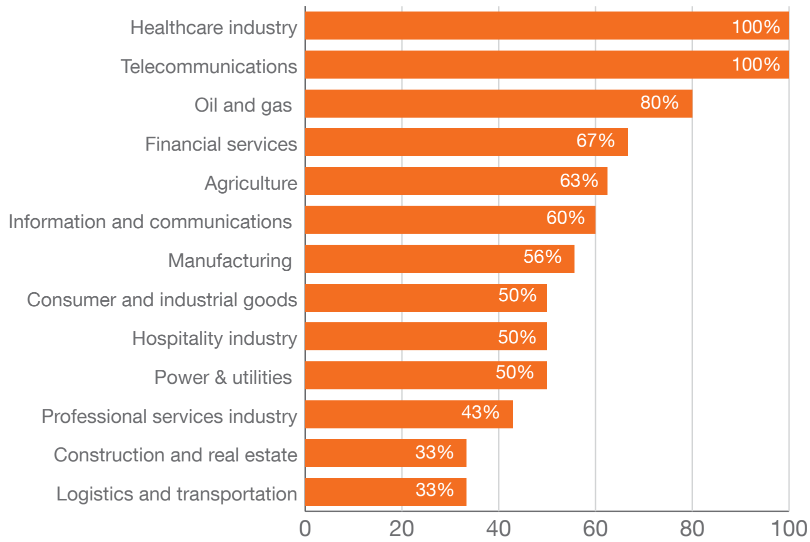
44% will delay investments

13% see agriculture, manufacturing as top sectors to invest over the medium term

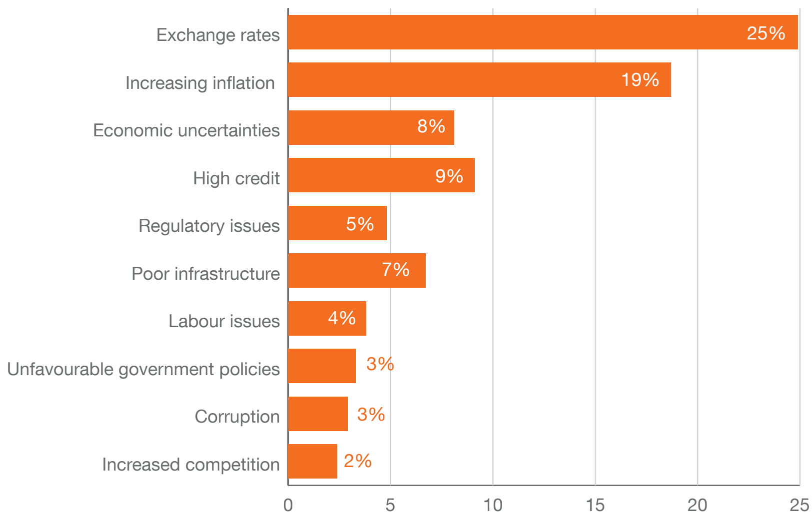
Slower economic growth – impact on sales

A significant number of companies (61%) experienced declining sales over the past 12 – 18 months with the highest impact across the healthcare, telecommunications as well as the Oil and Gas sectors. The limited availability of foreign exchange was cited by 86% of respondents as the key factor responsible for the decline in sales.

Number of industries with declining sales



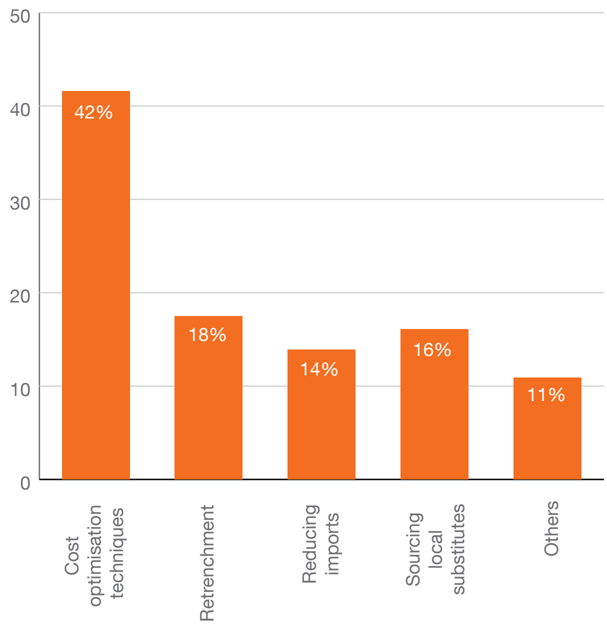
Top business challenges



Adjusting to the crude economic realities

Companies are adapting to the current economic realities by improving operational efficiency in the face of declining or at best sticky revenue growth. According to the survey, 42% of respondents have embarked on cost optimisation techniques with 14% reducing dependency on imports and 16% sourcing local substitutes. About 18% of companies are retrenching staff.

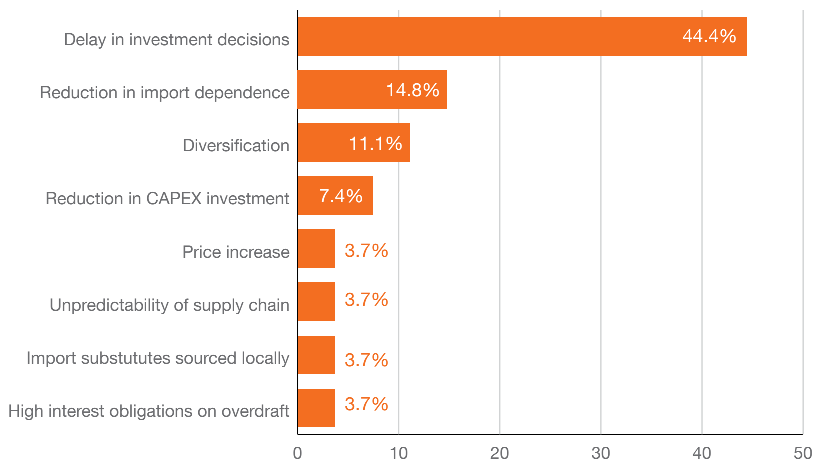
Strategies to cope with economic realities



Impact on investment decisions

Close to half (44.4%) of companies cited the delay in investment decisions as a significant implication of the current uncertain business environment. Other firms have taken a long term view and commenced investments in domestic substitutes (14.8%). Some companies have been forced to diversify across products and/or markets whilst others have cut back on CAPEX plans.

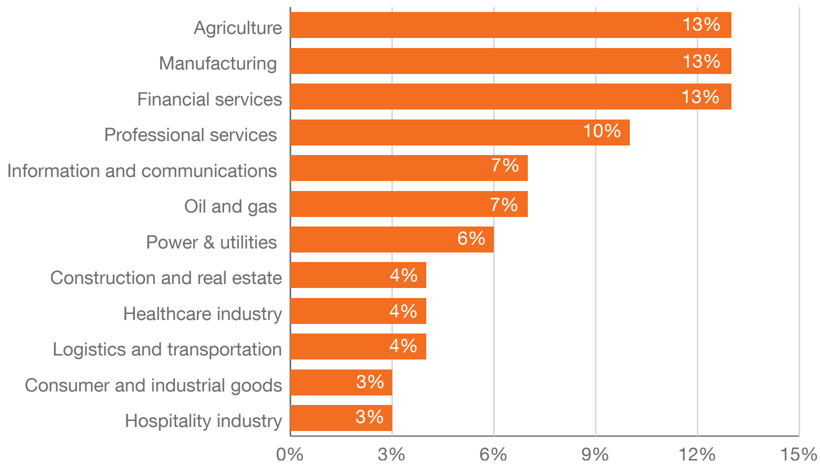
Impact of tougher business environment



Industry leaders highlight sectors with most opportunities for growth in the next five years

Respondents highlight the Agriculture, Manufacturing and Financial services sectors as those with the most opportunities for growth in the near to medium term at 13%. Interestingly, the opinions indicated in the chart below are somewhat synonymous with the GDP weightings, with the services sector highlighted by most industry leaders as a sector with high potential when aggregated and others being Agriculture and Manufacturing.

High potential sectors



Policy and regulatory measures

In response to the current economic challenges, the government has adopted various measures aimed at strengthening macroeconomic stability. Monetary policy has been focused on defending the currency, preserving the foreign reserves, whilst the fiscal policies are targeted towards plugging leakages, waste reduction and supporting the economy.

Monetary easing

After the harmonisation of the Cash Reserve Ratio (CRR) to 31% in May 2015, the ratio was reduced to 25% at the September 2015 Monetary Policy Committee (MPC) meeting in a move to ease liquidity conditions for the first time since the tightening cycle started in 2011. The rhetoric was simple: the broad based weakness in the domestic economy, slowing growth and rising unemployment were the overriding considerations for the decisions taken.

Furthermore, in November 2015, the MPC reduced the policy rate from 13% to 11% thus providing more support to the economy through the credit channel. Also, the symmetric corridor was adjusted to an asymmetric corridor from +200bps/-200bps to +200/-700bps, thus reducing the Standing Deposit Facility as a disincentive for banks with preference to keep deposits with CBN rather than lend. In addition, the CRR was further reduced to 20% from 25% with liquidity to be released to banks with focus on specific sectors: agriculture, infrastructure development, solid minerals.

Theoretically, an easing in liquidity condition should boost credit to the real sector. However, structural issues and limited bankable projects constitute challenges to bank lending; as such, lending rates remain elevated with preference to lend to the government. With the exchange rate risk now priced in for most of these companies, the impact of monetary easing on the real sector is likely to be limited.

Foreign exchange policies

The CBN has announced a number of policies largely to prevent a rapid depletion of the foreign exchange reserves in consideration of the sharp downtrend in the oil price and consequently, export revenues.
As soon as the oil price decline became evident in the third quarter of 2014, the CBN moved to adjust the currency by 8.4% to NGN168/USD, the crawling band was also widened to +/-5% (previously: +/-3%).

Following increased demand for foreign exchange at the DAS auction and the intermittent interventions in the interbank market, the CBN moved quickly to harmonise the two existing official rates in February 2015 resulting in the closure of the wDAS/rDAS window.

This resulted in a further 7% devaluation in the exchange rate NGN197-199/USD. The CBN has somewhat fixed the official rate at these levels since February 2015. In addition, administrative measures were introduced to control both demand and supply of FX. Some 41 items were not valid for FX at the official window and at the same time sales to BDCs were halted. At a point, US$ deposits were not permitted at banks although this has now been reversed. The implication is that some FX demands have shifted to the parallel market at a rate significantly higher than the official rate.

Market participants have been calling for devaluation but rather than solely an outright adjustment, the CBN could relax the restrictions around the supply of FX from autonomous sources, this could provide some support for the currency even as such clarity is likely to promote the resumption of FDI and FPI flows.

Import substitution

In line with the government's diversification focus, import substitution measures have been implemented largely across agriculture and manufacturing in an attempt to replicate the success of the cement sector which is now reported as in excess of domestic consumption. Consequently, there have been duties imposed on certain agriculture commodities since 2012, specifically wheat, rice and sugar. More recently, the bucket was expanded to the manufacturing, and automotive sector.

The prohibition of certain import items from officially assessing FX is also being touted as an import substitution strategy although it has been forced by the current economic climate. Probably, the greatest constraint in the implementation of the import substitution strategy is the difficulty in the business environment in terms of trade and logistics infrastructure. From the point of registering a business to electricity, road and rail infrastructure, warehousing and a simplified tax system, it just has to be easy to do business in Nigeria for import substitution to work successfully.

Treasury Single Account (TSA) and Integrated Payroll and Personnel Information System (IPPIS)

The concept of the TSA is simple – the Central Bank is the government's banker. The TSA provides one view of the government's account, providing an effective monitoring of receipts and payments thus promoting transparency, accountability and proper cash management. In addition, there is clarity on the amount of liquidity available to the government which prevents unnecessary borrowing in the capital markets at exorbitant rates. Full implementation commenced at the Federal level since 2015 and it is gradually being extended to the states.

Similarly, the IPPIS is aimed at creating a centralised database system for the public service with a single, accurate source of employee information. In terms of impact, the then Finance Minister reported that about N185.4 billion had been saved through the implementation of IPPIS. Recent reports also point to some success in implementation as 60,450 ghost workers were reportedly removed across MDAs. Interestingly, the 2016 budget targets up to NGN 1.51 trillion in independent revenues largely by ensuring strict compliance to these measures which should reduce revenue leakages. This target is much higher than the NGN820 billion estimated for oil related revenues and NGN1.45 trillion from non-oil revenues. A newly set up efficiency unit is targeted at reducing overheads by at least 7%, personnel cost by 8% and other service wide costs by 19% while harnessing the benefits of these initiatives as well as the Government Integrated Financial and Management Information System (GIFMIS).

Anti corruption drive

A recent report by PwC estimates Nigeria's 2030 GDP could be 37% higher if it reduces corruption to Malaysia's levels. The anti-corruption drive was perceived as a major crux of the Buhari campaign and probably, key to victory at the polls. The present government aims to reduce corruption and retrieve embezzled funds through the reorganisation of anti-corruption bodies to a singular agency, introduction of a plea bargain system that enables officials to return stolen funds to avoid prosecution and a structural reform programme for the oil and gas sector. Following closely from this are the reforms at the Nigerian National Petroleum Corporation (NNPC).

Over the years, there have been unsuccessful attempts to restructure the NNPC. Recently, the government has taken more deliberate steps to reform this institution in view of cost savings that could accrue from running a more efficient public institution. There are recent indications that the NNPC will be restructured into seven entities; five new core divisions comprising the upstream, downstream, refining group, gas and power, as well as the ventures' groups. The other two are finance and services groups.

Taxation

Nigeria's tax to GDP ratio estimated at 8% in 2014 was the 2nd lowest relative to other African countries (Kenya 17%, South Africa 25%, Angola 43%) and 4th lowest globally (USA 17%, China 23%, Germany 45%). Also the ease of paying taxes is one of the lowest globally at 181 out of 189 countries.

Nigeria's tax revenue declined by 20% to USD 30 billion in 2014. However, the current administration is focused on increasing tax revenues especially: Corporate Income Tax (CIT) and Value Added Tax (VAT). Within two years, government expects customs collection to increase from NGN862 billion in 2016 to NGN921 billion in 2018, and corporate tax to rise from NGN1.87 trillion in 2016 to NGN2.23 trillion in 2018.

The expected tax collection will be achieved by increasing compliance nationwide. Some of the activities of the government towards increasing the tax base and compliance are the introduction of the e-filing, more aggressive actions like proposed joint tax audits and tax authorities' collaborations. Other specific ones include enforcement of 30% advance corporate income tax on interim dividends, use of consultants for tax reviews and the establishment of the Free Zones Tax Administration (FZTA) unit by the Oil & Gas Free Zone Authority (OGFZA) to coordinate all tax matters relating to the free zones. Similarly the implementation of the stamp duty on deposits is expected to provide some support for the government's aggressive revenue drive.

The 2016 budget

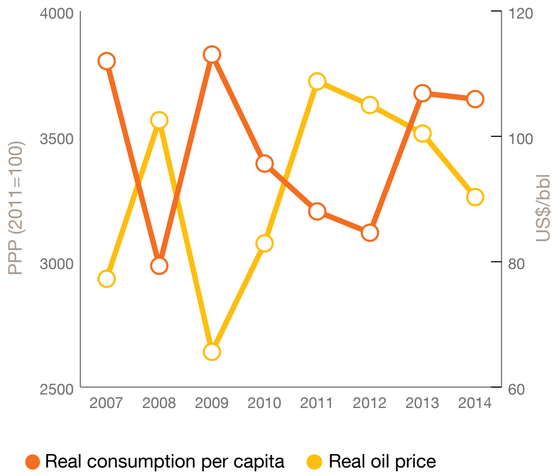
With a proposed oil price benchmark of $38 per barrel and production estimate of 2.2 million per barrel per day in 2016, the proposed budget shows lower dependence on oil revenue with 19% expected to be earned from the oil sector in comparison with 48% in 2015. In addition, an increase in government spending is expected to increase 35%y/y to NGN 6.08 trillion in 2016, driven largely by a 215% increase in CAPEX and the government's social investment programmes. With projected earnings at NGN3.86 trillion, fiscal deficit is targeted at 2.16% of GDP (nominal: NGN 2.22 trillion). Although Nigeria's total debt to GDP ratio is relatively low at c.10%, low revenues and the higher cost of borrowing ultimately limit the scope for more debt financing. Based on the 2016 budget, the debt service cost is over a third of government revenues.

Nigeria: Looking beyond Oil

Progress so far

Over the past decade, strong GDP growth has been supported by rising government spending and financed by high oil revenues. Following the rebasing of Nigeria's economy in 2014, GDP emerged more diversified with non-oil output accounting for an average of 86% from 2010-2014 relative to an average 60% in the early 2000s. Although strong periods of domestic growth coincided with episodes of high oil prices, our analysis suggests this relationship is relatively weak considering consumption per capita has not moved in tandem with oil prices.

Real consumption per capita and real oil price

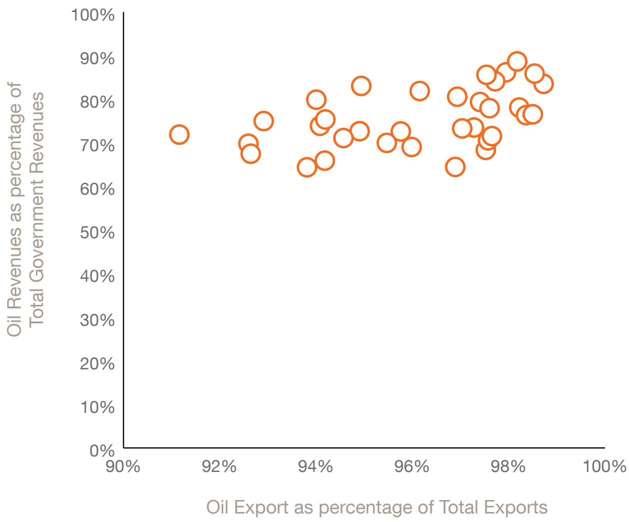


Source: PwC Calculations based on data from the EIA and IMF

Export diversification

In terms of export diversification, some progress has been made albeit little. From 2000 to 2014, total non-oil exports increased from 0.7% to 5.6% of non-oil GDP. In addition, the Hefindahl-Hrishman[4] export concentration index which gives an indication of the extent of a country's export diversification shows less product concentration in recent years from 0.86 in 2006 to 0.67 in 2013, thanks to a growing and more diversified non-oil economy which has supported exports of cash crops such as cocoa beans, sesame seeds and natural rubber. Despite a diversified services sector from a GDP perspective, services exports remain a small share of non-oil GDP at 0.41%. Net service exports in Nigeria has historically been negative as services remain restricted to the traditional services with relatively low value added and limited export potential.

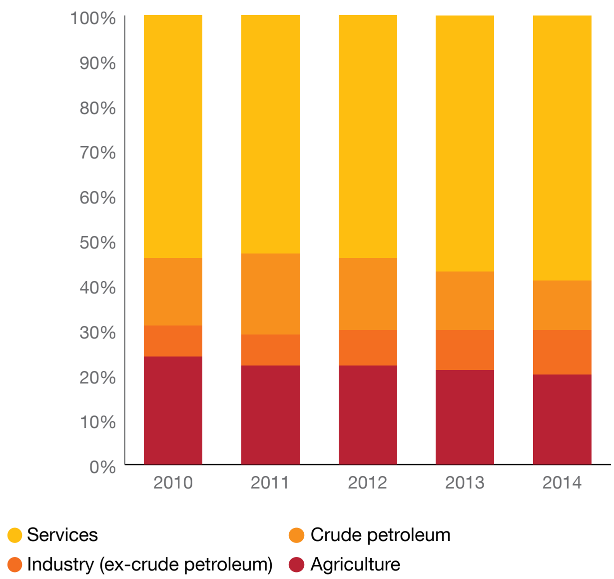
Oil dependence in Nigeria, 1981-2014



Fiscal diversification

Fiscal diversification involves increasing tax revenues from non-oil sector to reduce the reliance on oil revenues for financing spending. Oil related receipts continue to dominate budget revenues (80% of total revenue in 2014). Non-oil revenue remained largely unchanged as a share of non-oil GDP at about 3.3% over the past 4 years to 2014. This has occurred despite a flourishing non-oil sector due largely to the existing tax system which comes across as cumbersome and ambiguous for tax payers to comply with. Nigeria is a low-taxed economy compared to its peers; we estimate tax to GDP at 8% is the second lowest in Africa and fourth lowest in the world. Compared to an average of 16% for emerging markets and 18% for Sub-Saharan African economies, there is massive room to improve tax receipts by improving compliance and broadening the tax base to include the informal sector which is estimated at 58% of GDP[5] .

Composition of real GDP by sector



Source: PwC Calculations based on data from the CBN

4 Measure of the dispersion of trade value across an exporter's products. A county with a preponderance of trade value concentrated in a very few products will have an index value close to 1. Thus, it is an indicator of the exporter's vulnerability to trade shocks. Measured over time, a fall in the index may be an indication of diversification in the exporter's trade profile.

5 United Nations Development Programme representative; June 25 2014

What economic sectors are targets for the diversification efforts?

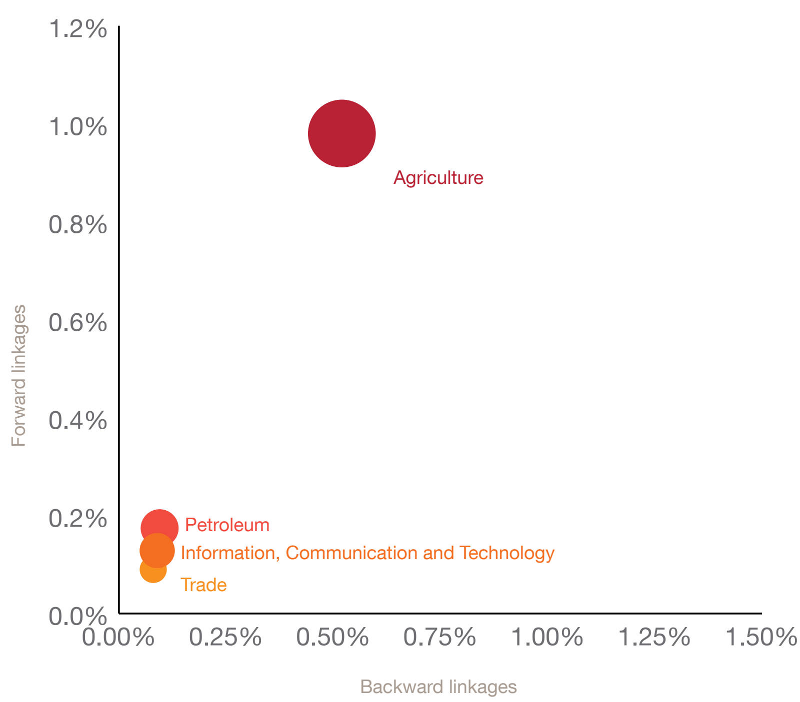
There are probably three core reasons why Nigeria needs to genuinely pursue diversification. First, to insulate the economy from the risk of being vulnerable to a single-commodity as the different oil price crashes have shown. Second, to create jobs that can raise the standard of living of an average Nigerian: Oil and Gas jobs account for less than 1% of total employment and the young population can no longer be absorbed by the public sector. Third, to prepare for life beyond the oil resource. Thus, diversification has been the subject of numerous plans and initiatives by the government although the statistics are broadly unchanged at least from the revenue and export perspective.

Yet Nigeria's intrinsic economic potential lies beyond oil. Nigeria has a large abundance of metals and minerals. It has a bubbling retail sector and a young middle class that is starting to embrace e-commerce. It has a big domestic market for manufactured consumer goods. The National Population Commission (NPC) estimates Nigeria's population at about 177 million with annual growth rate of 3.2%, making Nigeria the most populated in Africa, significantly ahead of Egypt, the next largest, with about 88million.

Further to its large population, Nigeria's population demographics are quite favourable with a young population (67% below the age of 30) and a growing middle class (estimated at 30% of the population) driving the growth in the consumption of consumer packaged goods (CPGs). With urban population currently estimated at 51%, urbanisation rate of 3.5% is also supportive of continued growth in CPGs as the Nigerian consumer becomes more sophisticated. The potential for a resurgent non-oil sector clearly exists and the following chapter addresses the question of priority sectors. According to our long term projections, Nigeria could grow at 5-6% per annum on average in the long-term assuming broadly growth friendly policies are being pursued.

Based on an input-output analysis multiplier model across 26 sectors, we identify Agriculture, Petroleum, Retail and ICT as the sectors with the strongest inter-industry linkages, both backward and forward. Backward and forward linkages are descriptive measures of the economic interdependence of industries in terms of the magnitude of transactions. They can be interpreted as an estimate of the direct and indirect increase in output following an increase in final demand. Backward and forward linkages, which were first proposed by Rasmussen (1956), are calculated from the Leontief inverse which is then weighted by final demand. (Please see appendix for methodology).

Indices of Backward and Forward Linkages



Source: PwC analysis

Agriculture

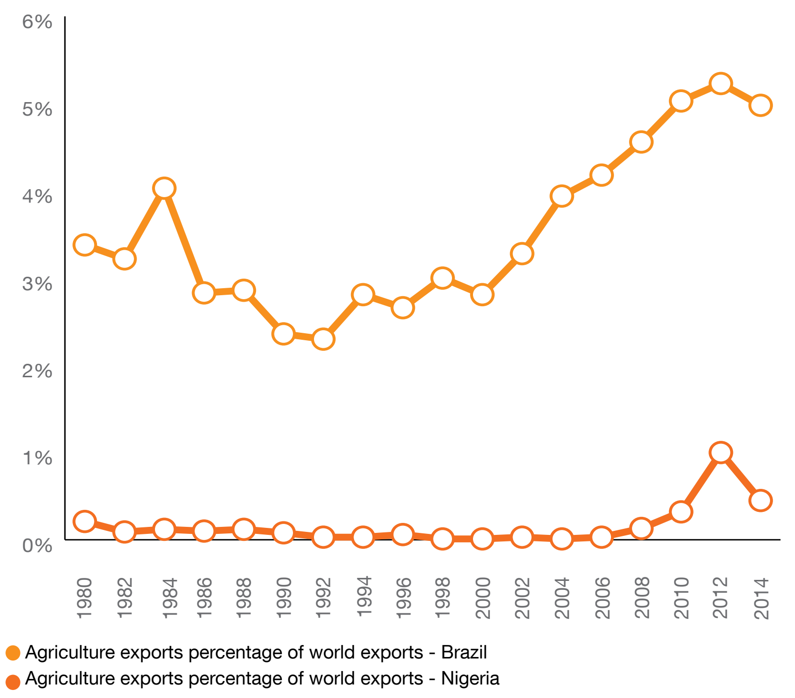
In the early 1960s, Nigeria had a leading position across several of its export crops, in particular, groundnut, cocoa, cotton and palm oil. In fact, its share of world agriculture exports was in excess of 1%. By the mid-1980s however, agriculture exports collapsed as the country shifted towards petroleum exploitation and by the 1990s, Nigeria's share in world exports of Agriculture had declined to less than 0.1%. An analysis by the Federal Ministry of Agriculture and rural development estimates Nigeria's agriculture export loss across these four crops at U$10 billion annually.

Asides being a key source of export revenues, agriculture was estimated to account for close to 60% of GDP and 50% of employment making it a sector with a key multiplier impact. As expected, over time, structural change forces an economy to evolve and the traditional sources of growth become less relevant. This has reflected in Nigeria's fundamentals post-rebasing, with agriculture now 22% of GDP and the services sector driving the economy at 53%. Having stated this, low productivity and not the lack of potential has been responsible for the declining relevance of the agriculture sector. The results of our input-output analysis ranks agriculture highest in terms of weighted value of forward and backward linkages. Thus, several measures have been taken to re-position agriculture as an engine of employment and diversification.

The most impactful has been the Agriculture Transformation Agenda which implemented a set of initiatives in 2011 to improve competitiveness in the agriculture sector and reduce reliance on imports. The major accomplishment of this initiative has been the liberation of seed and fertiliser supply and the development of the Staple Crop Processing Zone (SPCZ) as well as the channelling of more financing to the agriculture sector.

The impact has been immediate; our analysis shows Nigeria's share of agriculture exports hitting 1% in 2012 for the first time since the 1960s although this has declined to 0.43% and 0.45% in 2013 and 2014 respectively. We estimate that Nigeria's agriculture exports could reach US$59 billion (2014: US$8 billion) in 2030 if current reforms are sustained, implying a growth of 9.6% per year. This will require raising yields through greater use of fertiliser, seeds and mechanised implements, and increasing the amount of land under cultivation.

Agriculture as percentage of world exports



Source:PwC Calculations based on data from the WTO

Petroleum, chemical and non-metallic mineral products

The petroleum sector is highlighted as another sector with significant forward and backward linkages. Given the experiences of more advanced oil producers, in particular, the GCC region, diversification within the petroleum sector is key to harnessing the linkages to the non-oil economy. This implies investments across the downstream sector to develop petrochemicals, fertilisers, methanol and refining, industries relevant in both industrial and consumer products which Nigeria currently imports. Although a number of plants are being planned or are under construction, currently, the biggest plant is Indorama Eleme with an annual installed capacity of 630,000 metric tonnes according to the NIRP.

In contrast, the largest petrochemical company in Saudi Arabia, the Saudi Basic Industries Corporation is reported to have a capacity of 69 million metric tonnes, with the sector contributing 10% of total exports and 62% to non-oil exports[6]. Nigeria as the largest market in Africa offers unique opportunities for investment in the petroleum downstream sub-sector. However, the government needs to create the necessary business environment through price liberalisation and strong independent regulation. In addition, challenges around pipeline infrastructure, technology, supply consistency and capital need to be addressed.

Trade

The services sector is Nigeria's largest and fastest growing sector, accounting for 59% of GDP[7] and 58% of employment[8]. Unlike most advanced economies and a few industrialised emerging economies where economic growth has led to a shift from agriculture to manufacturing, structural change in Nigeria has resulted in a shift from agriculture to the services sector. Trade accounts for 17% of GDP and 23% of employment and has recorded average real GDP growth rate of 5.48%, higher than the economy wide real GDP growth of 5.31% over the past four years. The current retail distribution range from the traditional street trading and open market, to neighbourhood groceries and now westernised shopping malls. The potential of this sector on the back of favourable demographics continues to attract investments by global consumer goods companies and retailers. According to UNCTAD, there has been significant cross-border M&A growth focused on the consumer sector accounting for c.27% of the US$4.9 billion FDI inflow into Nigeria in 2014. Consumer spending is the largest driver of the economy, accounting for c.70% of GDP. Thus, as incomes rise along with rapid urbanisation, we project that household consumption could reach US$1.1 trillion by 2030, from US$317 billion in 2014 – this implies a CAGR of 9% through 2030.

ICT

Impressively, internet usage in Nigeria, according to the NCC has increased to 95 million people from 10,000 people in 1996 although much of this is mobile broadband. Having stated this, mobile broad band coverage and usage does not extend beyond the cities and major towns. Weak infrastructure, both physical and internet has kept Nigeria's internet penetration capped. The speed of internet, at 3kb/s per user 50 times slower than in South Africa, limits communication online and the potential of the digital economy. With a large population of young urban people, however, Nigeria is likely to see accelerated growth of its digital economy. As a market with rising mobile penetration and a negligible fixed broadband infrastructure, Nigeria has the opportunity to leverage mobile technology to generate improved social and economic outcomes across the consumer sector through e-commerce, the financial services sector through mobile banking and mobile insurance and social services through education and healthcare.

6 Data as at 2013

7 Data as at 2014

8 Data as at 2010

Transformation pillars

It has to be easy to do business

Based on a 2016 PwC interview of foreign companies across Nigeria, four concerns stand out as challenges with the business environment: corruption, inadequate infrastructure, low skill levels and macroeconomic uncertainty. Nigeria typically ranks towards the bottom end in international comparisons of the business environment. In the 2016 Ease of Doing Business ranking, Nigeria ranks 169th (2015:170th) out of 189 economies surveyed. Rankings dropped across: starting a business, getting electricity and getting credit. Interestingly, Rwanda jumped through the rankings from being 143rd in 2009 to 62nd in 2016. Over that same period, Nigeria's ranking has worsened as it moved from 102nd to 169th. For instance, it takes 5 days to start a business in Rwanda relative to 28 days in Nigeria. Cost to export is around US$786 vs US$183 in Rwanda. This is just one example of how Nigeria's business environment places the economy at a clear disadvantage relative to other countries it competes with for foreign investment. The obvious policy approach is to create an economic and regulatory environment that is unambiguous, transparent, and conducive for business. This means simplifying complex regulation and processes, and eliminating the hurdles that stand in the way of a bigger and more productive private sector.

Our survey highlights the exchange rate as the top challenge facing industries in recent times. Capital controls, FX rationing, and restrictions on the importation of certain items are measures the CBN has implemented to preserve the foreign reserves and maintain currency stability. Considering the outlook for the oil price is a lower for longer scenario, we think these measures if sustained over a prolonged period are negative for the economy as detailed in the first part of this report. Limitations to capital flows, the lack of transparency, liquidity and price discovery in the official exchange rate market could deter competitiveness, limiting FDI and consequently, growth. Sustaining the wide premium between the official and black market rates as well as ingenuity to circumvent economic restrictions could further breed corruption and revenue leakages with massive costs to the economy. The argument has gone beyond the need for an adjustment, to a more urgent need to re-liberalise capital flows for a resurgence in foreign investments which Nigeria needs to buffer its foreign reserves.

Reforms enacted by other countries to ease doing business

Starting a business	• In 2013, the Chilean government made starting a business simpler by allowing entrepreneurs to register certain types of legal entities online free of charge. This change reduced the time it takes to have company statutes registered by notaries from two to one day. • Macedonia made electronic submission mandatory for registration applications for new limited liability companies. The use of electronic signatures on company documents eliminates the need to get them notarised.
Improving tax administration and collection	• In June 2005, the Egyptian parliament approved a Law which mandated all companies to pay 20% tax on profit (not 32% or 40%, depending on the activity, plus 2% as development duty). New tax holidays and special exemptions were eliminated, as was the state development duty and the rules for multinational companies were improved. • Taxation administration also improved. Self-assessment replaced administrative assessment, essential for the tax reform.
Trading across borders	• Bangladesh made trading across borders easier by introducing a fully automated, computerised customs data management system, ASYCUDA (Automated System for Customs Data) World. • Time required to clear goods was also reduced through automating customs clearance procedures at the Chittagong port.

Source:World Bank, PwC Analysis

Developing a knowledge based economy

A skilled workforce is critical to improving Nigeria's productivity and efficiency. Labour productivity (output in US$ per hour worked) in Nigeria is reported in 2012 at $3.5/hr relative to $28.9/hr in Turkey, $24/hr in Russia and $10.7/hr in Brazil. As at 2014, Nigeria's labour productivity only increased marginally to $3.77/hr. The narrative within the corporate circle is that there is a mismatch between the workforce skills demanded and supplied. Consequently, most of the labour force end up unemployed or employed in the informal sector.

Considering the services sector is projected to be the key driver of the Nigerian economy going forward, measures have to be implemented to improve the value-add of labour in this sector. A comprehensive approach is needed; sound and quality education provides a solid foundation to develop the relevant skills for the workplace. In addition, a collaboration among all stakeholders including the private sector and educational institutions to design and implement education and training policies that are tailored to market needs.

Although formal education remains relevant and important, clusters are being increasingly used as an innovative way of providing market based training opportunities. This involves learning and knowledge transfer within agglomerations of economic activities. The government could create priority sectors as some sort of pilot which would receive funding and support. From our analysis, retail, ICT and professional services could be considered as priority sectors as the impact of increased productivity in these sectors could have a more than proportionate impact on the broader economy.

Proper fiscal management

Mono-product economies are inherently exposed to fluctuations in the prices of underlying commodities. Often, the proceeds during periods of high prices are poorly managed, leaving insufficient resources to cover periods where revenues underperform. Nigeria needs to ensure sustainable fiscal management that is resilient to the global oil price cycles. From a developmental perspective, improving tax collection and administration have become imperative for achieving national growth objectives. According to the IMF, new research suggests once tax-to-GDP ratio reaches 12.5%, real GDP per-capita increases sharply. Nigeria's tax-to-GDP ratio is c.8%; non-oil revenue collected as a proportion of non-oil GDP was 4.6% in 2013 relative to 15% for low-income economies and 18.5% for emerging economies.

Nigeria is a low-taxed economy compared to its peers, Value Added Tax (VAT) at 5% is one of the lowest tax rates in the world. The real issue is not the tax rate but the low level of compliance and outright evasions. In addition, challenges with arbitrary exemptions and enforcement have further constrained VAT receipts. Whilst Company Income Tax (CIT) at 30% is ranked high relative to peer countries, liberal approval of tax exemptions such as the pioneer tax status have resulted in lower CIT receipts. The framework for tax exemptions should be reviewed and approvals targeted at growth inducing sectors even as the government improves collection. In addition, the government will also need to become more efficient with spending – anecdotal evidence suggests there is room for substantial savings in capital outlays and operating expenditure of the three tiers of government.

From 2003 to 2009, Nigeria made an effort to save during times of high oil prices. The creation of the Excess Crude Account (ECA) in 2003 and subsequently, the Nigerian Sovereign Investment Authority (NSIA) in 2012, provided the government vehicles in which to store excess revenues. From 2003 to 2008, the ECA rose to $22bn. This meant when oil prices declined in the third quarter of 2008, the government was able to drain the ECA of $15bn over the next year to insulate the economy. Since 2009, the ECA has continued to be drawn down despite high oil prices, and stood at just US$2.5bn as of January 2015.

The NSIA now serves as fiscal savings and is split into the Stabilisation Fund, Nigeria Infrastructure Fund and the Future Generations Fund with Assets Under Management (AUM) of US$1.35 billion (0.3% of GDP) relative to Saudi's US$757 billion (90% of GDP) or Norway's SWF of US$882 billion. The government needs to be deliberate about increasing accretion to the NSIA which has investment objectives of diversification and improving long term economic prospects.

Technical appendix

To estimate the backward and forward linkages, the Rasmussen method (1956) is adopted. The formulas for the backward and forward linkages are as follows:

Backward linkage index:

$$Uj = \frac{1/\mathrm{n}\sum_{i=1}^{n} k_{ij}}{1/\mathrm{n}^2\sum_{j=1}^{n}\sum_{i=1}^{n} k_{ij}}$$

Forward linkage index:

$$Ui = \frac{1/\mathrm{n}\sum_{j=1}^{n} k_{ij}}{1/\mathrm{n}^2\sum_{j=1}^{n}\sum_{i=1}^{n} k_{ij}}$$

Where U_j is the backward linkage index and U_i is the forward linkage index; n is the number of sectors, k_{ij} represent the elements of the Leontief inverse matrix. Data is sourced from the latest available Input-Output publication (2011).

Projections

Agriculture

To project the value of agriculture exports in 2030, we assume an improvement in Nigeria's market share of agriculture exports. To calculate export share improvement, we identify Brazil as an emerging market with one of the most significant agriculture export performance in the past decade. Using Brazil's market share of agricultural exports, we compute the 10-year CAGR from 1994 and assume Nigeria's market share in global agricultural exports could take-off at a similar CAGR if reforms which commenced in 2012 are sustained and improved upon.

Consumption expenditure

We assume that private household consumption expenditure maintains its current 5-year CAGR.

List of abbreviations

ATA	Agriculture Transformation Agenda
BOP	Balance of Payments
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CBN	Central Bank of Nigeria
c.	circa
CIT	Corporate Income Tax
CPI	Consumer Price Index
CRR	Cash Reserve Ratio
DMO	Debt Management Office
ECA	Excess Crude Account
EIA	Energy Information Administration
FX	Foreign Exchange
FZTA	Free Trade Zone Act
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GIFMIS	Government Integrated Financial and Management Information System
ICT	Information, Communication, Technology
IMF	International Monetary Fund
IPPIS	Integrated Payroll and Personnel Information System (IPPIS)
MDAs	Ministries, Departments, and Agencies
MPC	Monetary Policy Commission
NBS	National Bureau of Statistics
NGN	Nigerian Naira
NNPC	Nigerian National Petroleum Corporation
NPC	National Population Commission
NSIA	Nigerian Sovereign Investment Authority
OGFZA	Oil & Gas Free Zone Authority
OPEC	Organisation of Petroleum Exporting Countries
PDI	Power of Dispersion Index
PIB	Petroleum Industry Bill
PMS	Premium Motor Spirit
RDAS	Retail Dutch Auction System
SDI	Sensitivity of Dispersion Index
SCPZ	Staple Crop Processing Zone
SWF	Sovereign Wealth Fund
TSA	Treasury Single Account
USD	United States Dollar
VAT	Value Added Tax
WDAS	Wholesale Dutch Auction System

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