

The Future of Nigeria: Three critical levers for improving HDI



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Executive summary

With GDP in market exchange rate (MER) terms at \$490 billion in 2015¹, Nigeria ranked as Africa's largest economy and could be the 9th largest global economy by 2050² according to PwC estimates. Prior to the recent decline in the price of crude oil, Nigeria enjoyed strong economic growth at a CAGR of 5.3%, post-rebasing³. However, this growth did not translate into social development as high poverty and inequality levels persist.

Our previous report, which estimates the impact of corruption on the Nigerian economy, identifies a low standard of living and widening inequality as some of the mechanisms through which corruption impacts the economy. In addition, based on a GDP projection of \$1.45 trillion in 2030⁴, the report estimates that Nigeria's GDP could be \$530 billion higher if corruption is reduced to levels comparable to Malaysia⁵. Thus, effective policies aimed at reducing corruption will be critical to achieving Nigeria's GDP potential.

However, this report argues that national policies should be guided not only by improvements in GDP but also a broader measure of development for which we use the Human Development Index (HDI). Whilst the HDI is a composite measure of development based on an assessment of education, life expectancy and income per capita indicators, this research draws on a more direct and measurable approach to tracking improvements in human development. Using quantitative analysis, academic reviews and country case studies, we identify three critical levers that need to be

improved to enable Nigeria reach its socio-economic targets which we measure by a high human development status. These levers are:

- Improving the ease of doing business
- Enhancing labour productivity
- Reducing the overall level of corruption perception

Thus, we conclude that progress across these three levers could result in a significant improvement in Nigeria's HDI score, reaching 0.73 (2014: 0.51), thereby attaining a "high human development"⁶ status by 2030. Specifically, we target Nigeria improves:

- Ease of doing business ranking through a higher Distance to Frontier (DTF)⁷ score of 61 in 2030 (2015: 45)
- Labour productivity to \$12.05/hr in 2030 (2015: \$3.61/hr)
- CPI score to 34 in 2030 (2015: 26)

Translating economic growth into real improvements in the lives of the average citizen poses a real challenge for policy makers. Tracking progress across these levers has the potential to boost the attention on HDI as a priority on the public agenda. An analysis of these three levers can identify areas requiring policy attention and specific strategies targeted at improving overall well-being can be formulated. **PwC will commence the publication of annual monitoring reports on the performance of these three identified levers with policy suggestions for each category.**

1. 2015 IMF World Economic Outlook

2. PwC Estimates

3. CAGR, 2010-2014

4. PwC analysis based on two potential annual growth rates of 5% and 7% (upper limit) to 2030.

5. PwC Estimates using PwC World in 2050 macroeconomic model.

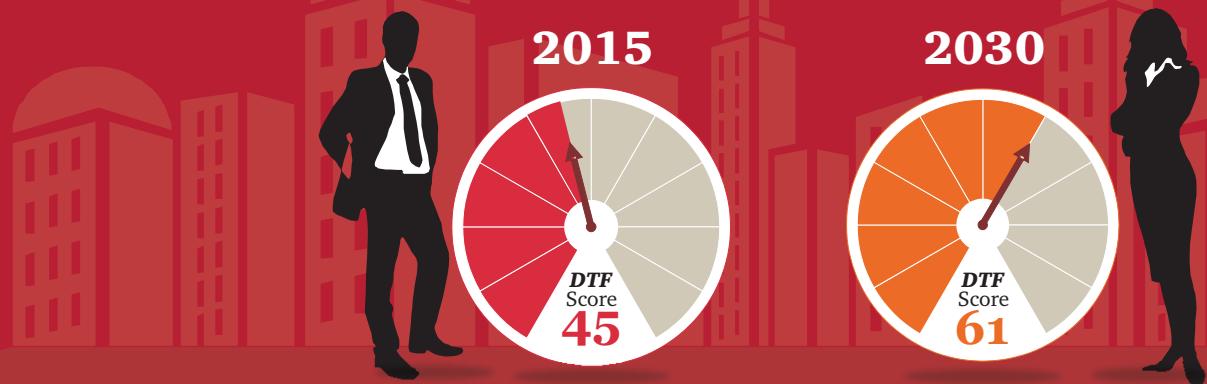
6. Please see appendix for country classifications

7. The Ease of Doing Business ranking is derived from the overall distance to frontier (DTF), which illustrates how far a country is from the best practice observed on each doing business topic across all countries. For example, in the starting a business section, each of the component (number of procedures, time, cost and minimum capital) is measured against the global best and worst using a normalisation methodology and converted into a score out of 100. Once the component scores are calculated, the group DTF is then a simple average of the component DTFs, and the economy DTF, an average of the group DTFs.

Human Development Index

Progress across the three levers below could result in a significant improvement in Nigeria's HDI score, reaching **0.73**, thereby attaining a “high human development” status by **2030**

Ease of Doing Business



Labour Productivity



CPI Score

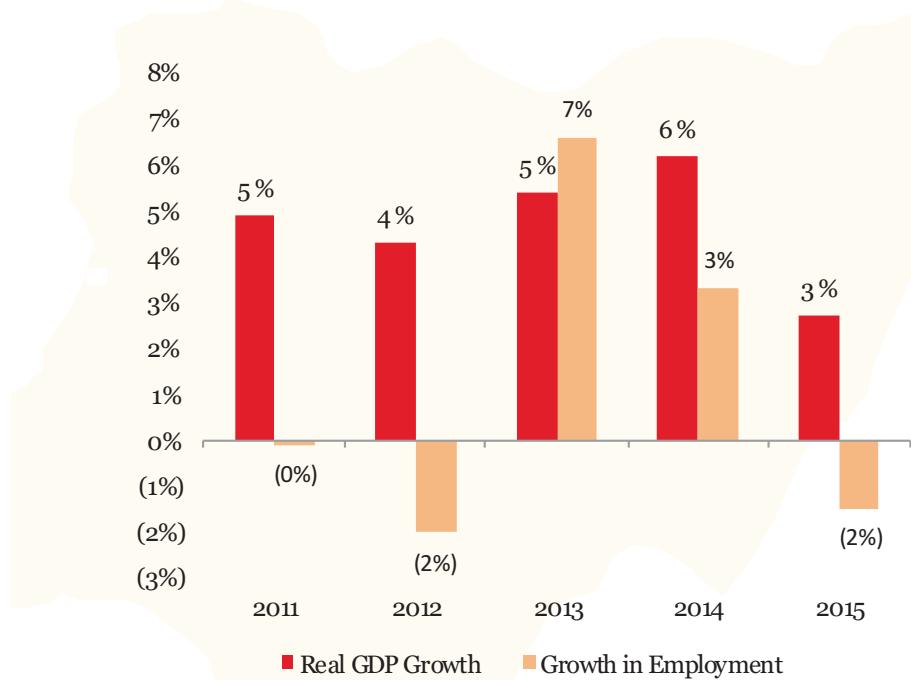


Why the Human Development Index (HDI)

Despite strong economic growth at a CAGR of 5.3%⁸ post-rebasing, Nigeria has been plagued with the jobless growth phenomenon as employment growth has only averaged 1.3%. However, growth has not been broad based with persistent incidences of high poverty, unemployment and underemployment. Official unemployment rose from 6.0% in 2011 to 8.2% in 2015, with a growing number of youths massively underemployed at 18.3%

of the labour force. Though growth in the Nigerian economy has been driven by more labour-intensive sectors such as agriculture and services, income opportunities have been limited due to low productivity levels and thus has not resulted in improved living standards for Nigeria's growing population, hence, the need for developmental measures beyond GDP.

Nigeria's Jobless Growth

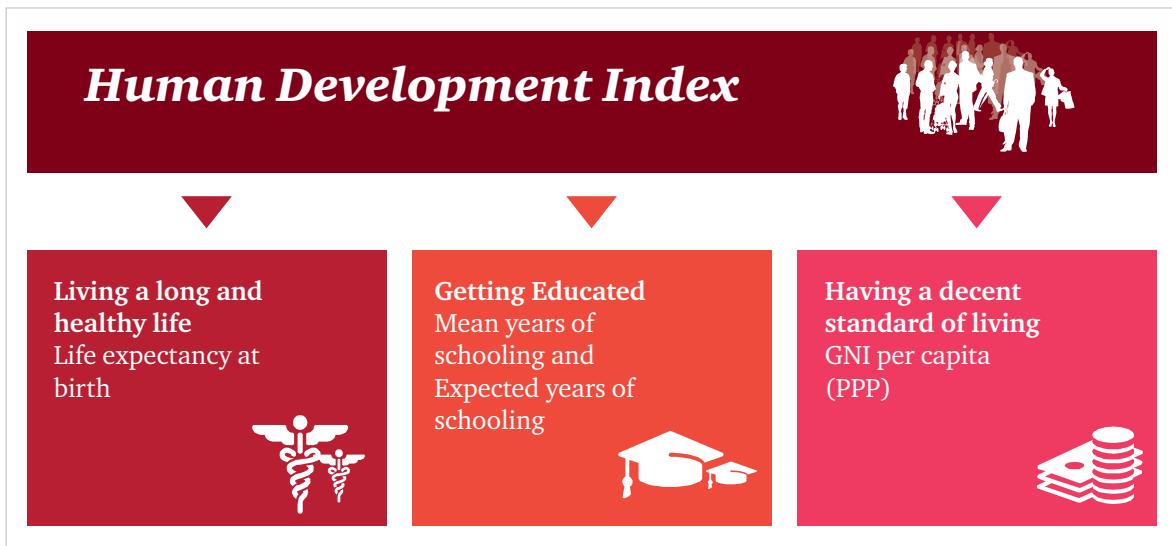


Source: NBS, CBN, PwC Analysis

8. Market Exchange Rate (MER)

To determine the most representative indicator of developmental outcomes, we have reviewed 10 academic studies which evaluate improvements in wellbeing and find the Human Development Index (HDI) to be a better representative

measure of well-being. The Index combines three dimensions of development- living a long and healthy life, being educated, and having a decent standard of living into an aggregate index.

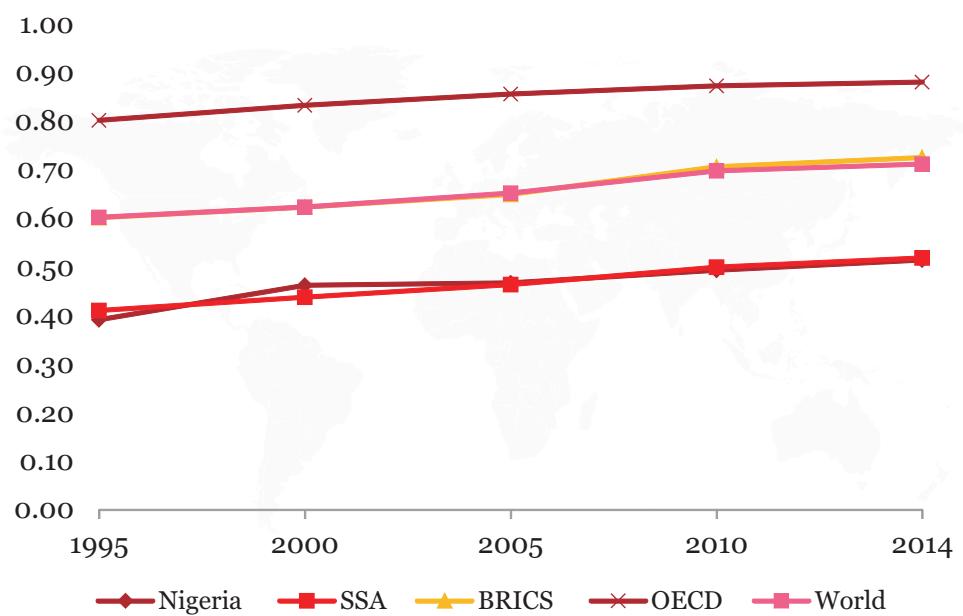


At a HDI value of 0.51, Nigeria is classified as a “low human development” country, with a rank of 152 amongst 188 countries. Between 2005 and 2014 however, Nigeria’s HDI value improved only marginally from 0.467 to 0.514.

Amongst the “large countries” which we define as population of 50 million persons and above,

Nigeria's 2014 HDI rank was 26 out of the total 27 countries within this category, only surpassing Ethiopia. The nation lags behind the “large countries” average on all three sub-parameters of HDI – health, education and income, with the gap widest in income and education.

Trend In HDI (1995-2014)



Source: UNDP, PwC Analysis



Three critical levers affecting HDI

Our approach

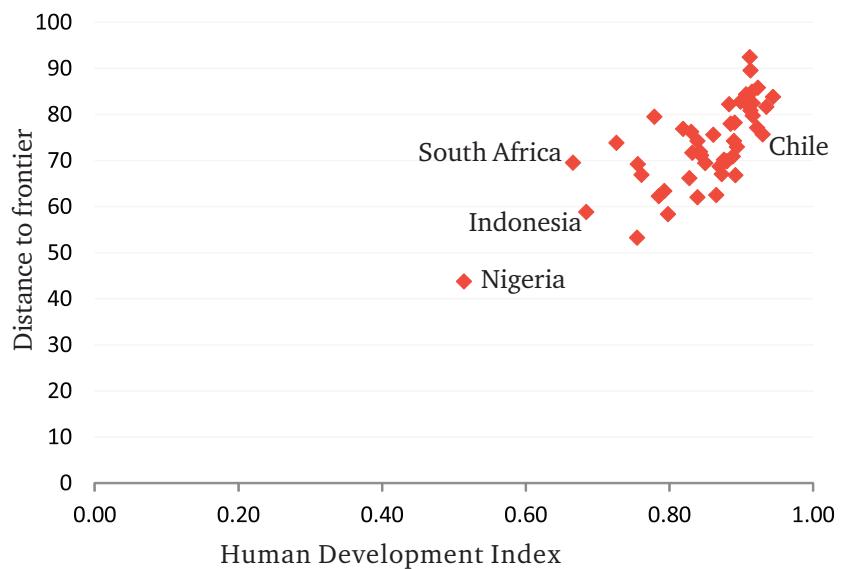
To determine the critical levers required to enable Nigeria reach its HDI target, we drew on two methods:

- **Economic literature review:** We conducted a review of the economic academic on the determinants of inclusive growth. These studies use dataset comprising of a large number of countries, including Nigeria, therefore making the results robust and applicable.
- **Quantitative modelling:** We ran a cross-country regression (using 43 high income countries⁹) of the HDI on the key drivers of inclusive growth identified in the literature review so as to establish significant relationships peculiar to high income countries.

Findings

Countries with very high levels of HDI are associated with a reduction in the barriers to doing business

Correlation Coefficient = 0.601



¹⁰Source: World Bank, UNDP, PwC Analysis

An enabling business environment attracts domestic and Foreign Direct Investment (FDI) which could play a catalyst role in economic development. A weak business environment is holding back

Nigeria's economic growth potential and slowing down the pace of development. Weak regulatory and institutional framework as well as poor infrastructure continue to pose significant challenges to businesses.

9. Empirically, strong links have been established between economic growth and human development in high income countries. Resources generated by economic growth have financed human development and created employment, while human development has contributed to economic growth. Source: UNDP 1996

10. Distance to frontier score illustrates the distance of an economy to the "frontier," which represents the best performance observed on each Doing Business topic across all economies and years included since 2005. An economy's distance to frontier is indicated on a scale from 0 to 100, where 0 represents the lowest performance and 100 the frontier.

Nigeria ranked 169th out of 189 countries in the World Bank's 2016 Ease of Doing Business Index, lower than Niger, Madagascar and Sierra Leone. Amongst the "large countries", Nigeria ranked 25 out of the 27 countries within this category, only ahead of Bangladesh and the DR Congo. Other than protecting minority investors and getting credit, Nigeria ranks low on all other indicators and will need to particularly

focus on getting electricity, simplifying the tax collection process and improving trading across borders so as to leverage its position as the hub of West Africa.

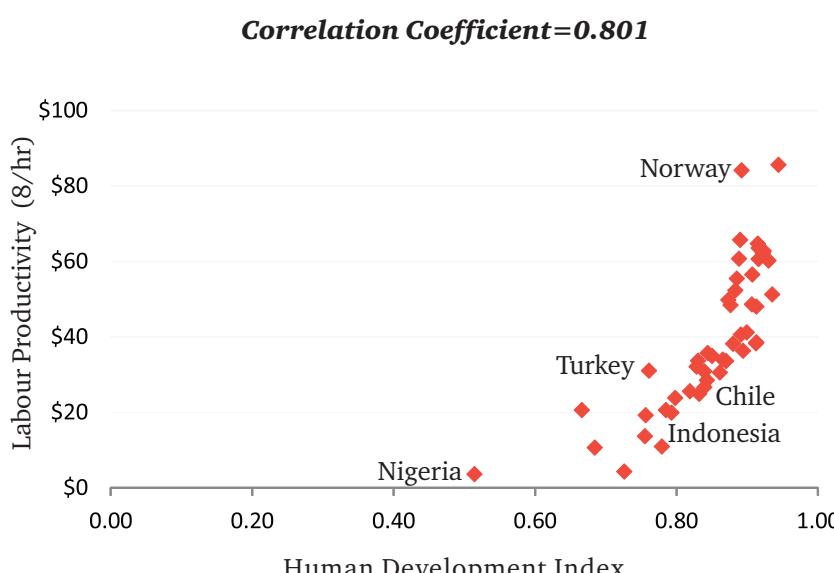
Improving Nigeria's ease of doing business will also require massive investments in physical infrastructure as a strategic priority in enabling growth and social impact opportunities.

Ease of doing business in Nigeria - rankings amongst the top 27 largest countries by population



Source: World Bank Ease of Doing Business report, PwC analysis

Countries with very high levels of HDI are associated with a more productive workforce

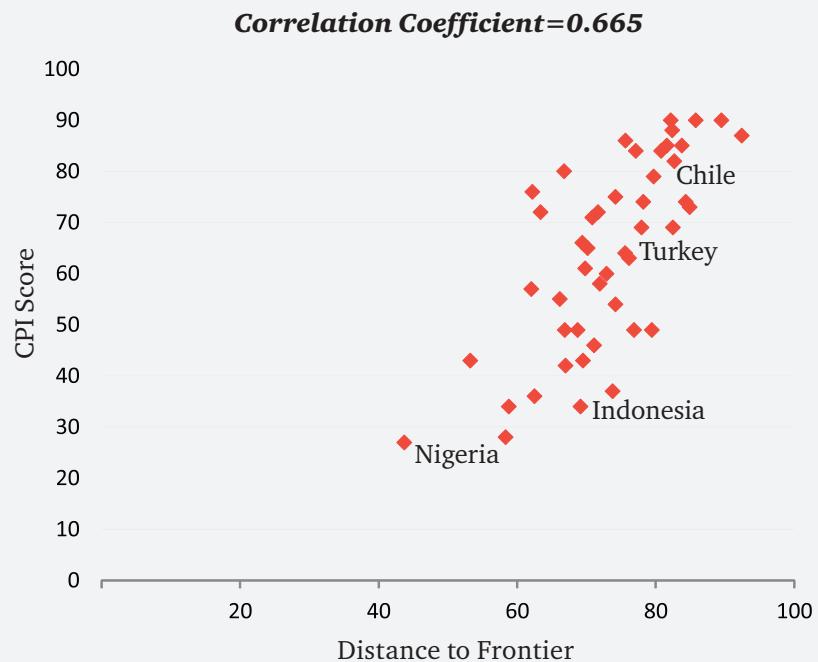


Nigeria has the advantage of a large workforce of over 70 million but majority are under-skilled. It is imperative to equip workers with skills needed to keep pace with an economy in transition like Nigeria. Average productivity of a worker in Nigeria is very low at \$3.61/hr relative to \$19.68/hr in South Africa and \$29.34/hr in Turkey. A sector level perspective also explains the low productivity trend as structural change in Nigeria has been driven by the services sector. Thus, declining shares of employment in agriculture and manufacturing have been absorbed by the services sector. The high productivity crude petroleum and natural gas sector only absorbs a few workers, mostly with specialised skillset and thus, has been unable to make an impact on the broader labour market. In addition, many sectors will need to go through significant transformation toward higher productivity and higher wages. Improvements in productivity will require investments to ensure a broad availability of quality basic education as well as relevant vocational training to match skills with the needs of businesses.

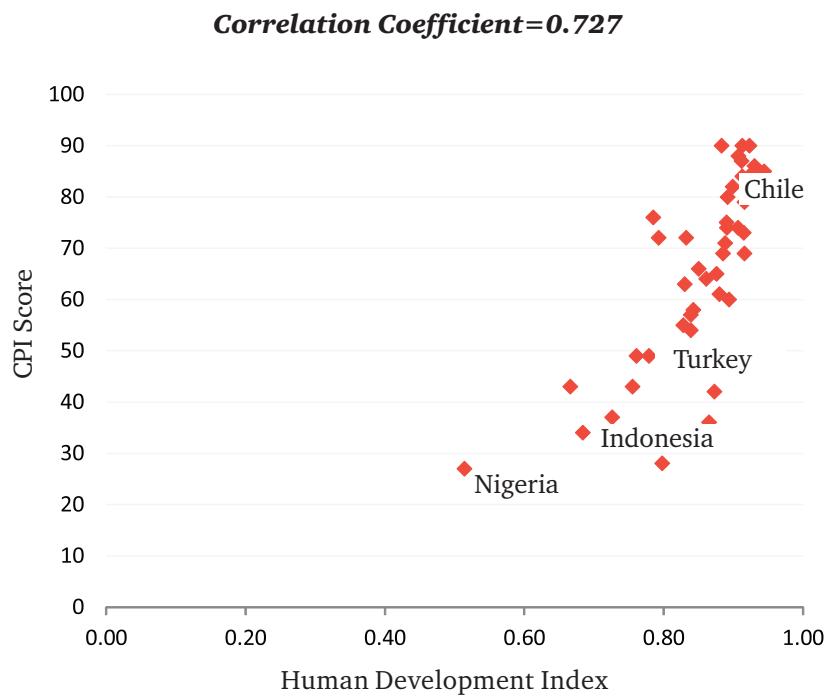
Source: Barro-Lee, UNDP, PwC Analysis

Corruption reduces private and public investment thereby undermining the prospects of broad based growth and development.

The effect of corruption on HDI provides interesting results. When controlling for country effects, we find that low CPI scores have a significantly adverse impact on development in low income countries whilst this relationship is not significant for high income countries. This is because FDI enhances growth and development in developing countries to a higher extent compared with developed countries¹¹. Therefore reductions in investment will have a more adverse impact on the prospects for growth and employment in low income countries. In addition, our results show economies that rank well on the ease of doing business also score well on Transparency International's Corruption Perception Index.



Strengthening public financial management will enhance the state's capacity to perform its core functions, thus providing public services needed to create an enabling business environment for smaller firms to compete. Tackling corruption in the public sector reduces the level of nepotism which allows the hiring of competent officials, therefore increasing the efficiency and quality of public institutions. In addition, greater transparency and accountability in the tax system will encourage increased compliance, thus increasing the upside to revenue collection and consequently improved healthcare and education outcomes. Ultimately, public expenditure to meet the pressures of demographic and population change in Nigeria should be financed by improved and increased tax collection. Although not statistically significant, we find that advanced countries, particularly the Nordic countries which rank high in development outcomes have a relatively higher tax-to-GDP ratio and have invested a higher proportion of revenues on education.

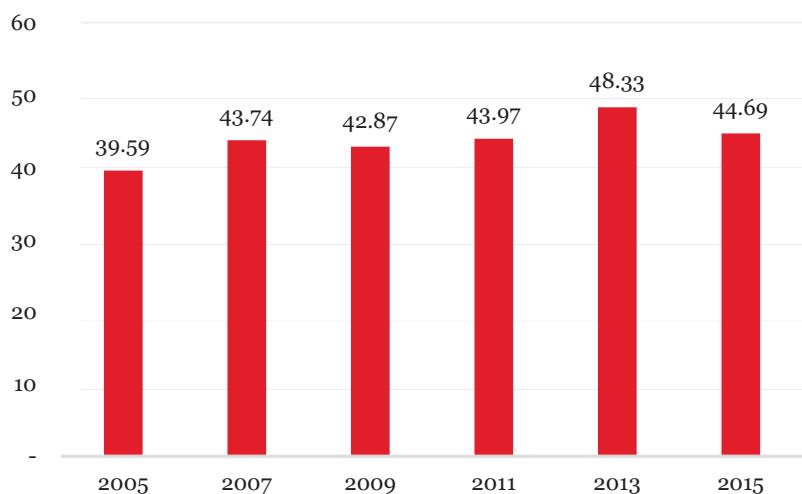


Nigeria's performance across the three levers

Ease of Doing Business

Nigeria has slightly improved on the Ease of Doing Business rankings, with its Distance to Frontier score improving from 40 in 2005 to 46 in 2015. Significant improvements have been recorded in the areas of “getting credit” and “protecting minority investors”. The multiplicity of taxes facing businesses in Nigeria with an average of 59 tax payments per year presents a major challenge to doing business.

Distance to Frontier Score



Source: World Bank, PwC Analysis



CPI Score

However, the CPI score has been hovering between 25 and 27 from 2012-2015 implying that there has been little or no progress in efforts taken to reduce corruption. There are series of high profile corruption scandals with prosecution still pending, as well as the lack of transparency in the use of public finances, which has damped the confidence in government's commitment to curb corruption. However, we are optimistic that the government will gain traction and credibility over time, as the current administration's anti-corruption drive firmly takes root.

Nigeria - CPI Score



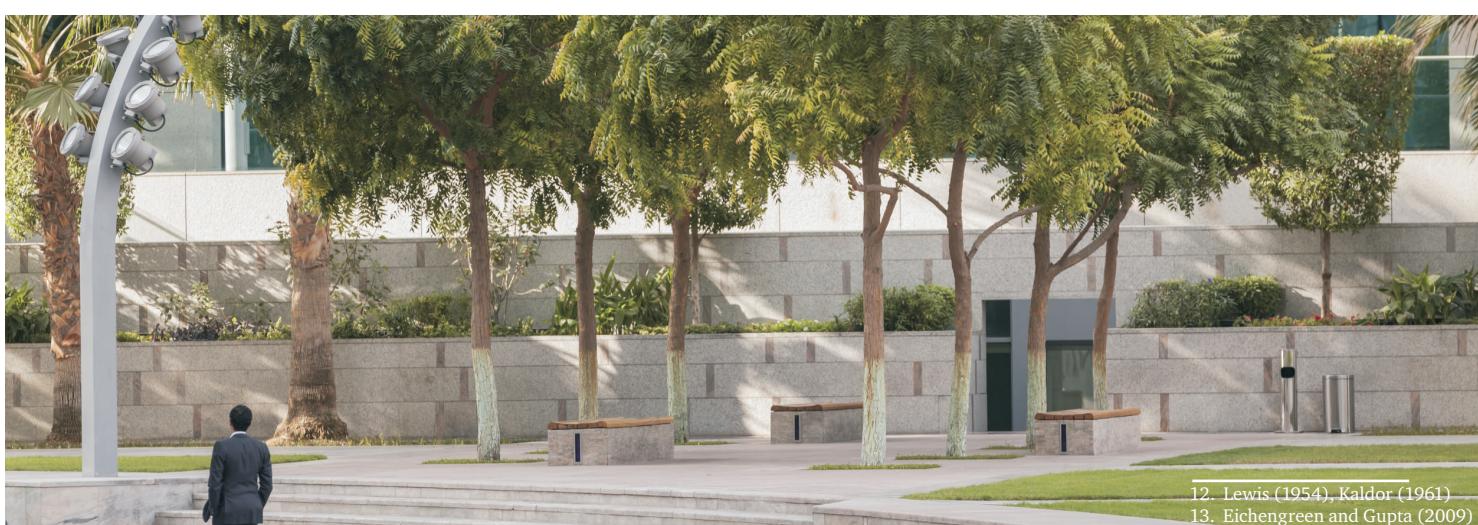
Labour Productivity

Nigeria's labour productivity remains relatively low at \$3.61/hour representing a marginal increase from \$2.79/hour in 2010. Despite contributing 20.5% to GDP and employing about two-thirds of the labour force, agriculture is bedevilled by low productivity due to the predominance of small scale farming and limited value addition to agriculture output. The manufacturing sector, which has been empirically proven¹² as the sector with the highest potential for productivity, is quite small (10% of GDP) and has been plagued by declining output owing to structural challenges in the business environment. Services, which accounts for 59.7% of GDP, offers very little value added especially within trade- its largest subsector. This is in sharp contrast to India whose labour productivity growth has been boosted by value-added, exportable modern services such as Business processes, ICT and Health¹³.

Labour Productivity (\$/hr)



Source: NBS, PwC Analysis



12. Lewis (1954), Kaldor (1961)

13. Eichengreen and Gupta (2009)



HDI- Nigeria's potential in 2030

We estimate the potential Human Development Index score that Nigeria could achieve in 2030 based on a scenario that simulates achieving the improvements in the CPI Score, Distance to Frontier¹⁴ score and Labour productivity of the country case studies.

The case countries are selected using the following criteria:

- Human Development Index grew at a rate above 10% from 2000-2014;
- Human Development Index in 2015 is above Nigeria's by at least 0.05 and/or;
- Country has moved upwards to a higher category (e.g. from low human development to medium human development).

Methodology for creating scenario

Using a sample of 46 Middle and High Income Countries¹⁵, we run a panel regression of HDI on CPI Score, DTF Score and Labour productivity to establish the equation below:

$HDI = \alpha + \beta (\text{CPI Score}) + \gamma (\text{DTF Score}) + \delta (\text{Labour productivity})$, where α is a constant and β, γ and δ are the values of the coefficient for the respective explanatory variables.

To estimate Nigeria's 2030 HDI score, we assume that Nigeria

achieves significant improvements across the three levers. To calculate these improvements, we identify countries with the most impressive improvements in CPI score, DTF Score and Labour productivity over the past 15 years, with recognition for country specific factors such as the stage of development or population. To avoid being skewed, we averaged the top three best percentage improvements to estimate the 2030 target for Nigeria across the three levers.

Results

The panel regression gives the equation:

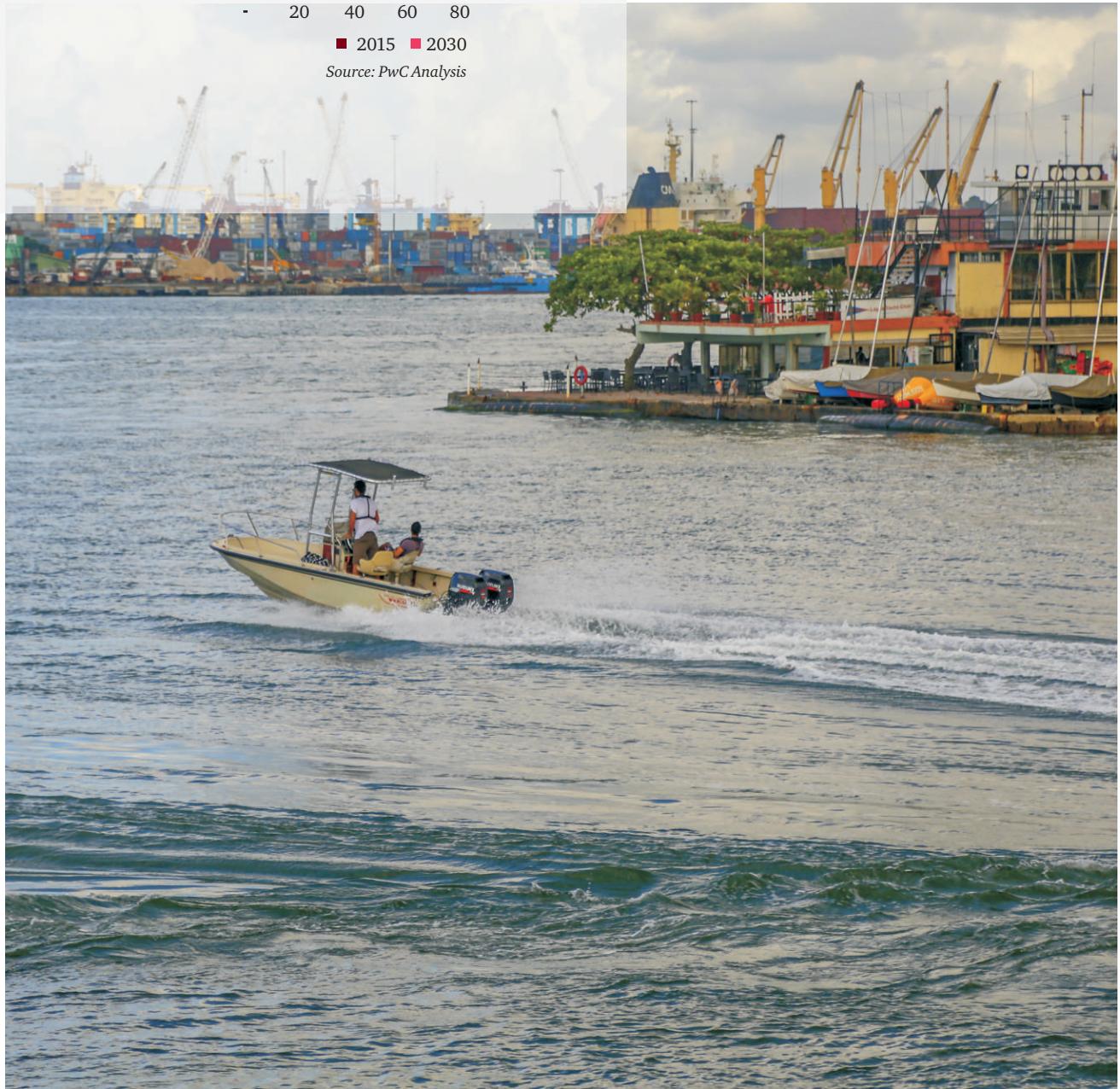
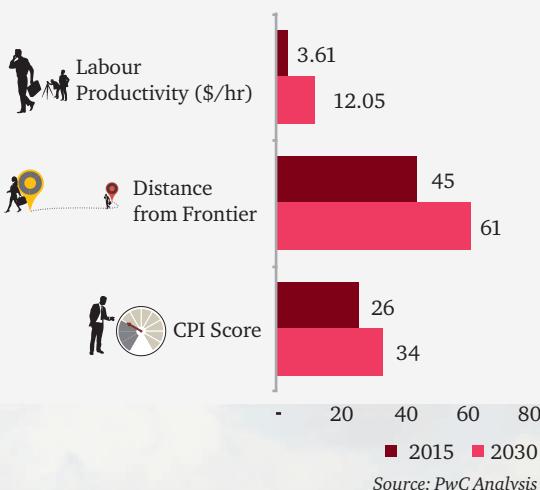
$$\text{HDI} = 0.614 + 0.0009 (\text{CPI Score}) + 0.0012 (\text{DTF Score}) + 0.0021 (\text{Labour productivity})$$

Our results show that HDI in Nigeria could reach 0.73 from the current 0.51 and attain the status of a high human development country by 2030 if it invests in policies and reforms on which a sustainable growth engine can be built. This will require improvements in the ease of doing business; an acceleration in labour productivity and reduction in the overall level of corruption perception at a rate similar to the average of its comparison countries.

14. Distance to Frontier score represents Ease of doing Business

15. High income countries using World Bank country classification

Attaining 0.73 HDI in 2030 - Lever targets



Appendix

Country Case Studies

Chile

- GDP (current US\$) - \$240bn
- Total Population- 18mn
- Labour Productivity - \$25.80/hour
- Poverty Headcount ratio at national poverty lines - 14.4%
- Life expectancy at birth (years) - 81
- GNI per capita (current US\$)- \$14,910
- FDI (net inflows % of GDP)- 8.5%
- Gini coefficient- 50.8

Chile significantly improved in its ease of doing business rankings by implementing reforms such as:

- Introducing an online system for business registration in 2011 and

providing an immediate temporary operating license to new companies.

- Introducing provisions to facilitate the continuity of the debtor's business during insolvency and creating specialised insolvency courts.

Chile has introduced anti-corruption policies such as:

- Passing a mandatory instructive signature on best practices in asset and interest declarations in 2015
- Promoting transparency in lobbying by publishing the list of registered lobbyists online.

Latin America & Caribbean



Criteria for benchmark country selection:

43 Higher HDI rank relative to Nigeria

73 Higher CPI Score relative to Nigeria

10.6% HDI increased from 2000-14

Previous history of business reforms and anti-corruption policies



16. Guide to data: GDP and Population (2015); Life expectancy (2014); Poverty headcount (2013)

Turkey

- GDP (current US\$)- \$718bn
- Total Population- 79mn
- Labour Productivity- \$31.70/hour
- Poverty Headcount ratio at national poverty lines- 1.6%
- Life expectancy at birth (years)- 75
- GNI per capita (current US\$)- \$10,830
- FDI (net inflows % of GDP)- 1.6%
- Gini coefficient - 40

Turkey significantly improved in its ease of doing business rankings by implementing reforms such as:

- Reducing the time required for dealing with construction permits by setting strict time limits for granting a lot plan and by reducing the documentation requirements for an occupancy permit.
- Introducing an electronic data interchange system, improving information technology

infrastructure and training about 2,500 customs officers and 14,000 traders, which eased trading across borders.

Turkey has introduced anti-corruption policies such as:

- Adopting an “Action Plan on Increasing Transparency and Enhancing Good Governance in the Public Sector”. The plan includes disciplinary and criminal sanctions against public officials involved in corruption, and measures aimed at modernising the auditing system of the public sector, improving transparency in campaign financing and strengthening the fight against money laundering.
- Agreeing on an Emergency Action Plan with the EU which helps in strengthening anti-corruption units.

Europe



Criteria for benchmark country selection:

72 Higher HDI rank relative to Nigeria

42 Higher CPI Score relative to Nigeria

16.6% HDI increased from 2000-14

Previous history of business reforms and anti-corruption policies

Indonesia

- GDP (current \$)- \$862bn
- Total Population- 258mn
- Labour Productivity- \$11.95/hour
- Poverty Headcount ratio at national poverty lines- 11.3%
- Life expectancy at birth (years)- 69
- GNI per capita (current \$)- \$3,630
- FDI (net inflows % of GDP)- 3%
- Gini Coefficient- 38

Indonesia significantly improved in its ease of doing business rankings by implementing reforms such as:

- Making tax payments easier and less costly for companies by: reducing the corporate income tax rate, reducing the ceiling for

employer contributions and introducing an online system for paying social security contributions.

- Introducing a simplified application process allowing an applicant to simultaneously obtain a general trading licence and a business registration certificate.

Indonesia has introduced anti-corruption policies such as:

- Strengthening the capacity of the Corruption Eradication Commission (KPK) by recruiting staff through open competition, establishing ethical codes, training investigators and developing comprehensive internal procedures.

Asia



Criteria for benchmark country selection:

110 Higher HDI rank relative to Nigeria

36 Higher CPI Score relative to Nigeria

12.7% HDI increased from 2000-14

Previous history of business reforms and anti-corruption policies

Country Classifications

Human Development Index

- Very High Human Development = HDI 0.8
- High Human Development = 0.8 HDI 0.7
- Medium Human Development=0.7 HDI 0.55
- Low Human Development= 0.55 HDI

Abbreviations

- CPI- Corruption Perceptions Index
- GDP- Gross Domestic Product
- GNI- Gross National Income
- FDI- Foreign Direct Investment
- HDI- Human Development Index
- DTF- Distance To Frontier
- IMF- International Monetary Fund



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