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Is local content a catalyst for development? The case of oil in Nigeria

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Section 1. Introduction

By 2015, with about 60 percent of its estimated population of 177.5 million below 24 years old population, concerns for jobs were at the heart of public debates in Nigeria (World Bank, 2014a). As one of Africa's leading oil producers, over the past five decades, oil has consistently represented between 60 and 90 percent of its export earnings. However, further to the decline in international oil prices, by 2016, the Nigerian economy had fallen into recession (IMF, 2016). Despite the country's renewed drive for diversification, the oil sector remains a central source of export revenue. There are expectations that the country's local content framework will contribute to generating economic linkages that would lead to job creation and socio-economic development.

This paper sets out to investigate whether local content policies, legislation and institutions in Nigeria during 2000-2015 were concomitant to positive and significant changes in socio-economic development. The next section provides the background to oil and development policy in the country with a highlight on the key features of its local content framework. The paper then unpacks the evidence on socio-economic development both at the national and state levels during the period of implementation of local content measures. This is followed by a discussion of the findings with an emphasis on governance issues. Before ending, the paper highlights some implications of the Nigerian experience for other oil rich developing countries in Africa.

Section 2. Oil and development policy in Nigeria

The popularity of local content policies and legislation across Africa's oil dependent economies stems from the belief that such policies will provide the tools for turning theoretical predictions of backward and forward linkages into tangible socio-economic benefits. This section identifies the rationale behind such predictions and provides key highlights of Nigeria's local content framework.

Foreign direct investment, backward and forward linkages

Oil projects are capital-intensive and in many developing countries, are reliant on foreign direct investment (FDI). According to Hirschman's linkages framework (1958; 1981), three types of linkages induced by FDI play a central role in spurring industrial development from natural resource rents. First, fiscal linkages between financial and productive sectors enable the transformation of rents into productive investments. Second, consumption linkages stimulate the development of productive sectors. And third, direct linkages, i.e. forward and backward linkages to other firms induce manufacturing development and diversification of the economy. This framework also posits that better access to markets, capital and skills by foreign investors can potentially lead to the upgrading of local firms. A virtuous cycle emerges as the first round of FDI can further generate 'snow ball' effects, whereby local firms in turn demand more products and inputs, thereby spurring a second round of FDI (Hobday, 1995; UNIDO, 2012). However, contrary to market and efficiency seeking FDI, natural resource-seeking FDI will tend to create isolated enclaves in the host economy, and have minimal linkages to local industries (Prebisch, 1950; Morrissey, 2012; Nunnenkamp and Spatz, 2003). Reasons for the development of such enclaves include the remote location of oil and mineral projects and the asymmetry between the needs of extractive projects in terms of technological and organizational capabilities and the resources available in the host country.

To circumvent these drawbacks, oil and mineral rich developing countries often design local content policies to maximize the gains from FDI in their natural resource sector. Local content definitions range from the quantum of locally produced materials, personnel, goods and services rendered to the oil, gas and mining industries, to the level of equity ownership local citizens hold. Applications include specific clauses and requirements in investors' contracts and agreements that seek to promote local content or an enactment that lists local content requirements. As a result of these preferences, local content measures can be incompatible with the agreement on Trade-Related Investment Measures, the General Agreement on Tariff and Trade, and the Agreement on Subsidies and Countervailing Measures (ASCM)

of the World Trade Organization (WTO). Of concern is the obligation to endorse the “national treatment” principle that is contained within these agreements. In practice, however, such violations are difficult to prove and can be easily avoided by member countries (Nwapi, 2015). Most local content policies include the promotion of local participation and the use of local raw materials by investors, thereby increasing the share of investors’ spending captured locally (Heum et al, 2011; Tordo et al, 2013). Examples of developing countries with variants of local content frameworks include Angola, Brazil, Indonesia, Kazakhstan, Malaysia, and Nigeria (Tordo and Anouti, 2013).

Five decades of oil related policies in Nigeria

Contemporary local content policies in Nigeria’s oil sector originate in a longstanding track record of establishing policies and institutions aimed at enhancing the economic impact of the oil sector. Following the adoption of the United Nations Resolution on Permanent Sovereignty over Natural Resources, in 1969, the Nigerian Government enacted the Petroleum Act thereby ensuring the ownership and control of all petroleum resources by the Federal Government. The Petroleum Act stipulated that holders of oil mining leases are required, within 10 years of the grants of the lease, to ensure that 75 percent of the total numbers of persons employed in managerial, professional and supervisory grades are Nigerians. These initiatives opened a series of policies of natural resource nationalism in Nigeria. On the institutional front, in 1971, shortly after joining the Organization of Petroleum Exporting Countries (OPEC) Nigeria established the Nigerian National Oil Corporation (NNOC). In line with OPEC regulations, NNOC (which was named NNPC in 1977) acquired controlling interests in concessions held by foreign companies, marking the beginning of State participation in the operations of the Oil and Gas Sector. As part of the Third National Development Plan of 1975-1980, the adoption of the second Nigerian Enterprise Promotion Decree (NEPD) in 1977 led to foreign ownership in the oil sector to be brought down from 100 percent to 60 percent. It marked the beginning of the obligation for foreign firms to enter into joint ventures with Nigerians.

After years of military regimes and macro-economic instability, in 1999, the incoming government set in place a new economic policy framework that aimed to amplify the central role played by the oil sector in the country’s development path. The privatization wave of 1999-2003 characterised by substantial government divestiture from key sectors led to the oil sector becoming the country’s largest recipient of FDI. Growing concerns for billions of oil and gas revenue flowing out of the country led to the creation of a National Committee on Local Content Development, and the establishment of a Local Content Policy in 2000. A report published by the Committee in 2002 highlighted that the local content of goods and services in the upstream sector of the oil and gas industry in Nigeria was less than 5 percent. In other words, 95 percent of the yearly expenditure in the oil and gas industry was not spent on Nigerian goods and services (Ovadia, 2013). The report recommended the drafting of a local content bill and the establishment of initial targets for aggregate local content value in the oil and gas industry. Overall targets were initially set at 40 percent by 2005 and 60 percent by 2010. A Nigerian Content Unit within the Department of Petroleum Resources was created in 2002, followed by a Nigerian Content Division within the NNPC. NNPC released a series of Nigerian content directives and increased local content targets to 45 percent by 2005 and to 70 percent by 2010 (Ovadia, 2013). The Nigerian case became part of many studies on the development benefits of local content policies in the oil sector (UNCTAD, 2006).

In parallel to the efforts specific to the oil sector, the Nigerian government adopted a number of strategy documents at the federal and local level: the 2003-2007 National Economic Empowerment and Development Strategy (NEEDS) and the accompanying State Economic Empowerment Development Strategy (SEEDS) and Local Economic Empowerment and Development Strategy (LEEDS). NEEDS was meant to lead to economic diversification through the increase of industrial capacity utilization, and the improvement of agricultural productivity. Its stated objective was to create about 7 million new jobs by 2007. Continued efforts to devise a framework for the country’s development strategy culminated into the finalization of Nigeria’s vision for economic transformation in 2009. The document lays out the country’s plan for achieving its objective of becoming one of the world’s top 20 biggest economies by 2020 (Government of Nigeria, 2009). Targets include achieving a per capita income of US\$4000 per

annum by 2020. Furthermore, the Vision highlights the optimization of key sources of economic growth and the fostering of sustainable social and economic development as two of its three core pillars. The development of output and efficiency in the mineral sector constitutes one of the key elements of the Vision's second pillar. To this effect, the document includes simulations based on GDP growth of 11 percent over the plan period and cost of crude oil of \$60 and a sectoral growth rate of 3.9 percent for the oil and gas sector over the period.

Successive Nigerian governments have also attempted to establish oil related financing mechanisms both for greater fiscal stability and for redistributive purposes at the federal and state level. These measures include the adoption of an "oil-price-based fiscal rule" in 2004, which became the Fiscal Responsibility Bill in November 2007. The price benchmark was fixed at US\$60.0 per barrel over the initial four-year plan period and excess revenue above the benchmark price was to be saved in an Excess Crude Account in the Central Bank of Nigeria. The excess crude proceeds was partly intended to be used to finance budget deficit as well as for funding of priority physical infrastructure. The Account was to be gradually transformed into a Sovereign Wealth Fund (SWF).

At the State level, the special characteristics of the Niger Delta as the main oil producing region were acknowledged and led to the creation of the Niger Delta Development Commission (NDDC). The Commission was established with the purpose of assisting the Delta's nine states, namely Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers, in the formulation and implementation of policies to ensure sound and efficient management of the resources of the Niger Delta. In addition, the Commission's mission includes tackling ecological and environmental problems that arise from the exploration of oil with the view to advising the federal and state governments on the prevention and control of oil spillages gas flaring and environmental pollution. With regards to funding, the Niger Delta Development Commission Act relies on an annual contribution of 3 percent of their total annual budget by oil producing companies operating in Nigeria. In addition, a provision made in Nigeria's constitution in 1999 stipulates that oil-producing communities benefit from the so-called 13 percent Derivation rule. This rule provided for higher budgetary allocations to oil-producing states a sharing principle that implies the distribution of revenue based on where the oil originates. Thus, out 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. The change in the derivation rate concluded decades of fluctuating rates of oil revenue to be devoted to oil producing states. This rate ranged from a peak of 50 percent in 1976 to a low point of 1.5 percent in 1983 (Iyoha and Oriakhi, 2008). This breakthrough was meant to generate greater development benefits in oil producing States.

The 2010 Nigerian Oil and Gas Industry Content Development Act

The drive towards greater institutionalization of the local content policy culminated in the approval of the Nigerian Oil and Gas Industry Content Development Act by parliament in 2010 (Government of Nigeria, 2010). Local content is defined under section 106 of the Act as "the quantum of composite value added to or created in the Nigerian economy by a systematic development of capacity and capabilities through the deliberate utilization of Nigerian human, material resources and services in the Nigerian oil and gas industry". The Act stipulates that in all cases, first consideration is to be given to Nigerian independent operators (Art. 3 (1)) and makes provisions to enhance local participation in all aspects of oil operations including through the specification of minimum amounts of local materials and personnel used by oil and gas operators in the country and in the ownership of firms in the oil sector.

The Act grants regulatory powers to the Minister of petroleum. As such, the Minister is responsible for ensuring that international or multinational companies working with their Nigerian subsidiaries prove that 50 percent of the equipment needed for their operations is owned by these subsidiaries (Art. 41 (2)). The Minister's direct authority also applies during operational phases. His control is exercised through the assessment of annual reports submitted by the operator and on the basis of which the Minister makes regulations on the targets for joint ventures and alliances specific to each project (Art. 46). In addition, the Minister issues regulations regarding targets related to research and development (Art. 36) and mandatory investments in manufacturing production facilities or services provisions (Art. 37).

On the institutional front, the Act established the Nigerian Content Development and Monitoring Board (NCDMB) (Art. 69-(1)) in charge of supervising, coordinating, administering, monitoring and managing the development of Nigerian Content in the oil and gas industry. NCDMB is mandated to “implement the regulations made by the Minister in relation to any aspect of the Act” (Art. 69-(2)). To this effect, the Act requires that all companies interested in operating in the Nigerian oil and gas sector submit first and foremost a “Nigerian Content Plan” to NCDMB (Art. 7). NCDMB is also mandated with capacity building functions aimed at developing the capacity of local contractors and Nigerian companies along the oil value chain in the following areas: facilitation of the establishment of critical facilities such as pipe mills, docking and marine facilities, pipe coating facilities; promotion of indigenous ownership of marine vessels, offshore drilling rigs, etc.; development of businesses located in oil producing areas; promotion of services in banking, insurance, legal, etc. These capacity building activities are funded through the Nigerian Content Development Fund thanks to a levy of one per cent on every contract awarded in the Nigerian oil and gas industry. Regarding the conduct of operations, the Nigerian National Petroleum Cooperation (NNPC) is vested with exclusive government rights for upstream and downstream development. Most of Nigeria’s major oil and natural gas projects are operated through joint ventures (JV) between IOCs and NNPC, whereby NNPC is the majority shareholder. As a result of these policies, Nigeria’s local content framework was considered as one of the best in Africa and became the focus of many capacity building activities.

Section 3. Oil and socio-economic development at the federal and state level during 2000-2015

This section begins with an examination of changes in job creation and in capacity building, followed by an account of variations in economic growth, poverty and inequality, health and education during 2000-2015.¹

Job creation and capacity building

Evidence of impact of the oil sector on job creation in Nigeria comes mainly from NCDMB. Industry experts and local content executives within oil companies acknowledge the lack of sufficient means for measurement, hence difficulties in assessing progress (Ovadia, 2013).² Estimates of the performance levels of local content in the Nigerian oil sector range from 10 percent in manufacturing to 55 percent in fabrication and 90 percent in engineering. According to the NCDMB, national capture of annual investment in oil and gas increased from less than 5 percent in 2000 to about 40 percent in 2012 (Ovadia, 2015). The NCDMB also finds that that the oil sector led to the creation of more than 30,000 new jobs in engineering, fabrication and oilfield services (Ovadia, 2015). This performance is in line with the African average where the share of spending of international oil companies on employment, procurement, and infrastructure in oil and gas projects constitute about 40-50 percent of the total cost allocation (Afdb, 2014).

At the national level, aggregate unemployment figures rose from 12.7 percent in 2007 to 23.9 percent in 2011. Only about 7 percent of workers, roughly 4 out of 53 million people, are employed in the non-agricultural wage private sector (World Bank, 2014b) In the oil sector itself accounts for less than 1 percent of total employment, most of whom are expatriates (PwC, 2015a). Structural constraints in the development of a vibrant sector are likely to have dampened the potential of Nigeria’s local content policy in driving backward and forward linkages. Constraints include the poor state of physical infrastructure such as electricity, limited access to finance and corruption (World Bank, 2014b). On electricity for example, only 40 percent of the Nigerian population has access to power. With an

1 The evidence is based on available data points computed from global and national databases.

2 The World Bank’s Enterprises Survey, for example, does not offer any information on the extent of firm creation that could be attributed to the oil sector (World Bank, 2014b).

estimated electricity production/million population of 0.13bn kilowatts, Nigeria produces five times less than India and 36 times less than South Africa per person (World Bank, 2014b). With regards to finance, though 11 Nigerian banks are among the top 50 banks in Africa, 65 percent of the economically active are serviced by the informal financial sector (World Bank, 2014b). Furthermore, only 14 percent of the SMEs that require a bank credit are successful in obtaining one.

With regards to capacity building, there is evidence of skills development in the domestic oil sector thanks to local content requirements. The examination of company reports reveals the mechanisms and the extent to which some of these joint-ventures contributed to the generation of positive spillovers across the oil sector. Reports on a survey based on the Nigerian oil industry further indicate that 75 percent of IOCs have supplier development programmes composed of training and information exchange aimed at improving quality, lead time and technological capabilities of local suppliers (Morris et al., 2011b). The local content Act is also likely to be the main impetus behind the emergence of internationally competitive Nigerian firms in the oil sector.³ However, much of the supply chain is abroad (PwC, 2015a). Limitations in access to large capital funds make it unlikely that the sector departs from its heavy reliance on FDI and joint ventures. In addition, the technological gap between oil majors and other firms in the sector widens as International Oil Companies face increasing pressure to raise environment, health and safety standards (Sigam and Garcia, 2012).

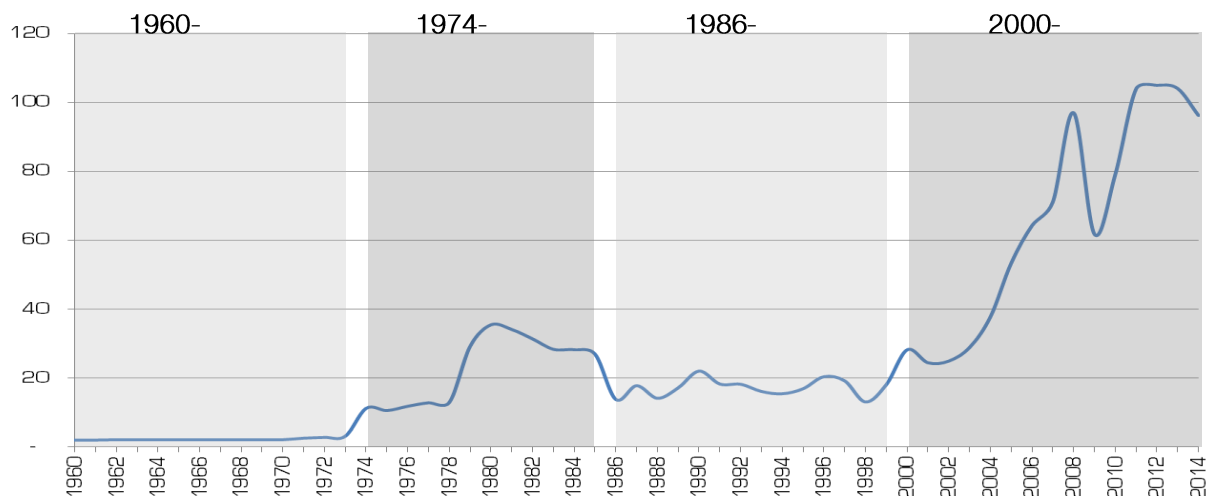
Economic Growth

The implementation of local content policies and the institutionalization of the National Content Development Act coincided with the upward trend in oil prices (figure 1). This favorable context contributed to expectations that the period would be associated with an improvement in socio-economic indicators. The limited changes in the indicators associated with the direct effects of the oil sector are reflected in the fluctuations of GDP growth during the period under study. With the exception of a substantial peak in 2003, GDP growth hovered between 3 and 8 percent during 2000-2010. It was generally stable with an annual average of 6.4 percent in real prices between 2010 and 2013 (figure 2). By 2013, Nigeria's recorded progress in its performance on global rankings based on GDP (Government of Nigeria, 2013). In contrast to the country's heavy reliance on oil for its exports revenue, the 2014 rebasing exercise uncovered that Nigeria's growth has been largely driven by the non-oil sector. It revealed that the natural resources sector represents a small share of the Nigerian economy, falling from 33 percent before the rebasing to 14 percent thereafter. Most of the increase in GDP has come from fast growing sectors such as manufacturing, real estate, communications, and other services whereas restated real growth in agriculture, was estimated to be at 2.6 percent per year. Agriculture alone contributed to 22 percent of GDP (World Bank, 2014a). These sectors played a role in dampening the impact of the drastic fall in GDP growth in 2015.

Nigeria's growth performance during the period of implementation of local content policies follows a long-term trend of peaks and dips as well as a heavy dependence on oil exports (figures 2 and 3). The contemporary history of Nigeria's macro-economic performance is rooted in the country's status as one of Africa's largest oil producers over the past five decades. After a short-lived upward trend during the first years of independence, the country's GDP growth has been volatile since the end of the 1960s (figure 2). The oil boom of the 1970s marked a turning point for Nigeria when oil prices quadrupled in November 1973 and oil production rose to a peak of 2.4 million barrels per day (Sala-i-Martin and Subramanian, 2003). The contributions of oil to export earnings rose from 57.5 percent in 1970 to 93.3 percent in 1977 (Iyoha, 1995). The unprecedented flow of export revenues, increase in foreign reserves, domestic incomes and imports that resulted from the sharp increase in oil prices in 1979 were met with inappropriate economic management policies and inefficiencies in the public investment programmes. As a result, the oil boom did not translate into sustained growth in Nigeria (Bevan et al, 1992).

³ Oando, for example, is a Nigerian integrated company with activities in the upstream, midstream, downstream, of the Nigerian energy industry. Another company, Niger Dock, fabricated and completed the Abang and Itut oil production platforms, using 100 percent Nigerian engineering and fabrication (Government of Nigeria, 2013).

Figure 1: International prices of oil, 1970-2014



Source: UNCTAD Stat

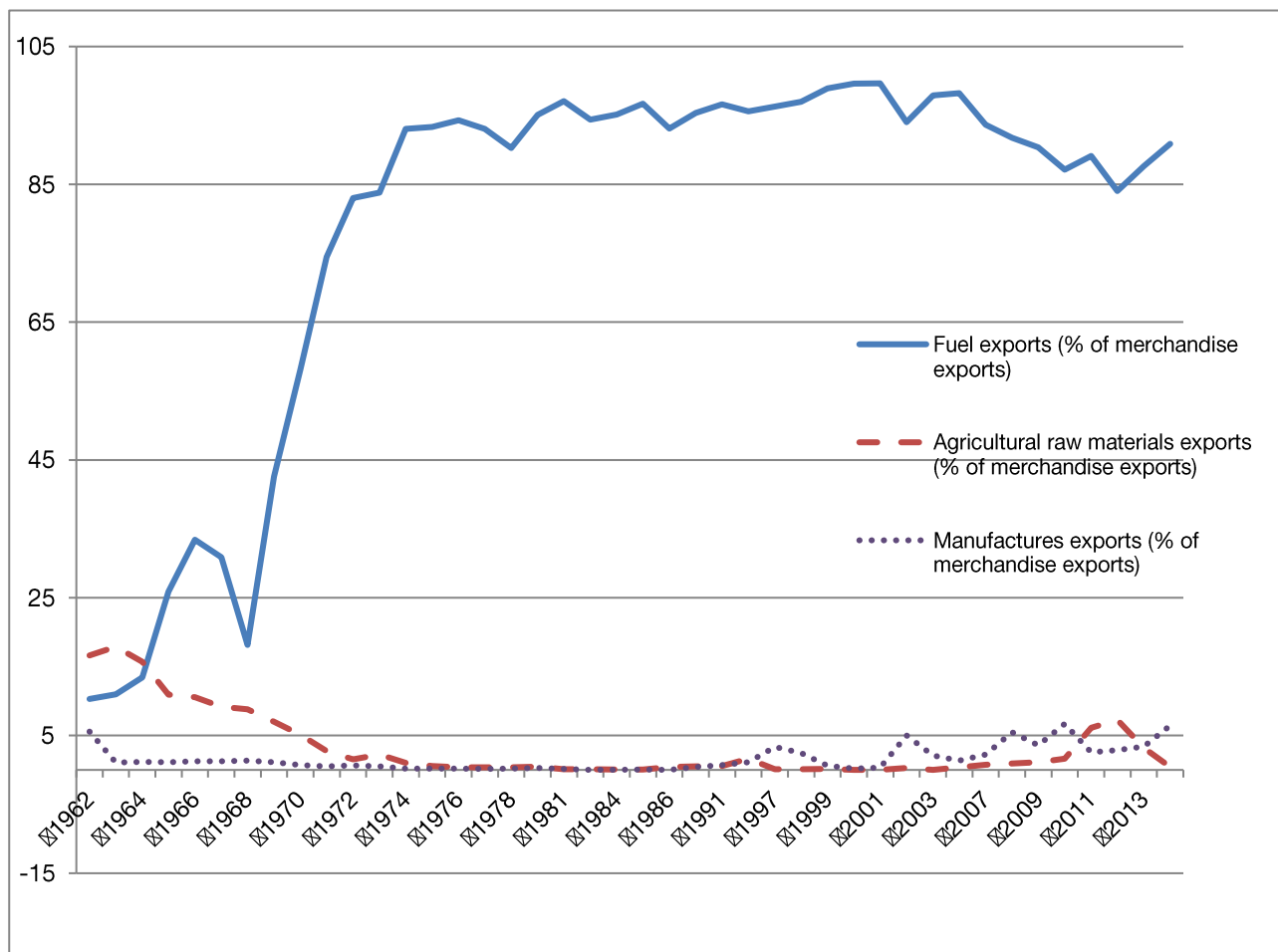
The end of the oil boom in 1982 exposed Nigeria’s chronic current account and balance of payment deficits and a growing external debt stock. As oil accounted for about 25 percent of total output, the 1986 oil price bust led to the contraction of Nigeria’s GDP for two consecutive years. Frequent lapses of negative growth rates resulted in an average growth rate of just 1.5 percent a year between 1983 and 1999. With the 50 percent drop in oil prices, Nigeria’s export earnings fell from about \$25 billion in 1980 to \$6.4 billion in 1986. It was in this context that Nigeria adopted an IMF backed Structural Adjustment Programme (SAP) (Iyoha and Oriakhi, 2008). In the years that followed, economic growth resumed with increased contributions from agriculture and manufacturing. However, by the early 1990s, with the rise in international interest rates in the early 1980s, Nigeria became one of the 15 most indebted poor countries (Iyoha and Oriakhi, 2008). In 1993, Nigeria’s external debt per capita of \$300 was substantially higher than the country’s income per capita at official exchange rates, thus highlighting major dysfunctions in the Nigerian economy.

Figure 2: Nigeria's annual GDP growth (in real prices), 1961-2014



Source: World Bank, World Development Indicators

Figure 3: Composition of Nigeria's exports, 1962–2014



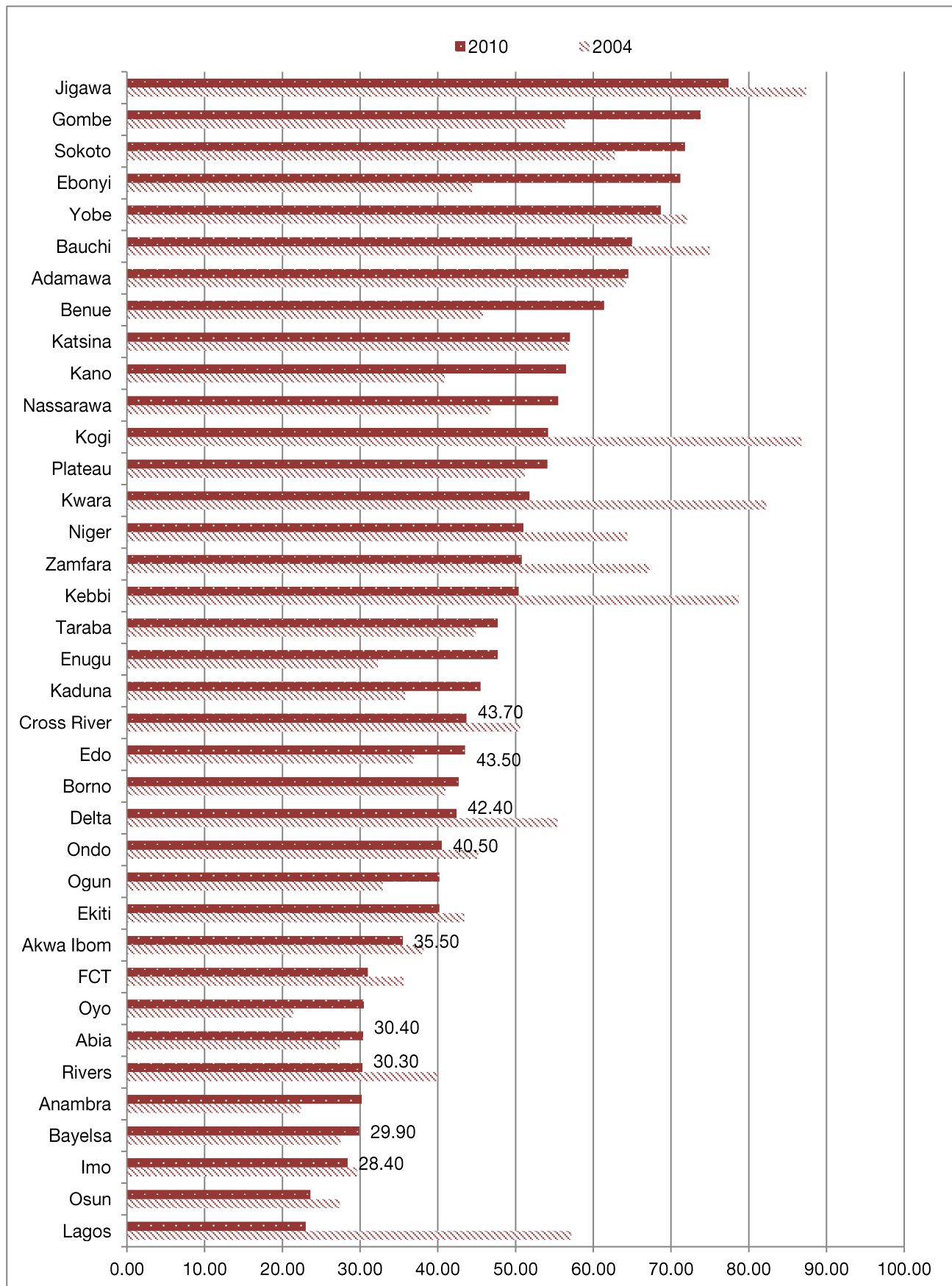
Source: World Bank, World Development Indicators.

Poverty and inequality

Revised data from the Nigerian Bureau of Statistics (NBS) using adult equivalent scales indicate that the incidence of absolute poverty at the federal level declined slightly, from 48.4 per cent to 46 per cent at the national level during that period. The incidence of poverty increased in three oil-producing states, namely Edo, Bayelsa and Abia, whereas it fell in Delta, Cross Rivers, Rivers, Akwa-Ibom, Ondo and Imo (figure 4). Poverty incidence increased during 2004–2010 in some of Nigeria's largest rice producing states, namely Kaduna, Benue, Ebonyi, Taraba, Kano and Borno. It is possible that as the effects of the nascent agricultural reforms were not yet felt then. In contrast, the poverty headcount ratio fell in Kebbi, a state with high potential for agricultural development. Poverty also decreased in Zamfara, one of the two top performers among states with regards to the speed of obtaining a construction permit in the World Bank's doing business indicators (World Bank, 2010).

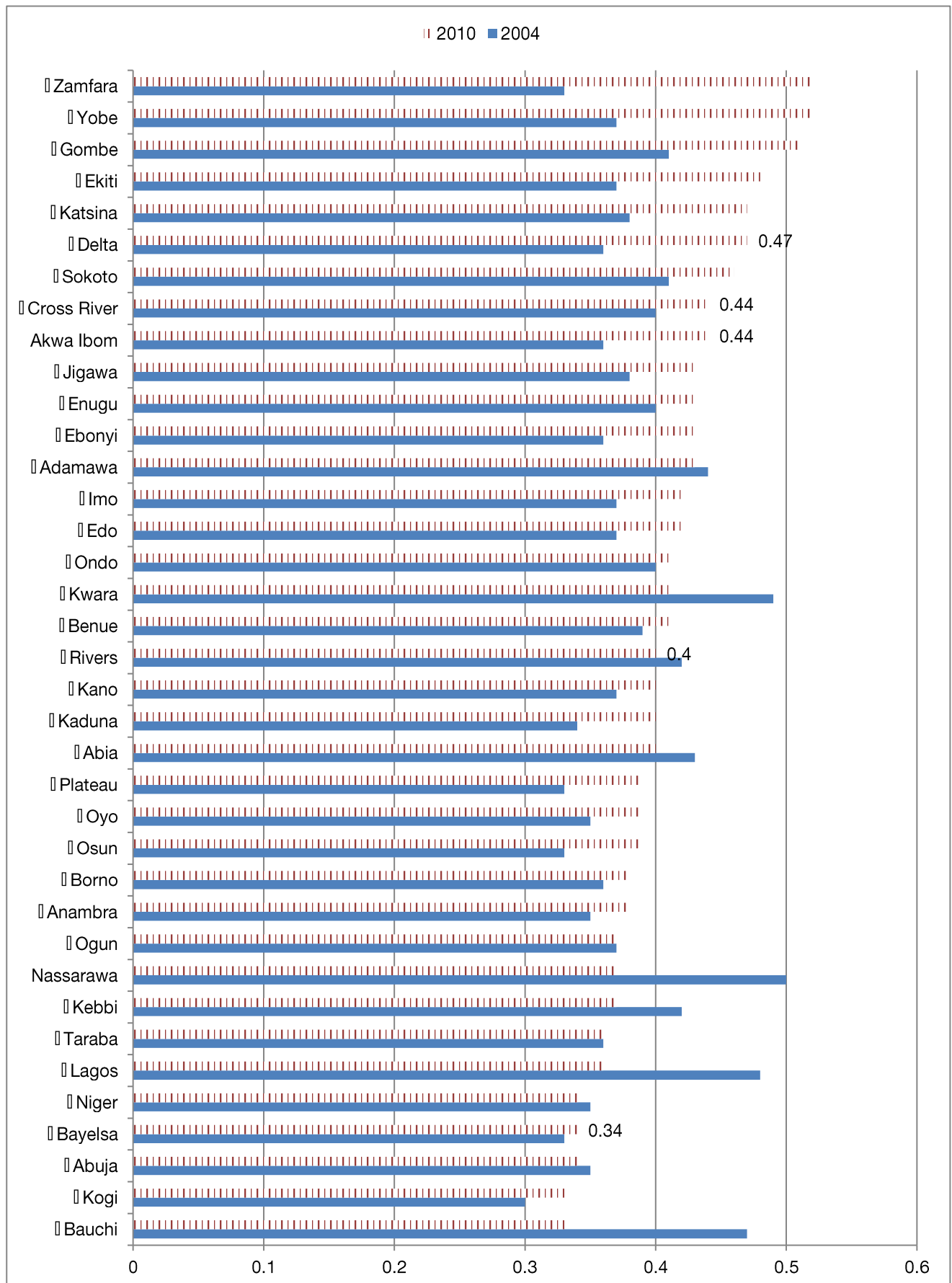
With regards to inequality, at the disaggregated level, wealth concentration increased 29 states out of 36 during 2004–2010 (figure 5). The 10 states where the Gini coefficient was highest in 2010 include three out of five oil producing states, namely Delta, Cross River and Akwa Ibom. The roots of the trend in wealth concentration can be traced by to the 1970s. During that decade, the richest 5 percent controlled 38 percent of income in Nigeria whereas the poorest 20 percent accounted for 7 percent of available income (Adelman and Morris, 1971). This greater inequality of wealth was attributed to the oil boom (Bienen and Diejomoah (eds), 1981). Between 1985–1992 the extremely poor became poorer whilst the standard of living for other groups improved (Canagarajah et al., 1997).

Figure 4: Poverty incidence at State level during 2004-2010



Source: Government of Nigeria, <http://www.nigerianstat.gov.ng/>

Figure 5: Inequality at State level during 2004-2010



Source: Government of Nigeria, <http://www.nigerianstat.gov.ng/>

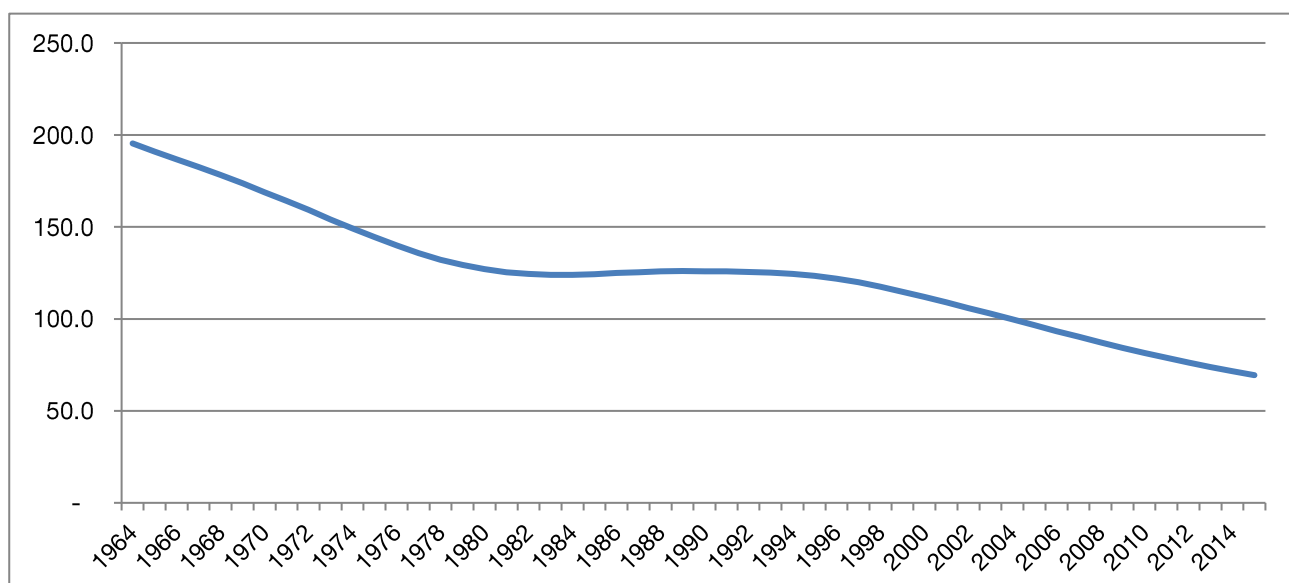
Health and education

The oil boom of the 2000s was not accompanied by a boom in expenditure on social sectors in Nigeria. For instance, public expenditure on health represented only 1.7 percent of GDP in 2013 (World Bank, 2014a). These low levels of budget allocated to the social sector are, in turn, partly explained by deficiencies in tax collection by the Federal Government. The contribution of taxes as a percentage of GDP was of 3.2 percent on average between 2005 and 2012 in Nigeria, well under the average of 16.7 percent in Sub-Saharan Africa. These deficiencies have led Nigeria to be classified 179 out of 189 on ease of tax payment (PwC, 2015b). In addition, in recent years, Nigeria's spending on economic and social sectors has been substantially reduced by the weight of current expenditures. As wages of public sector workers claim 80 percent of the total amount, only a minor proportion of oil revenue trickles down to social sectors (Ekor and Adeniyi, 2014).

As a result, the years of the implementation of the local content Act coincided with contrasted progress on health and education indicators. Infant mortality rates at the national level also declined significantly over the four decades, moving from 195 per thousand at independence to about 100 per thousand in 2004 and further down to 69.4 per thousand in 2015 (figure 6). Reported cases of malaria (figure 7) also indicate good progress at national level and across most of the states. Access to safe drinking water has also improved at national level and in the majority of oil producing states despite variations at state level. In oil producing states, these figures show notable progress compared to the past. Official figures cited in the 2006 Niger Delta Master Plan indicate that life expectancy dropped from about 60 years in the late 1970s at the peak of the oil boom to 47.5 years in 1999 and 46.8 years in 2000. Nevertheless, Nigeria's performance on social indicators is far below that of other middle-income developing countries. There are for example 840 maternal deaths per 100,000 live births in Nigeria, 27 times more deaths than Malaysia (World Bank, 2014a). With regards to primary school enrolment (figure 8), numbers seem to remain constant overall despite an increasing population. The number of children enrolled has even decreased in some oil producing states. As of 2015, thirty percent of youth, aged between 15 and 24, have not completed more than primary education. In addition, illiteracy rates are high in many states, especially among girls in Northern states (World Bank, 2015a).

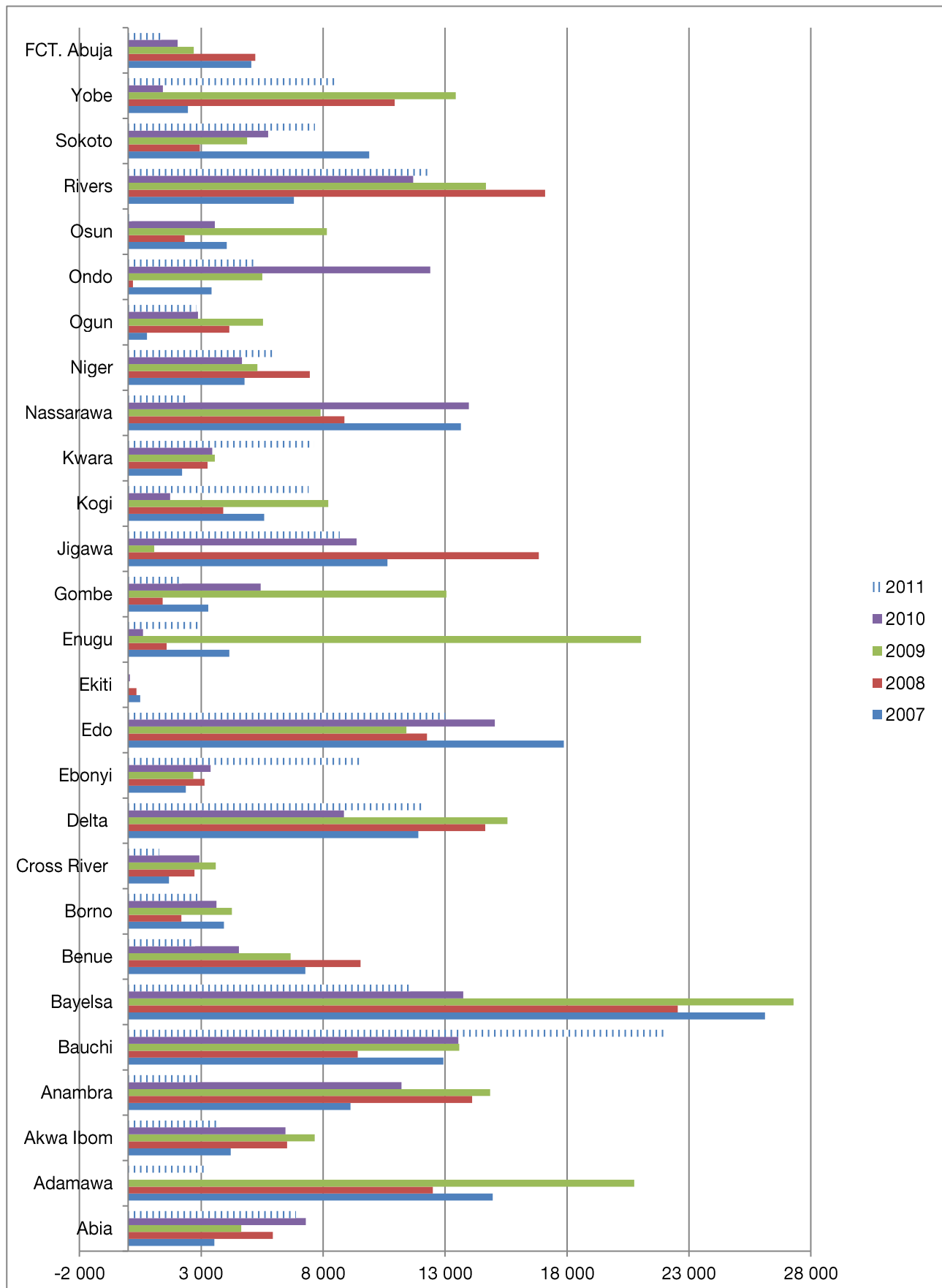
Overall, changes in socio-economic indicators proved to be mixed and were all below expectations and far below the objectives laid out in the Vision and different strategy documents. The period of implementation of Nigeria's local content policies was not associated with a transformational trajectory of Nigeria's socio-economic development.

Figure 6: Infant mortality rates in Nigeria, 1964-2015



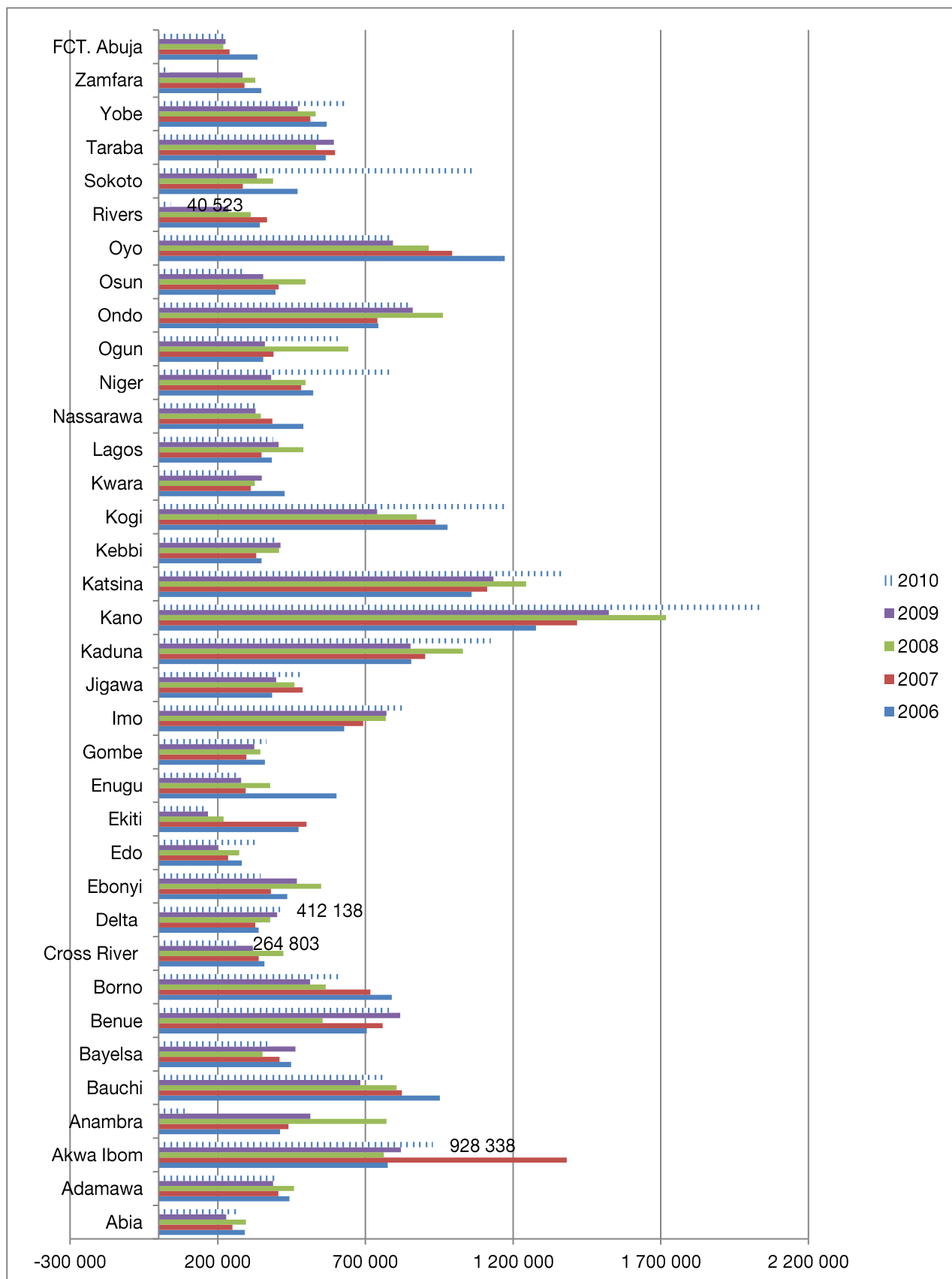
Source: Government of Nigeria. 2015. <http://www.nigerianstat.gov.ng/>

Figure 7: Reported cases of malaria in Nigeria, national and state levels, 2007-2011



Source: Government of Nigeria, <http://www.nigerianstat.gov.ng/>

Figure 8: Number of children enrolled in primary school in Nigeria, state level, 2006-2010



Source: Government of Nigeria, <http://www.nigerianstat.gov.ng/>

Section 4. Discussion of the findings

Drawing on the literature on oil and development, this section discusses possible causes to the findings of the previous section. It singles out the role of governance in the oil sector in framing the Nigerian development outcomes and some implications of the pitfalls of the Nigeria case for oil dependent African economies.

Oil and the natural resource curse

Oil spurred a high level of attention from policy makers and advocacy organisations alike (Government of Nigeria, 2013). In light of deficiencies noted in audits of the sector, the Nigeria Extractive Industries Transparency Initiative (NEITI), for instance made a number of recommendations for remedial actions. Most of these recommendations were not implemented (Nigerian Natural Resource Charter, 2014). At the federal level, the Nigerian's blueprint for economic transformation set growth objectives at unrealistic levels. Estimates of oil prices could not be adequately foreseen at the time of its design, partly justifying the errors in calibrating the forecasts. In addition, the stated objective of 75 percent of local content did not give full consideration of the initial conditions of the Nigerian economy. In contrast, the Fiscal Responsibility proved to be a good foresight as it helped Nigeria during the 2008 financial crisis as it allowed the government to draw from the \$22 billion accumulated in the Excess Crude Account to smooth the budgetary effects of oil price volatility. However, the drastic decline in oil prices on international markets re-ignited the evidence of structural vulnerability in Nigeria's oil dependent economy.

Similarly, the reversal of policy neglect of the agricultural sector was slow to show substantial impact. At independence, Nigeria was self-sufficient in staple foods and performed well in a number of export crops, including in palm oil (60 percent of global exports), groundnut (30 percent) and cocoa (15 percent). With the rise of the oil economy, in 1975, Nigeria became a net food importer and by the early 1980s, and its agricultural imports bill exceeded its agricultural exports. Agriculture's share in total output fell from an estimated 64 percent in 1960 to 33 percent in the 1990s (Iyoha and Oriakhi, 2008). By the 2000s, Nigeria global share of exports of each of its export crops averaged about 5 percent and agricultural growth has averaged just over 2 percent since 2010 (World Bank, 2014a). Similarly, the impact of oil on industrial development remains far below its potential following the demise of the manufacturing sector that followed the 1970s. In the years that followed, Nigeria's high debt service ratio in the 1990s led to insufficient foreign exchange to finance the import of material and intermediate goods for the agricultural and manufacturing sectors (Iyoha and Oriakhi, 2008). Additional unfavorable circumstances contributed to the decline of key sectors such as the textile industry. It employed about 250,000 people in its heyday with 175 textile mills running in the country up to the mid-1980s. By 2010, the number of workers employed in the mills fell to 25,000 (Raine, 2009).

Nigeria's case confirms earlier evidence that, in the African context, economic linkages in extractive sectors have generally been scarce and spillovers into the broader economy negligible (Bwalya, 2006; Akinlo, 2004; Morrissey, 2012). On the positive side, the evidence on capacity building shows that policies and institutions related to local content policies in the oil sector allowed the development of a few leading domestic companies that are able to compete internationally in the African oil sector. However, Nigeria's local content policy framework did not succeed in creating significant backward and forward linkages at the national and state levels. The focus on ownership and job creation differs from the choices made by countries such as Norway and Malaysia, where local content has been high and has been defined as value added to the host country rather than in terms of ownership of the supplier. In the same vein, no special earmarking was made to enable oil rents to be used for social development. At the state level, major statements of intent were laid out in the Niger Development Master Plan (Niger Delta Development Commission, 2006). The Niger Delta benefited from an Amnesty programme that created an impetus for infrastructure investments and capacity building programmes aimed at contributing to job creation (Government of Nigeria, 2013). However, by 2015, development objectives laid out in the Plan were far from being achieved.

Oil and Governance

Nigeria's President during the period under study acknowledged right-based and rule-based governance as the basis for optimising socio-economic development (Government of Nigeria, 2013). The fight against corruption resulted in a number of high level prosecutions. However, Nigeria still ranked among the world's bottom 25 percent on rankings of global perceptions of corruption (Transparency International, 2016). This constitutes a major progress compared to its ranking as the second worst country in the world in corruption rankings in the 1990s (McKinsey Global Institute, 2014). Despite the improvement in some corruption rankings during the period under study, Nigeria remained one of the most cited nations involved in international bribery schemes in reports by specialized press. Bribery and corruption were not limited to the oil economy. The World Bank Enterprises Survey, for instance, reveals that 26 percent of firms interviewed have been subject to requests for bribe payments by specific regulatory and administrative officials require such as tax inspectors or regulators of government contracts. These estimates are well above the SSA and lower middle-income country averages, respectively of 17 and 15 percent (World Bank, 2014b). The combined effects of bad economic governance and wider structural constraints may have contributed to the limited backward and forward linkages from the oil sector.

In the wake of the Panama Papers, press reports revealed the extent of corruption related to oil in Nigeria, most of which related to facts during the design and implementation of the country's local content policy.⁴ It revealed to the general public that the former Governor of the Delta State, is currently serving a 13-year conviction in the UK for ten counts of money laundering and conspiracy to defraud. Some of these properties were acquired in 2001. Similarly, a former Nigerian Minister of Petroleum, has been implicated in facilitating the transfer of payment of \$1.1b to a shell company he anonymously owned. As recently as in October 2015, Nigeria's oil minister during 2010-2015, the architect of the National Content Act, was arrested in the UK based over money laundering and bribery allegations. Although she has been released on bail since then, the case is still under consideration by a UK court.⁵ Both the treasury and the NNPC are cited as having played a key role in the mechanisms that led to the diversion of funds.

Loopholes in the 2010 Act may have provided good ground for rent seeking. The Act legitimises the concentration of power in the hands of the Minister of petroleum without making any provisions for checks and balances. As stipulated in a dozen of articles throughout the Act, the Minister of Petroleum Resources is responsible for policy formulation, oversees the activities of all actors in the oil industry through the Department of Petroleum Resources, which regulates the collection of royalties, taxes and rents from oil companies. More specifically, the Minister has authority over the regulations for awarding oil blocks, oil field licenses, and oil lifting licenses for all contracts. Investigations on transactions involving international oil companies, for example, have revealed that billions of dollars payments for oil blocks are officially made to the government before being diverted to offshore accounts bearing the name of the petroleum minister. The 2010 Act also allows NCDMB to "accept gifts of money, land or other property on such terms and conditions, if any, as may be specified by the person or organization making the gift" (Art. 100). Again, there is no mention of mechanisms that would pre-empt donations of gifts that would amount to bribery. Similarly, though analysts and industry stakeholders acknowledge the professionalism and hard work of the Board's staff, no account is made of means for oversight over the Board's activities, including the management of the Fund (Ovadia, 2013). Nor is there full disclosure of the process and mechanisms behind the selection of the beneficiaries for the Fund. The Act was passed regardless of these deficiencies, hence raising questions on the extent of the hold of the patronage network over Nigeria's institutions and policies.

The Nigerian case supports the school of thought that the impact of natural resource abundance on growth is mediated through policies and institutions. Natural resource abundance is detrimental to

4 <http://linkis.com/www.one.org/africa/p/vHEVt>

5 <http://www.bbc.com/news/world-africa-34430597>

institutional quality, and therefore, ultimately detrimental to growth (Acemoglu et. al., 2001). In addition, oil and minerals rich economies lead to massive rents in a way that food or agricultural resources do not, which in turn make them more vulnerable to lobbying rent-seeking activities (Sala-i-Martin and Subramanian, 2003). Nigeria's experience during 2000-2015 validates the argument that natural-resource abundance with rent-seeking activities (Torvik, 2002; Robinson et al., 2006; Sandbu, 2006). Worse still, as court proceedings uncover billions of dollars embezzled by the oil establishment in Nigeria, it is ascertained that "oil corrupts and excess oil corrupts more than excessively" (Sala i Martin and Subramanian, 2003). The examination of governance indicators shows that institutions responsible for oil policies have remained enclaves within government. The practice of past years has shown that the institutionalization of a coordination ministry was not sufficient in tackling the overbearing power of oil "kleptocrats" in the country.⁶

Oil as a fuel for development ?

There are counter-examples that lend support to the inevitability of the natural resource curse. The paths of developed countries such as Finland, Norway and the United States of America (USA) show that a natural resource-based industrialization path can contribute to development. Chile, Indonesia, Malaysia, Sri Lanka and Thailand are among the developing countries that have achieved a successful move from initial conditions of strong concentration in mineral sectors to that of a relatively diversified economic base (Coxhead, 2007). The case of Indonesia is of particular interest considering some similarities with Nigeria. Both countries had broadly identical levels of socio-economic and demographic characteristics in the 1960s. However, contrarily to Nigeria's neglect of its agricultural and manufacturing sectors following the oil boom, Indonesia used a substantial part of its oil revenue to develop both sectors. Known as a "reforming autocracy", Indonesia's government sought to draw on a strong technocracy that understood the risks associated with a minerals-based development strategy (Eifert et al, 2003). The Government designed and implemented development policies explicitly aimed at sustaining economic stability (Gelb, 2010). The contributions of oil to Indonesia's GDP fell gradually from 50 percent in the early 1970s to 25 percent a decade later. By 2004, despite holding 3.7 billion barrels of proved oil reserves Indonesia became a net importer of oil and subsequently left OPEC in 2008 (Norton Rose, 2010).

In the agricultural sector, Indonesia heavily invested in research and development. By the mid-1980s, at a time when Nigeria became a net food importer, Indonesia achieved rice self-sufficiency (Hill, 2000). In addition, the government used very large investments of oil income to develop the natural gas sector, both for export and as an input to fertilizer production. Fertilizer was distributed at subsidized prices, and contributed to boosting yields. The Government also conducted labour intensive community-based programs and investments in local infrastructure, including the construction of schools and roads in rural areas. The latter alone constituted about one quarter of public investment during the oil boom (Auty, 1994). Indonesia then moved towards low-wage manufacturing and adopted an export-oriented strategy in the early 1980s, with FDI attraction among its trademark measures. These policies were combined with cautious management of public spending in the boom years 1974-81. These policies bore results and by 2005, manufactures represented 47 percent of the country's merchandise exports.

The limited changes in Nigeria's socio-economic indicators during the oil boom of the 2000s provide ground for questioning the case for the enactment of local content requirements as a sufficient condition for earning Nigeria to be considered one of the leading petro-developmental states in the Gulf of Guinea (Ovadia, 2015). The narrative is that these states are aiming to turn oil into a development engine mostly through the implementation of local content policies. The prominence gained by these policies has led Ovadia (2015) to assert that local content might be the single most important innovation in energy policy in the developing countries in recent decades. He goes on to add that where they promote local ownership, local content policies generally have a dual nature as they will both benefit local elites and

⁶ The former Nigerian Minister of Finance referred to kleptocracy in Nigeria's oil industry during an interview with the Financial Times (Financial Times, 2015).

have positive socio-economic development effects including in Nigeria. The analysis in previous sections shows that the assertion on benefiting local elites stands whereas that on generating positive developmental effects remains to be seen. To reverse the current trend, major governance reforms are urgently needed both in Nigeria as well as at the international level. In regard of the latter, effective legal and regulatory mechanisms at the global level are essential for detection and prosecution of complex off shore transactions, characterized by multiple intermediaries and high level secrecy (Chatham House, 2013).

As the evidence shown in earlier sections illustrates, Nigeria provides proof that natural resource curse is a demonstrable empirical fact (Sachs and Warner, 2001). Nigeria's difficulties in turning oil revenue into significant development outcomes are the result of the interwoven effects of policy mistakes and governance challenges. Nigeria's case of Dutch disease over decades of dependency on the oil economy reflects illustrates the argument that natural resource-based economies sustain bad policies much longer than non-natural resource dependent economies (Auty, 1993 and 1994). As the evidence above shows, the limited progress on Nigeria's socio-economic indicators during the years of implementation of its local content policies happened concomitantly to cases of money embezzlement by the oil establishment. Policies during 2000-2015 have not halted decades of patronage networks. Oil related rent-seeking activities contribute to fueling political patronage networks in the country (Iyoha and Oriakhi, 2008). The increase in the number of states, for instance, facilitated the development of patronage and the practice of kickbacks for government contracts (Bevan et al, 1992). These long standing features of the Nigerian political economy have hindered the potential of the National Content Development Act in fully contributing to socio-economic development.

Nigeria's experience should constitute a warning for many newly oil rich African countries that are betting on the design of a local content framework for maximizing the development impact of their extractive sector. Beyond the design of a local content framework, oil dependent African countries that wish to replicate oil related success stories would do so in the context of a changing global environment. First, prospects for making the most of the sector might no longer be the same considering heightened awareness of the environmental impact of fossil fuels. At the global level, energy-related activities contribute to about 70 percent of global Green House Gas (GHG) emissions, 60 percent of which is attributed to oil, to its extraction, processing and subsequent combustion. And yet, up to 2015, oil and gas companies spent about half a trillion dollars a year to develop new reserves. This trend prompted the International Energy Agency (IEA) to warn that two-thirds of proven coal and oil resources should remain underground to limit global temperature increases to 2 degrees Celsius (IEA, 2012).

Second, the oil sector is knowledge intensive. Amongst developed countries, the US development trajectory shows that the development of knowledge economy in the mineral sector was key in making natural resources a propeller of the development of the manufacturing sector (Wright and Czelusta, 2004). Features of a knowledge economy were present throughout the oil supply chain from growth exploration, to transportation, to geological knowledge, and to the technologies of extraction, refining, and utilization. Other central determinants of the positive impact of mineral resource abundance on the US economy since the 1870s include the following: an accommodating legal environment; collective learning in the sector; profitable returns on large-scale investments; investment in the infrastructure of public knowledge; and education in mining, minerals, and metallurgy. Above all, successive governments carried forward the determination to establish the right enabling environment for exploiting the country's mineral resources for developing the manufacturing sector (Wright and Czelusta, 2004). And finally, considering constraints to accessing capital and the widening technological gap between oil majors and other companies, the scope for catching up remains limited for African companies.

Section 5. Conclusion

The adoption of the National Content Act in 2010 and the design of successive regional development master plans for the Niger Delta region gave rise to hopes and expectations that oil would generate ripple effects on its domestic non-oil economy and on the standards of living of the Nigerian population. However, Nigeria has not yet achieved the stated objective of reaching 75 percent of local content in

its oil sector. Oil policies and institutions established during 1999-2015 have not reversed the trend of decades of weak impact of oil on social development outcomes in the country. In addition, by 2015, policy reforms have not fully resurrected the agricultural sector nor generated the conditions for a faster development of the manufacturing sector. Governance challenges contributed to making ineffective existing mechanisms for catalyzing and monitoring the impact of the oil sector on broader socio-economic development. As a result, successive oil booms, including that of the 2000s, became missed opportunities for turning oil revenue into finance for development in Nigeria.

Regardless of the pitfalls of the development impact of the country's oil sector, everyday economic life in Nigeria is vibrant and innovative. The new government's drive for diversification and its focus on the fight against corruption could constitute a new basis for further unleashing the potential of Nigeria as Africa's economic powerhouse. The country's experience shows the need to better manage expectations on the benefits of local content policy. Although essential to catalyzing the development benefits of the extractive sector, local content cannot be the single flagship programme in efforts to do so. Nor can strategy documents accompanied by a vision statement for a 10-year period be sufficient for generating such benefits. To be more effective, local content policies must be integrated within a broader development policy framework complete with carefully designed comprehensive implementation plans and rigorous monitoring mechanisms and an efficient and effective tax collection system. Examples of countries that have been successful in turning natural resources into a blessing show that embarking on such a path requires careful policy planning, coordination and above all relentless execution of an all-encompassing development policy framework. Furthermore, increased awareness of the environmental damage of fossil fuels, a rapidly changing technology landscape in oil exploration and competition from alternative energy sources should lead to the identification of a new policy mix for oil rich African economies. And finally, Nigeria's severe macroeconomic challenges that led to depression in 2016 should constitute a warning of the dangers of relying on oil as a catalyst for development.

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