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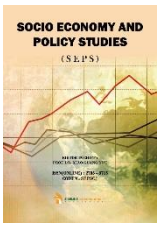

RESEARCH ARTICLE

INNOVATIVE SUSTAINABILITY IN AN EMERGING ECONOMY: NIGERIA'S ECONOMIC DIVERSIFICATION AND HISTORY WITH DEVELOPMENT GOALS

Chimdiya Onyeka, Paulina Onyeka*

Research and Innovation, Diya Solutions, 7 Bell Yard, London, WC2A 2JR
Corresponding author e-mail: paulina_onyeka@diya-solutions.com

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ABSTRACT

Nigeria's emerging economy has gone through a number of phases and dependencies since independence in 1960 and is currently Africa's largest economy. The majority of government revenue comes from oil but the oil economy presents a lot of challenges not least from a sustainability perspective. Partly to address some of these challenges, Nigeria has also gone through various internal and global development programmes including the Millennium Development Goals and currently the Sustainable Development Goals – with varying degrees of performance recorded. This study systematically reviews Nigeria's history with these targets and makes economic diversification recommendations based on the findings. Specifically, the study uniquely and chronologically evaluates the evolution history of the Nigerian economy and for the first time, presents a much-needed analysis of rapid diversification potentials for Nigeria underpinned by an established and innovative sustainability framework.

KEYWORDS

sustainability, economic diversification, oil economy, emerging economies, Nigeria, tourism, agriculture, entertainment, sustainable development goals.

1. INTRODUCTION

With a population of 200 million and GDP of US$498 billion, Nigeria is Africa's largest economy, and the economy is largely based on oil revenues (2/3 of government revenue) (United Nations, 2019; IMF, 2022). The World Bank ranks Nigeria as the 27th-largest economy in the world in terms of nominal GDP and the 24th largest in terms of purchasing power parity (World Bank, 2017). Nigeria's debt-to-GDP ratio was reported as 16 percent in 2019 (Ceicdata) with Effoduh submitting that economic development was hindered in Nigeria by years of military rule and mismanagement (Effoduh, 2015). The economic reforms that accompanied the restoration of democracy in 1999 put Nigeria back on track towards achieving its full economic potential. Nigeria is expected to have the highest average GDP growth in the world between 2010 and 2050 and according to Polgreen, Nigeria made history in April 2006 by becoming the first African country to completely pay off its debt (estimated $30 billion) owed to the Paris Club (Polgreen, 2006).

Resource extraction constitutes the most important sector of the Nigerian economy (Eyre and Agba, 2007). Petroleum is the most important source of state income and Nigeria is responsible for about 2.7 percent of the world's oil supply. Majority of the crude oil is extracted from the Niger Delta region. Production has often been interrupted by protests, as the inhabitants of the oil-producing regions have demanded a larger share of the revenues (Ejobowah, 2000).

There are vast reserves of natural gas, but most of the gas produced is a by-product of crude oil. In the past this was burned off, as there was no market for it, but production has since increased, and Nigeria became a globally ranked exporter of this commodity. However, with the continuing global move away from fossil fuelled forms of energy towards greener sources, Nigeria is waking up to the potential realities of diminishing oil revenues. As the 14th largest oil exporter in the world and with an economy largely dependent on oil revenue, the calls for the diversification of Nigeria's economy have grown louder in recent times (US Energy Information Administration, 2015).

A review of available literature indicates that, due in part to these diversification calls, some authors have written about the Nigerian economy with some attention being paid to different economic time periods. Some authors have also written about sustainable development within Nigeria as an emerging economy. There has however not been an attempt to present these areas together nor to utilise this intertwining to highlight possible paths forward for Nigeria within an established and innovative sustainability framework. This study will therefore explore the historical evolution of Nigeria's economy from a sustainability viewpoint and dating back to Independence in 1960 and with relevance to Nigeria's aims of achieving development goals and targets.

2. METHODOLOGY

The methodology is centred on this study's objective to use a Systematic Literature Review (SLR) to chart the chronological evolution of the Nigerian economy since Independence, placing this history within an innovative sustainable development framework and then making recommendations for future progress. Due to the interdisciplinary nature of the subject matter, a broad search strategy was employed. Databases such as EBSCO and ProQuest were used for the search of relevant literature. In addition, manual searches of references linked to diverse sectors of the Nigerian economy were performed within the peer-reviewed materials selected. Date restrictions were from 1960 (Nigeria's year of independence) to present. The last date of search was 07 October 2022.

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A scoping review was undertaken in order to identify the relevance and size of subject areas within the literature. Keywords were identified to retrieve the literature. The final search string used, with Boolean operators is: (nigeria*) AND ("development plan") OR ("sustainable development") OR ("colonial africa") OR ("oil* economy OR production") OR (agricultur*) OR ("development goals") OR ("econom* diversif*") Search terms were similar for all databases likely to hold relevant material. Initial searches were restricted to the title, abstract and keywords of journal articles. Excluded materials from the results include 'grey literature' such as governmental and non-governmental reports, unpublished thesis and dissertations, newspaper and magazine reports. Also excluded were chapters in books, papers in conference proceedings, non-research papers and papers written in a language other than English.

Mendeley Reference Manager was used to remove repeated entries across databases. Three independent reviewers were used to assess the eligibility of the studies shortlisted for review and that they accurately reflect the aims of this study. The shortlisted materials were then subjected to a detailed review. The identification, screening, inclusion and/or exclusion of sources were performed in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Moher et al., 2009). A flow diagram for the methodology applied in this SLR is presented in Figure 1 below.

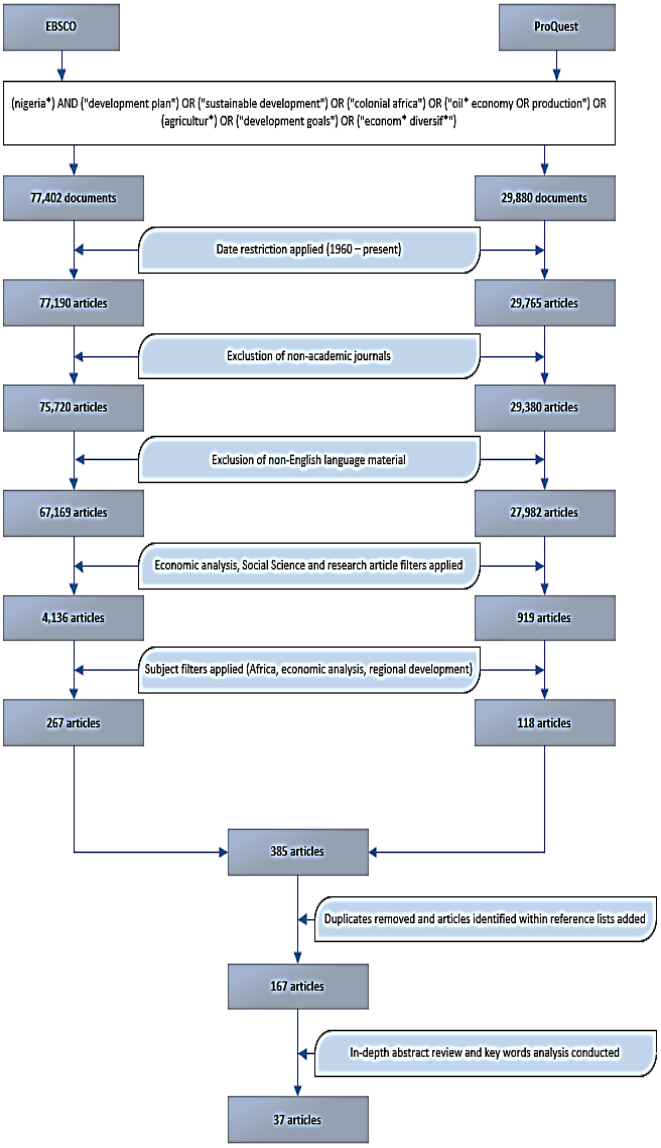

Figure 1: Flow Diagram of Systematic Literature Review

3. FINDINGS

3.1 Descriptive Analysis

In terms of journal spread, the selected 37 papers are published in 34 journals (Figure 2). Six papers, representing a total of 15 percent of the selection, appear in the same three journals. This is highlighted in Figure 3.

Figure 1: Selection Distribution by Journal

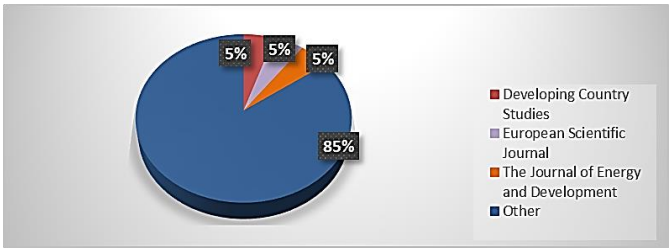

Figure 2: Journals with Higher Representation within the Selection

In terms of periodic spread, the papers are also analysed based on the distribution of the selection by years. Such analysis highlights the rise over time in research output on the subject matters of this study. The analysis indicates an increase in research output around 2009 with occasional spikes punctuating an almost even spread of research interest over the period in question (Figure 4).

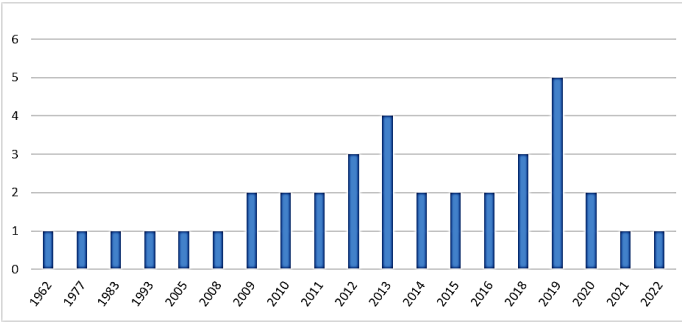

Figure 3: Distribution of Selection by Publication Year

In the following section, an analysis of the literature is provided. The main cluster of eras of Nigerian economic history and development are described. The sustainability framework for applying the outcome of the SLR is highlighted. The main challenges that confront the Nigeria's achievement of development goals are observed. The main future research avenues resulting from this review is presented.

3.2 Literature Analyses

The table below presents a cluster classification of the selection. The analysis classified the selection into different eras covering different aspects of the economic history covered by this study.

Table 1: Journal Articles Classified by Cluster		
Classification	**Authors**	**Published year**
The Independence Era	Rivkin, A.	1962
	Elam, and Uko,.	1977
	Ukaegbu,	2005
	Steyn,	2009
	Badru,	2010
	Alesina *et al.,*	2011
	Mohammed,	2013
	Ahungwa *et al.,*	2014
	Korieh,	2018
	Yagboyaju,	2019
	Okitiakpe, *et al.,*	2019
	Nwamuo *et al.,*	2020
The Oil Boom Era	Cochrane and Struthers,	1983
	Eleri,	1993
	Ugochukwu, and Ertel,	2008
	Jernelöv,	2010
	Beiser,	2011
	Watts,	2012
	Chinedu, and Chukwuemeka,	2018
	Abayomi *et al.,*	2019
	Enyoghasim, *et al.,*	2019
	Johnston, *et al.,*	2019
	Obike, *et al.,*	2020
The Development Goals Era	Enabudoso, *et al.,*	2009
	Ojo,	2012
	Okeshola,	2012
	Ayodele *et al.,*	2013
	Omowaleola,	2013
	Ugwuanyi,	2013
	Ajiye,	2014
	Sanubi and Akpotu,	2015
	Odunyemi,	2015
	Eromon,	2016
	Osazee-Odia,	2016
	Inegbenebor *et al.,*	2018
	Nwokwu and Ndukwe,	2021
	van Vuuren et al.,	2022

Cluster classification into eras was adopted after in-depth reading of the articles. The main eras of classification that emerged and their respective proportions (Figure 5) are as follows:

1. The Independence Era (32 percent): Articles in this cluster cover many issues ranging from the struggle for independence, the early agriculture-based economy and the Nigerian Civil War.
2. The Oil Boom Era (30 percent): Articles in this cluster deal with the immediate economic aftermath of the War and the environmental impacts of the oil economy.
3. The Development Goals Era (38 percent): Articles in this cluster deal with the UN Sustainable development goals, the millennium development goals and other national development targets within Nigeria.

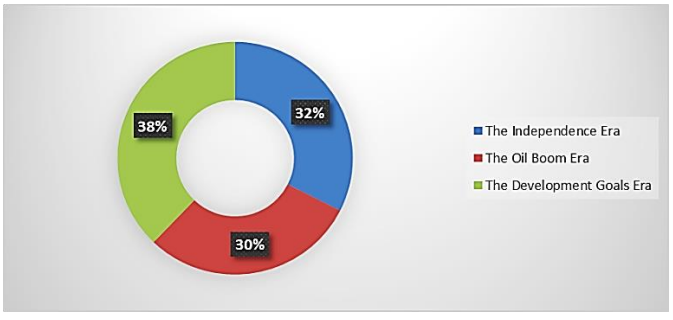

Figure 4: Proportion of Selection by Cluster

In the following sub-sections, this study first reviews the sustainability framework and then characterises the SLR's main research clusters (as already listed). Finally, the output of the SLR is used to make recommendations within the sustainability framework.

4. Discussion

To make this study even more relevant to management, innovation and sustainability stakeholders, this discussion of the findings aims for an understanding of the history of the Nigerian economy from a sustainability viewpoint and split across eras. This forms the baseline assessment of Nigeria's current position in relation to the visions of a future with a managed and sustainability-driven economy. Conclusions will therefore deliver innovative impact and recommendations made will be based on analyses done in line with the ABCD approach of the Framework for Strategic Sustainable Development (FSSD) described below.

4.1 Framework for Strategic Sustainable Development (FSSD)

A group of researchers describe the Framework for Strategic Sustainable Development (FSSD) – originally known as The Natural Step (TNS) (Eriksson and Robèrt, 1991; Broman and Robèrt, 2017). This innovative framework provides basic rules to maximise relevance and impact in any practical application of its sustainability principles. These principles provide the understanding that for a society to be sustainable, nature is not subject to systematic increases in the following: concentrations of substances from the earth's crust (such as fossil CO2, heavy metals, and minerals); concentrations of substances produced by society; degradation by physical means (such as deforestation and draining of groundwater tables); and in that society there are no structural obstacles to people's health, influence, competence, impartiality, and meaning. According to The Natural Step, FSSD further stipulates an ABCD method for applying the framework as follows (The Natural Step, 2018):

A - for **Awareness** or an understanding of what sustainability means for the people, businesses and the planet. The framework requires that a science-based and whole-systems approach is utilised in developing a vision of what future success would look like for the subject matter.

B – for **Baseline Assessment** to assess and identify any gaps in the existing approach and how current activities contradict the sustainability principles. Such an assessment enables the early identification of critical sustainability issues, their limitations and any potential impacts.

C – for **Creative Solutions** that are specifically designed to address gaps identified in the previous gaps analysis. Such innovative solutions need to be bespoke for the subject matter and aim to achieve success as defined during the Awareness phase. The ultimate purpose of any solution is to innovatively bridge the gap between the present and the vision of the future.

D – for **Devising a plan** of action. This step addresses the implementation strategy for any creative solutions already designed to fill the gaps identified during the baseline assessment. This step decides what needs to be done and when. It prioritises the harvesting of low-hanging fruit in order to achieve quicker benefits and decide what longer term benefits and sustainability planning would look like.

For the purposes of underpinning this review study to the FSSD framework, the following conceptual descriptions are necessary:

4.1.1 Sustainability

A practical description of sustainability are in the words of Paul Hawken noting 'Leave the world better than you found it, take no more than you need, try not to harm life or the environment, make amends if you do' (Hawken, 1993). Sustainability is therefore an economic state which does not reduce the ability of the environment to deal with the demand put on it by people. Purvis, Mao & Robinson describe sustainability along the lines of three pillars namely social, economic and environmental (Purvis et al., 2018). The International Ocean Institute advises that sustainability used to mean environmental sustainability and simply meant using natural resources in a way that people in the future could continue to rely on their yields in the long term (International Ocean Institute, 2015). Gadgil and Berkes point out that many ancient cultures had practices which restrict the use of natural resources by inhabitants (Gadgil and Berkes, 1991). A closely linked term to sustainability is 'sustainable development' and UNESCO describes sustainable development as referring to the many processes and pathways to achieve sustainability. Both sustainability and sustainable development are linked with the three pillars as described.

4.1.2 Economic Diversification

This is as proposed by the United Nations Framework Convention for Climate Change (UNFCCC) to mean shifting an economy away from a single income source toward multiple sources from a growing range of sectors and markets. Traditionally, it has been applied as a strategy to encourage positive economic growth and development. The UNFCCC however extends the context to climate change adaptation wherein it assumes new relevance as a strategy to diversify away from vulnerable products, markets, and jobs toward income sources that are low-emission and more climate-resilient (Zhang, 2003).

4.2 Era 1: Independence, Agriculture and Civil War (1960-1970)

At Independence from Britain in October 1960, Nigeria inherited an economy that was heavily reliant on agriculture. Yagboyaju and Rivkin posit that the 1962-1968 development plan was Nigeria's first national plan and that, among several objectives, it emphasized the introduction of more modern and private sector led economic growth (Yagboyaju, 2019; Rivkin, 1962). This plan also pushed innovative agricultural methods including equipment such as hydraulic hand presses for oil palm processing and a greatly expanded agricultural extension service. The focus during this era was therefore on policies to enhance more sustainable and equitable growth in agriculture in the pursuit of an export-led growth. During this period, Nigeria was effectively demarcated into three main regions with different agricultural produce focus thus: the eastern region produced palm oil, the northern region produced groundnut and the western region was focused on cocoa. During this era, these regions not only excelled in their produce, but they also became renowned for them; so by the mid sixties, Nigeria already had the famous groundnut pyramids of the North and the oil and cocoa plantations of the East and West respectively.

According to Elam and Uko, and Korieh, between 1960 and 1966, Nigeria's palm oil production remained relatively large and the revenues received by the farmers were high enough to warrant investment in trading and transportation (Elam and Uko, 1977; Korieh, 2018). This facilitated the penetration of roads into remote villages and promoted the expansion of trade as well as encouraged urban migration. The importance of yams, cassava and other farm products as sources of cash also increased with urban growth. This reduced rural dependence on export production, although palm oil remained an important source of cash. This resulted in Nigeria being self-sufficient in food in the 1960s as well as a net food exporter. The exports averaged 1.3 million tonnes a year up to 1970. Korieh continues that the local politics during this era enabled the various parts of Nigeria to rely mainly on agriculture as the major source of state and private revenue (Korieh, 2018). For all involved, it was all about agriculture at that point and according to the agricultural sector in the early sixties contributed about 62% percent to gross domestic product (Ahungwa et al., 2014).

However, as noted by many African states like Nigeria were artificially structured by colonisers like the British, bringing different ethnic nationalities together located in different parts of the country with distinct languages, histories, cultural backgrounds and values (Badru, 2010; Alesina et al., 2011; Nwamuo et al., 2020). These different cultures were forced to coexist together under the same political unit with little meaningful effort dedicated to cohesion. Mohammed asserts that this unification of different peoples with marked differences was done by the British for economic reasons and the colonial administration sought to use the budget surpluses in Southern Nigeria to offset the deficit resulting from the amalgamation with Northern Nigeria (Mohammed, 2013). Consequently, irrespective of the economic successes of the first decade following Independence, by July 1967 the disagreements across tribal lines had reached breaking point and the Nigerian Civil War was underway.

Internal conflicts do not only slow down the pace of development but also reverse developmental gains. Prosecuting internal conflict results in the diversion of resources meant for national development. These conflicts also result in losses of human and material resources, degrade the environment, and expose nations to undue involvement from external actors (Osondu, 2019). These issues were no different in terms of the impact that the Nigerian Civil War of 1967-1970 had on innovation and sustainable development among the parties to the conflict. Ukaegbu observes that Nigeria, with its immense human and material resources, significant scientific infrastructure has to this day remained unable to manage the much needed technological leap forward (Ukaegbu, 2005).

On the other hand, the smaller Biafra (a secessionist region in Eastern Nigeria between 1967-70 whose secession was the final act resulting in the civil war), saw indigenous scientists and engineers succeed in socially relevant science in the absence of the usual conditions typically considered essential for technological development. Korieh takes an even dimmer view of the impact of the war – that it disrupted cash crop production, especially palm produce export, which had historically been the main source of income for the Biafrans (Korieh, 2018). Trade and commerce in general also diminished due to the general insecurity and the mobilisation of large numbers of men into the army.

Korieh agrees with a declassified intelligence memorandum that during the war, in federally controlled Nigeria, the general population lived in traditional economies with little effect felt of the war (Korieh, 2018; Central Intelligence Agency, 1968). In Biafra, on the other hand, external trade had become confined to smuggling via the creeks and back roads due to blockades of the region by the federal government resulting in a decline in economic activity. Agricultural production of staple foodstuffs was at least only maintained in Biafra by the absorption of about a million refugees from elsewhere in Nigeria. Such production was limited to consumption quantities as exports from the region had virtually ceased.

The Nigerian Civil War ended in 1970 with Biafra being re-absorbed into Nigeria. This also coincided with global rise in oil prices. Nigeria therefore sought to nationalise its then maturing oil industry - with increasing discoveries of oil in commercial quantities in the Niger Delta region. A group of researchers note that prior commercial exploration of oil had been going on for about 20 years - but only by a consortium of Royal Dutch Shell and British Petroleum under colonial rule (Okitiakpe et al., 2019). Steyn disagrees with this position and argues that oil exploration in Nigeria dates back to the beginning of the twentieth century (Steyn, 2009). Regardless of date of inception, there is consensus that following the end of the war, Nigeria was keen to join OPEC and as a result, there was a major shift in focus from agricultural produce to oil exports. The oil economy had arrived.

4.3 Era 2: Oil Boom and the Niger Delta Region (1970 – 2000)

Cochrane & Struthers report that by the 1970s, Nigeria's oil production had risen to 2.0 million barrels per day (Cochrane and Struthers, 1983). Nigeria, thereafter, attained the status of a major oil producer, ranking 7th in the world in 1972 and, according to crude oil sales income as a proportion of foreign exchange earnings escalated from 58.1 percent in 1970, to 93.6 percent in 1975, and to over 98 percent through the first half of the 1980s (Ugochukwu and Ertel, 2008). By the Year 2000, Nigeria had become the sixth largest oil producing country in the world and report that as of 2000, oil and gas exports accounted for more than 98 percent of export earnings and about 83 percent of Nigerian government revenue, as well as generating more than 14 percent of GDP (Abayomi et al., 2019). It also provided 95 percent of foreign exchange earnings, and about 65 percent of government budgetary revenues.

In terms of the sustainability implications of such a shift in focus to oil, observed that exploration and exploitation of crude oil resources in different oil-producing areas of the world have negative impacts on the inhabitants and their immediate surroundings, upon which they depend for their means of livelihood (Johnston et al., 2019). The Niger Delta region in Nigeria and its rich crude oil deposits has been the mainstay of the economy since its commercial discovery and exploration. Oil exploration and production operations have contributed significantly to Nigeria's growth and development but have negative effects on the fisheries livelihoods of the local host communities.

This is due to pipeline leakages and spillages within fresh, coastal and marine waters, affecting fisheries livelihoods. A group of researchers also weighs in on the environmental impacts of the oil age noting that before the advent of oil prospecting and production in the Niger Delta region, the people of Niger Delta were farmers as other regions of the country (Enyoghasim et al., 2019). They were predominantly fish farmers, and the environment was viable, and the soil was fertile. Thus, farm yield was sustainable, sufficient for the subsistence and commercial needs of the people. With the discovery of oil, production began that destroyed livelihoods from the soil and farmlands through gas flaring and oil spillages. Yearly, Nigeria flares about 0.84 trillion cubic feet of associated natural gas.

Jernelöv reports that the Nigerian government recorded more than 7,000 spillages between 1970 and 2000 (Jernelöv, 2010). A major oil spillage in the early 1970s in Ogoniland of the Niger Delta led to thousands of gallons being spilt on farmland and rivers and on rich agricultural land and the rivers were badly polluted. A sizeable area of that land still remains unusable with the polluted land fenced off. The oil, which penetrated the ground many metres, still pollutes the water courses during the rainy

season. Thirty years after this spillage, Shell was fined £26m for the incident. According to Watts, in 2009 alone, Royal Dutch Shell Plc spilled nearly 14,000 tonnes of crude oil into the creeks of the Niger Delta (Watts, 2012). The company blamed thieves and militants for the environmental damage. This amount of oil spilled was more than double the amount poured into the delta in 2008 and was quadruple what was spilled in 2007 – highlighting the human and environmental sustainability issues surrounding oil exploration in Nigeria.

According to Nigeria's Niger Delta is 51,800 sq km (20,000 square miles) of wetlands and is home to about 150 species of fish and other wildlife that remain endangered by spills (Obike et al., 2020). Chinedu & Chukwuemeka suggest that in roughly 40 years (1976-2014), about three million barrels worth of oil have leaked into land and rivers in the region (Chinedu and Chukwuemeka, 2018). Beiser quotes an Amnesty International report as saying that "decades of pollution and environmental damage, caused by the oil industry, have resulted in violations of the right to an adequate standard of living, including food and water, violations of the right to gain a living through work and violations of the right to health (Beiser, 2011)." Such a description runs counter to even the most generous expectations of sustainable development.

Furthermore, Eleri argues that the focus, during this era, on supply of modern fuels for economic life and energy needs contributed to social inequalities as rural communities were neglected in favour of more urban clusters (Eleri, 1993). Such a situation also stands in contrast with one of the core tenets of the concept of sustainable development which is that the wellbeing of present generations (in urban clusters for instance) must not be achieved at the expense of future generations (in the rural areas in this case).

4.4 Era 3: Vision 2010 and Development Goals (2000 – Present)

4.4.1 Vision 2010

As the human and environmental concerns resulting from oil exploration in Nigeria became more evident over the years, different administrations have tried to tie sustainability in to different visions, agendas and goals that Nigeria has subscribed to over time. Just before the new millennium, the Sani Abacha administration set up the Vision 2010 programme with a broad vision to, by 2010, transform Nigeria into a united, sustainably industrious economy where the needs of life are affordable to all. According to Ugwuanyi the vision 2010 Council, headed by Ernest Shonekan, was inaugurated on November 27, 1996 with a mandate to develop a blueprint that will transform the country and place it firmly on the route to becoming a developed nation by the year 2010 (Ugwuanyi, 2013). Analysing how well Nigeria has met the Vision 2010 objectives more than a decade after the deadline reveals that Nigeria has been unable to completely meet all of the targets set (Nwokwu and Ndukwe 2021). This assessment is summarised in the table below.

Table 2: Nigeria's Vision 2010 Outcomes*

Area of Focus	Vision 2010 Target	Outcome
Political system	It was envisaged that Nigeria would have a stable democracy within characterised by comprehensive freedom for the citizens, rule of law, openness, accountability, and orderly and predictable changes of government by 1998.	Partially met -Democracy returned to Nigeria in 1999.
Economy	To see GDP growth rising to an average of 10 per cent in 2010; oil stops being the mainstay of the economy and a less than 5 percent inflation; manufacturing accounting for 25 percent of GDP; oil contribution to GDP less than 20 percent.	Unmet Oil now accounts for over 86 percent of state revenue in 2022
Education	By the year 2010, primary school enrolment should be almost 100 percent and at least 26 per cent of the government budget (at federal, state and local levels) should be devoted to education	Unmet -As of 2018, the gross enrolment rate in elementary schools in Nigeria stood at 68.3 percent. -Education budget in 2021 was 5.6 percent
Population	By the year 2010, the country's population growth rate should have declined to less than 2 percent per annum.	Unmet Population growth at about 2.7 is still higher than GDP at 1.9 percent
Manufacturing	By the year 2010, manufacturing should contribute about 24 percent to the GDP and should be a major employer of labour	Unmet Manufacturing contributes 13 percent of GDP in 2022
Poverty Alleviation	By the year 2010, it was envisaged that not more than 20 percent of the population should be categorised as poor.	Unmet 42.6 percent of Nigeria's population is categorised as poor in 2022.
Unemployment	Nigeria should have attained virtual full employment of all able-bodied persons by the year 2010.	Unmet 33 percent is Nigeria's unemployment rate in 2022

*As posited by: (Inegbenebor et al., 2018; Ayodele et al., 2013; Ojo, 2012; Sanubi and Akpotu, 2015).

4.4.2 Millennium Development Goals (MDGs) (2000 – 2015)

In 1999, Nigeria returned to civilian rule, and this was just in time for the inception of the Millennium Development Goals in the year 2000. The new administration led by President Olusegun Obasanjo set significant targets for Nigeria after decades of military rule. A group of researchers report that Nigeria was among 189 countries from across the world that endorsed the United Nations Millennium Declaration in New York in September 2000 (Omowaleola, 2013; Enabudoso et al., 2009). This led to the adoption of the eight time-bound Millennium Development Goals (MDGs) and their monitorable indicators. The eight goals were to be achieved by respective countries by 2015 and were stated as follows: MDG 1: Eradicate Extreme Poverty and Hunger; MDG 2: Achieve Universal Primary Education; MDG 3: Promote Gender Equality and Empower Women; MDG 4: Reduce Child Mortality; MDG 5: Improve Maternal Health; MDG 6: Combat HIV and AIDS, Malaria and Other Diseases; MDG 7: Ensure Environmental Sustainability; MDG 8: Develop a Global Partnership for Development.

Nigeria's 2005 debt relief success was made possible, in part, by the direct involvement of the then Finance Minister (Dr Ngozi Okonjo-Iweala) working closely with lawmakers such as Hon Farouk Lawan and Senator Udo Udoma who joined delegations, monitored progress and reported back to President Olusegun Obasanjo. Such transparency, cross-party cooperation and accountability of the negotiating team to elected officials were unprecedented in Nigeria at the time. Furthermore, Osazee-Odia refers to former boss of Nigerian Communications Commission - Ernest Ndukwe's 2011 lecture where Nigeria's decade of Telecom Revolution between 2001 and 2011 is described as made possible because Nigeria opted for full sector reform, backed up with a National Telecom Policy published in Year 2000 and a new Communications Law enacted in Year 2003 (Osazee-Odia, 2016; Ndukwe, 2011). Such an approach enabled a clear articulation of government intentions (including the legislature) for the sector and the roles of the various stakeholders. Therefore, the recorded partial MDG successes in achieving financial debt relief and achieving telecommunications growth all occurred in ministries or parastatals with direct reporting to a named federal minster or official in addition to specific legislative oversight.

The table below breaks down the 2015 UN report on how Nigeria fared with the Millennium Development Goals.

Table 3: Nigeria's Millennium Development Goals Outcomes**

MDG No	Specific Targets	Overall Outcome
MDG 1: Eradicate extreme poverty and hunger	- Halve, between 1990 and 2015, the proportion of people living on less than $1.25 a day - Halve, between 1990 and 2015, the proportion of people who suffer from hunger	Unmet -Nigeria's poverty reduction target was a reduction to 21.4 percent. The end of programme report indicated that Nigeria was at 33.1percent
MDG 2: Achieve universal primary education	-By 2015, all children can complete a full course of Primary education/primary schooling, girls and boys	Unmet. - The net enrolment figure was 60 percent in 1995 but had declined to 54 percent as at the end of programme report.
MDG 3: Promote gender equality and empower women	Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015	Unmet - The end of programme report status ratio of girls to boys in basic education was 94 percent. The figure in 1991 was 82 percent. - Regarding women's contribution to the total labour force, the proportion was 37.7 percent at end of programme report - Regarding the proportion of seats held by women in the National Parliament, the end-point status was 5.11percent in 2015 against the expected target of 35percent
MDG 4: Reduce child mortality	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Unmet -In 1990 (as the baseline), the infant mortality rate (IMR) was estimated at 91 deaths per 1000 live births. The end-point figure stood at 58 deaths per 1000 live births and was short of the 2015 target of 30 deaths per 1000 live births.
MDG 5: Improve maternal health	-Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio -Achieve, by 2015, universal access to reproductive health	Partially met - Maternal mortality target was met as the baseline figure of 1000 deaths per 100,000 live births in 1990 decreased to 243 per 100,000 live births by end of programme - the proportion of births attended by skilled health personnel increased from a baseline figure of 45 percent in 1990 to the end-point status of 58.6 percent - Antenatal coverage of at least one visit recorded an end-point status of 68.9 percent, and for at least four visits, the end-point status was 60.6 percent.
MDG 6: Combat HIV and AIDS, malaria and other diseases	-Have halted by 2015 and begun to reverse the spread of HIV/AIDS -Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it -Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.	Unmet - The prevalence of HIV among pregnant young women aged 15–24 years was 4.1percent at end-point. - The end-point status of the incidence of tuberculosis in Nigeria was 338 per 100,000 people
MDG 7: Ensure environmental sustainability	-Integrate the principles of sustainable development into country policies and programs; reverse loss of environmental resources -Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss -Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation -By 2020, to have achieved a significant improvement in the lives of at least 100 million slum-dwellers.	Unmet - For access to safe drinking water, the recorded end-point status of 67 percent in 2015. The baseline figure was 40 percent in 1990. - by 2015 (end of programme), 29 percent of the population was using improved sanitation facilities - The percentage of the urban population living in slums declined from a baseline figure of 77.3 percent in 1990 to an end-point status of 50.2 percent
MDG 8: Develop a global partnership for development	-Develop further an open, rule-based, predictable, non-discriminatory trading and financial system -Address the Special Needs of the Least Developed Countries (LDCs) -Address the special needs of landlocked developing countries and small island developing States -Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term -In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries -In co-operation with the private sector, make available the benefits of new technologies, especially information and communications	Met - Debt relief was granted in 2005. -The growth in the number of cellular phone subscribers and the tele-density per 100 people standing at 77.8 and 99.3, respectively at end of programme.

**As posited by: (Ajiye, 2014; Okeshola, 2012; Eromon, 2016; Odunyemi, 2015).

4.4.3 Sustainable Development Goals (2015 – Present)

Following on from the MDGs Nigeria adopted the UN 2030 Development Agenda in September 2015 which included the Sustainable Development Goals (SDGs). According to the SDGs are intended to be achieved by 2030 and are a collection of 17 interlinked global goals designed to be a shared blueprint for peace and prosperity for people and the planet, now and into the future (van Vuuren et al., 2022). The 17 SDGs are: Goal 1: No Poverty; Goal 2: Zero Hunger; Goal 3: Good Health and Well-being; Goal 4: Quality Education; Goal 5: Gender Equality; Goal 6: Clean Water and Sanitation; Goal 7: Affordable and Clean Energy; Goal 8: Decent Work and Economic Growth; Goal 9: Industry, Innovation and Infrastructure; Goal 10: Reduced Inequality; Goal 11: Sustainable Cities and Communities; Goal 12: Responsible Consumption and Production; Goal 13: Climate Action; Goal 14: Life Below Water; Goal 15: Life on Land; Goal 16: Peace, Justice, and Strong Institutions; Goal 17: Partnerships for the Goals.

As the SDG achievements deadline is still at a future date, Voluntary National Reviews (VNR) provide an avenue to gauge Nigeria's performance thus far. The Office of the Senior Special Assistant to the President on the Sustainable Development Goals (OSSAP-SDG) is responsible for the VNR and Nigeria's 2020 VNR indicates that the national focus was in the areas of poverty, an inclusive economy, health and wellbeing, education, gender equality, the enabling environment of peace and security, and partnerships. Challenges so far have included the COVID-19 pandemic which has burdened public health systems, insecurity from Boko Haram insurgency which has engaged the government's attention following destructive attacks on numerous targets and also the collapse in oil prices – hugely significant for an economy still getting 86 percent of public revenue from oil and gas (OSSAP-SDGS, 2020). The 2017 VNR lists a significant additional challenge of a high number of children who are out of school.

4.5 Rapid Diversification Potential (RDP) Alternatives to the Oil Economy

In line with the FSSD framework, this study now explores other promising and more sustainability-friendly sectors of the Nigerian economy which, in relatively rapid order, could be boosted with relatively minimal effort to begin the diversification process. As part of this innovative approach, this study will refer to these sectors as Rapid Diversification Potentials (RDPs). Within the ABCD approach, RDPs in this review would qualify as the 'low-hanging fruit' in any impact driven implementation strategy. Innovation must have impact. The most impactful RDPs are therefore those other potentially viable sectors of the Nigerian economy that the available literature suggests would require relatively little attention to get up and running as serious contenders for more economic significance in Nigeria.

4.5.1 Tourism

A group of researchers describe tourism in Nigeria as centred largely on events, due to the country's ample amount of ethnic groups, but also includes rain forests, savannah, waterfalls, and other natural attractions (Nomishan et al., 2020*;* Akpan and Obang, 2012; Godabe, 2019; Akpan, 2012). According to Akande the duo of culture and tourism have already impacted positively on the nation's image and in view of emerging challenges, the government should shore up the annual budgetary allocation to the Nigerian Tourism Development Corporation (NTDC) to enable it function to its full potentials (Akande, 2014). The NTDC itself should work more assiduously in strengthening tourism to make Nigeria the world's '*numero uno*' tourism destination. The tourism industry is regulated by the Federal Ministry of Information and National Orientation and, despite the rise in Boko Haram insurgency, Orekoya reports that tourists still spent $1.5 billion in Nigeria in 2017 (Orekoya, 2018).

The impact potential of tourism to the Nigerian economy is therefore high and qualifies it as an RDP. Any targeted effort to boost this particular RDP must remain conscious of the balancing act between citizens' needs and economic needs. This is because according to Ramkissoon a harmonious relationship between residents, government, businesses and tourists could promote social sustainability and contribute to sustainable tourism development (Ramkissoon, 2020). In terms of the challenges facing the sector (Ndanusa et al., 2014). note that whilst business tourism presents a major potential sub-sect in Nigeria's overall tourism figures, the supporting infrastructural development is far below average for the comfort and taste of such calibre of visitors both at the attraction sites and the intangible services such as: accommodation, transportation, food & beverages.

Consequently, would-be tourists rather prefer to stay put on their business concerns and conference venues. This drastically reduces the economy of scale that comes with such visits. Bello and Bello recommend that the Nigerian government should make decisive efforts to collect and make available travel and tourism data on a timely basis (Bello and Bello, 2020). This is expected to help in tourism planning and designing high-quality destination-marketing campaigns. It was also recommended for the Nigerian government to restore tourism to a full ministry status as against the current merger of the sector with the ministry of information, culture and national orientation. A further recommendation was for the appointment of experts to ministerial positions within the ministry and developing a competitive nature for Nigerian environmental regulations. This would contribute to environmental sustainability by making eco-tourism development practices easier in the country.

4.5.2 Agriculture

As previously discussed, Nigeria has the arable land and has successfully and more sustainably utilised this in the past. According to Ekpo & Egwaikhide agricultural commodities accounted for more than 75 percent of the annual exports of Nigeria at Independence (Ekpo and Egwaikhide, 1994). By 1985, it was almost a complete reversal with food items accounting for over fifty percent of imports (Obasanjo, 1988). The agricultural sector currently suffers from extremely low productivity, reflecting reliance on antiquated methods. Agriculture has failed to keep pace with Nigeria's rapid population growth, so the country, which once exported food, now imports a significant amount of food to sustain itself. There is also some more encouraging literature regarding the potential impact viability of this sector as an RDP. According to a study, by the first quarter of 2020, agriculture exports contributed approximately 22 percent of Nigeria's GDP (Mogoluwa et al., 2021).

By the first 6 months of 2020, this amounted to 204.45 billion Nigerian Naira (NGN) (approximately $482m) which indicates that productivity is increasing in the sector to enable export growth. The Sustainable Development Goals in the agriculture sector in Nigeria has already made impact in the export sector responsible for the consumption and production of agricultural products in Nigeria. In January 2016, agricultural exports raked in NGN 4.1 billion which then rose to NGN 25 billion by January 2017. From April 2019 – March 2020, total agriculture exports hit NGN 289 billion (approximately $683m) for Nigeria. Furthermore, some researcher report that SDGs have also led to the emergence of various policies that have had impact on the agriculture sector (Gil et al., 2018). Some of them include the Nigerian 'Agricultural Promotion Policy—2016–2020' with a focus on achieving food security through the reduction of food imports. The Empowering Novel Agribusiness-Led Employment Program finances the development of youth-led agribusinesses.

A further scheme is the Agricultural Credit Guarantee Scheme Act of 2016 providing the entire agricultural supply chain with incentives. The Agriculture Promotion Policy launched in mid-2016 has boosted soybean and cowpea production, chosen for their nutritional value and export potential. In the view of local Nigerian companies have recently commenced exporting groundnuts, cashew nuts, sesame seeds, moringa seeds, ginger and cocoa (Obioha and Chijioke, 2021). The literature therefore suggests that diversification potential of agriculture, in its food producing capacity, to push the achievement of development goals is therefore very significant. A group of researchers describe an innovative and sustainable food production entrepreneurship concept that could be used to bridge the gap between privileged and marginalised communities in emerging economies (Samkange et al., 2021). Any such narrowing of the gap understandably helps to meet development goals.

4.5.3 Entertainment

According to Miller, the Nigerian Film Industry (Nollywood) is globally recognised as the second largest film producer in the world (Miller, 2012). The industry is a significant part of the Arts, Entertainment and Recreation Sector which contributed 2.3 percent (NGN 239biliion) to Nigeria's Gross Domestic Product (GDP) in 2016. It is one of the priority sectors identified in the Economic Recovery and Growth plan of the Nigerian government with a planned $1billion in export revenue by 2020. Oparaugo reports that several grants have been launched by the Nigerian Government, in order to support quality content in Nigerian films (Oparaugo, 2021). 'Project Nollywood' was launched by the Nigerian Government in 2006 in conjunction with Ecobank. This project provided approximately $800,000 to Nollywood filmmakers for the production of enhanced quality movies coupled with suitably funded distribution networks.

Furthermore, President Goodluck Jonathan announced a $200 million Intervention Fund in 2010 to be financed by the Nigerian Export and Import Bank to assist in providing industry wide training and

infrastructural support. These interventions appear to have significant impact and set this sector up perfectly to fit the RDP designation. According to Oparaugo by the end of 2013, Nollywood made record breaking revenue of NGN 1.72 trillion ($11 billion) and as of 2014, Nollywood was worth NGN 853.9 billion ($5.1 billion) (Oparaugo, 2021). This made Nollywood the third most valuable film industry in the world, behind Hollywood in the US and Bollywood in India. Nollywood contributed about 1.4 percent to Nigeria's economy, and this was attributed to the rise in quality films and more formal distribution methods.

Oparaugo further describes the new era of Nigerian movies as of generally much improved quality, with considerably bigger budgets averaging between NGN 40 million ($250,000) and NGN 120 million ($750,000) (Oparaugo, 2021). The production periods now take months and even span into years. This is much different from the previous practice that saw movies usually shot in a matter of days or weeks. A persisting challenge for the industry as reported by Nwogu is a proper copyright and distribution system (Nwogu, 2015). Ernest-Samuel & Uchenna Joe are more critical, noting a further myriad of challenges confronting the industry including imbalance in artistic output, high rate of nepotism and poor technological apparatus (Ernest-Samuel and Uchenna Joe, 2019). On balance, however, Nollywood presents significant potential for the Nigerian economy and needs to attract quality investors to exploit its RDP status. With no need of materials from the earth's crust (FSSD) the entertainment sector also has great sustainability potential within Nigeria – as against the current oil economy.

5. Conclusion

Underpinned by the FSSD framework's ABCD approach, this review study set out to perform a baseline assessment of Nigeria's history with development goals. The study analysed potential economic diversification solutions as a plan for a more sustainability driven future economy. This study has shown that, whilst opinions vary as to the degree of impact on different sectors of society, it is clear that the current nature of Nigeria's oil economy is not the most sustainability friendly. An over-reliance on a singular source of revenue in a country such as Nigeria is a recipe for significant challenges. The environmental impacts of oil exploration in Nigeria have been devastating for the Niger Delta region in particular.

This study also noted that Nigeria has so far failed to fully achieve any of its development goals. Where partial MDG sub-target successes were recorded (financial debt relief and achieving telecommunications growth), these occurred in ministries or parastatals with direct reporting to a named federal minster or official in addition to specific legislative oversight. This study also found that Nigeria is currently facing a challenge of children out of school and insecurity and insurgency which undermine progress in other areas and detracts government attention. These challenges identified in the literature fit within the critical issues for sustainability as described in the FSSD framework.

In line with the ABCD low-hanging fruit approach of FSSD, to enable a faster diversification of the Nigerian economy away from a high government dependence on oil revenues and thereby achieving the vision of a future sustainability driven economy, this study performed an analysis of available literature on the rapid diversification potential of some other sectors of the Nigerian economy such as tourism, agriculture and entertainment. The analysis found that these sectors are already displaying encouraging performances and an injection of government focus and funding could rapidly drive further successes.

Noted challenges include poor infrastructure in tourism, antiquated methods with no mechanisation in agriculture and copyright protection, power supply issues and lack of royalties in the entertainment industry. Targeted focus on addressing these RDP challenges will maximise innovation impact and increase their potential of rapidly diversifying the economy away from oil. This will provide more environmentally friendly jobs for the local population to fund economic growth whilst addressing the three sustainability pillars of people, economy and environment in Nigeria or any similar developing economy.

Recommendations

With sustainability, challenges tend to have domino effects. Therefore, further study is recommended to ascertain whether Nigeria's current SDG challenge of children out of school, could very well affect Nigeria's future ability to meet not only the SDGs relating to education, but also those relating to future employment and the future economy. This is because children out of school today could potentially fail to acquire the skills needed to run a digital economy of tomorrow and, as observed the best type of education is one that reflects the dynamism of and interrelation of society and industry.

Furthermore, it will be beneficial to explore the possibility of additional economic sectors as RDPs. In designating an RDP, consideration should be given to the potential for maximum impact of such a sector on citizens' welfare and development. Nigeria's human capital development ranked 150 of 157 countries in the WorldBank's 2020 Human Capital Index and the WorldBank reports that the challenge of inequality, in terms of income and opportunities, remains at high levels and hinders poverty reduction in Nigeria. The absence of job opportunities is central to high poverty levels, regional inequality, and socio-political unrest. High inflation has also damaged the welfare of households with high prices in 2020 likely to have pushed an additional 7 million Nigerians into poverty. It is therefore important that in designating RDPs, priority is given to sectors that have the potential to drive the individual development of a wider selection of the population in addition to growing the economy.

Competing Interests

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