

Identification of the Leading Economic Sectors of Nigeria: A Typology Juxtapose of Nigerian Economy Vis-À-Vis African Economies

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Received: 10/8/2021

Revised: 27/12/2021

Accepted: 4/4/2022

Published: 15/7/2023

Citation: Sadiq, M., Singh, I. P., M., A. M. ., & M. A., I. Identification of the Leading Economic Sectors of Nigeria: A Typology Juxtapose of Nigerian Economy Vis-À-Vis African Economies. *Jordan Journal of Economic Sciences*, 10(2), 101–115.

<https://doi.org/10.35516/jjes.v10i2.1396>



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Abstract

Objectives: The typology of Nigeria's economy was examined alongside those of West Africa, sub-Saharan Africa, and developing economies in Africa using time-series data from 1970 to 2018. Some issues remain and will continue to attract the attention of academics, activists, members of civil society, and practitioners to answer the question if Nigeria is capable of realizing its vast potential and maintaining its ability to grow.

Methods: The data covered values of nine sectors in each of the economy at constant prices and the data were analyzed using inferential statistics.

Results: The empirical evidences showed crude oil and solid mineral to be the major basic sectors of Nigerian economy at sub-regional level. While beyond, Nigerian economy shifted to agriculture and tertiary production chain sectors and the possible reason may be due to emerging oil economies in Africa. Furthermore, vis-à-vis the regional economies, agriculture and allied activities, and tertiary sectors of Nigerian economy have the potential development to grow faster. The possible reasons for this are that they are long-term sustainable, appropriate, and reliable alternative sources of revenue earning due to the global collapse in oil prices and insurgencies affecting the Nigerian economy's mineral resources and secondary production sectors. Besides, the secondary production chain needs to be strengthened to become potential, thus complementing the non-oil sectors of the Nigerian economy.

Conclusions: Therefore, for the welfare of Nigerians, the surest means is for the policymakers to hold on to optimal potential development of agriculture and allied activities, and tertiary production sectors of the country's economy. For sustainability of Nigerian economy, it must be non-oil diversified supported by agriculture and allied sector. This is because the most appropriate way to enhance the country's economy is to harness the economic activities that are the foundation of majority of Nigerians' economic life and will be able to accommodate the existing human resource conditions.

Keywords: Economies; Nigeria; Africa; Sectors; Performance.

تحديد القطاعات الاقتصادية الرائدة في نيجيريا: تصنيف متلصق للاقتصاد النيجيري مقابل الاقتصادات الأفريقية

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ملخص

الأهداف: تم فحص تصنيف الاقتصاد النيجيري جنباً إلى جنب مع اقتصادات غرب إفريقيا، وأفريقيا جنوب الصحراء والاقتصادات النامية في إفريقيا باستخدام بيانات السلاسل الزمنية التي تمتد من 1970 إلى 2018. بعض القضايا لا تزال قائمة وستستمر في جذب اهتمام الأكاديميين والناشطين وأعضاء المجتمع المدني والممارسين: هل نيجيريا قادرة على تحقيق كامل إمكاناتها الهائلة والحفاظ على قدرتها على النمو؟

المنهجية: غطت البيانات قيم تسع قطاعات في كل من الاقتصاد بالأسعار الثابتة، وتم تحليل البيانات باستخدام الإحصاءات الاستنتاجية. النتائج: أظهرت الأدلة التجريبية أن النفط الخام والمعادن الصلبة هي القطاعات الأساسية الرئيسية للاقتصاد النيجيري على المستوى دون الإقليمي قبل أن يتحول الاقتصاد النيجيري إلى الزراعة وقطاعات سلسلة الإنتاج الثالث، وقد يكون السبب المحتمل بسبب اقتصادات النفط الناشئة في إفريقيا. علاوة على ذلك، وفيما يتعلق بالاقتصادات الإقليمية، والزراعة والأنشطة المرتبطة بها، والقطاعات الثالثة للاقتصاد النيجيري، فلديها القدرة على النمو بشكل أسرع. والأسباب المحتملة لذلك هي أنها مستدامة على المدى الطويل، وأنها المصادر البديلة المناسبة والموتوقة لكسب الإيرادات بسبب الانهيار العالمي في أسعار النفط إلى جانب حركات التمرد التي تؤثر على الموارد المعدنية وقطاعات الإنتاج الثانوية للاقتصاد النيجيري. إلى جانب ذلك، تحتاج سلسلة الإنتاج الثانوية إلى التعزيز حتى تصبح ذات إمكانات، وبالتالي استكمال القطاعات غير النفطية للاقتصاد النيجيري.

الخلاصة: لذلك، من أجل رفاهية النيجيريين، فإن أضمن الوسائل هي أن يتمسك صانعو السياسات بالتنمية المحتملة المثل للزراعة والأنشطة المرتبطة بها، وقطاعات الإنتاج العالي في اقتصاد البلاد. ومن أجل استدامة الاقتصاد النيجيري، يجب أن يكون متنوعاً غير نفطي مدعوماً بالزراعة والقطاع المتحالف، وذلك لأن الطريقة المناسبة لتعزيز اقتصاد البلد هي تسخير الأنشطة الاقتصادية التي تشكل أساس الحياة الاقتصادية للنيجيريين، وستكون قادرة على استيعاب ظروف الموارد البشرية الحالية.

الكلمات الدالة: اقتصادات؛ نيجيريا؛ أفريقيا؛ أداء القطاعات.

INTRODUCTION

Nigeria's economy follows the pattern of a developing country (Chete et al., 2014). Nigeria transitioned from a weak agricultural economy to a relatively prosperous, oil-dominated economy in the 1970s (Okezie and Amir, 2011). However, Nigeria has been unable to achieve long-term development due to its reliance on the oil and gas sector. Crude oil exports serve as the country's principal source of revenue and foreign exchange earnings, making it vulnerable to oil price fluctuations. In the past decade, the primary sector, particularly the oil and gas sector, has dominated the GDP, accounting for over 95% of export earnings and nearly 85% of government revenue (Chete et al., 2014). The critical need to diversify the nation's economy cannot be overstated, especially considering the volatile and shifting global oil prices. Diversification is necessary to reduce the country's sensitivity to macroeconomic risks, such as production drops, demand and price declines, and reserve exhaustion (Adetokumbo and Edioye, 2020).

Nigeria, with its people and natural resource endowment, has the potential to become Sub-Saharan Africa's largest economy and a significant game changer in the global economy (Okezie and Amir, 2011). However, these opportunities have remained unrealized, and if current trends persist, Nigeria risks failing to achieve the internationally agreed-upon Sustainable Development Goals (SDGs) by 2050.

Studying the Nigerian economy presents significant challenges to scholars due to its unique structure, traits, effects, and inherent contradictions. By the late 1960s, the economy had transitioned from agriculture to reliance on crude oil and gas as the primary source of expansion. However, all attempts to diversify the economy and establish a solid foundation for broad, stable, and productive growth have consistently failed (Edo and Ikelegbe, 2014). Despite significant oil earnings, prosperity and growth have eluded the country since the late 1960s, and Nigeria remains among the poorest nations in the world based on major development indicators. Economic growth has been erratic, lacking sustained or regular progress, and highly sensitive to fluctuations in crude oil and gas prices. Incompetence, corruption, and poor performance continue to hinder economic management, with each strategy, program, vision, and reform generating high hopes but yielding limited results.

Despite the current growth, the economy remains weak, and there has been limited significant expansion in the manufacturing and tertiary production chain sectors (Edo and Ikelegbe, 2014). Moreover, the current growth is neither broad nor inclusive, and it fails to drive human development, employment, productivity, or wealth creation. These circumstances, contradictions, and problems give rise to a range of concerns. Can true growth be achieved without a strong focus on production? Can long-term growth be sustained in the presence of existing distortions and weaknesses? What policies are currently in place to promote economic growth and development? The list of possible questions is far from exhaustive, but it highlights the breadth of concerns, fears, and hopes that arise when a serious examination of the Nigerian economy is undertaken. While the complex and extensive history of the Nigerian economy cannot be fully explored, a comprehensive and critical analysis of the country's structure, macroeconomic performance, and the necessary steps to achieve deeper and more sustainable growth and development is imperative.

Several issues persist and will continue to capture the attention of academics, activists, civil society members, and practitioners. Can Nigeria effectively harness its immense potential and sustain its growth capacity? Considering Nigeria's macroeconomic, political, and security situation, how feasible is the potential for sustainable growth? What type of management is required to facilitate substantial growth and development, and what are the potential policy challenges? In light of the aforementioned, this research endeavors to identify the key economic sectors of the Nigerian economy by comparing it with those of other African economies.

RESEARCH METHODOLOGY

Time series data at constant price that ranged from 1970 to 2018, sourced from UNCTAD data base and covered economies of Nigeria, West Africa (W/A), Sub-Saharan Africa (SSA) and Developing economies: Africa (DEA) were used. Agriculture, hunting, forestry and fishing; Industry; Mining and utilities; Manufacturing; Construction; Services; Whole trade, retail trade, restaurant and hotel; Transportation, storage and communication; and, other activities were the economic sectors considered. The analytical models employed were the Static Location Quotient (SLQ), Dynamic Location Quotient (DLQ), and Klassen typology growth model.

Table 1: Taxonomy of the sectors

Sectors	Definition	Label	Summary
Agriculture, hunting, forestry and fishing	Agriculture and allied activities	A	-
Industry	Crude oil	B	Mineral resources
Mining and utilities	Solid mineral	C	
Manufacturing	-	D	Secondary chain
Construction	-	E	
Services	-	F	Tertiary chain
Whole trade, retail trade, restaurant, and hotel	Trade and Tourism	G	
Transportation, storage, and communication	Logistics	H	
Other activities	-	I	

Model specification

The Static Location Quotient (SLQ) is utilized to classify sectors into basic and non-basic categories. The model follows Budiharsono (2001) as outlined by Patiung and Wisnujati (2020) and Wisnujati and Patiung (2020), and is represented as follows:

$$SLQ_i^n = \frac{s_i^n / S^n}{s_i^r / S^r} \dots\dots\dots (1)$$

where, SLQ_i^n = SLQ of i^{th} sector of the local economy; S_i = value of i^{th} sector; S = aggregate value of all sectors; n = local economy (Nigerian economy); and r = international economy (African regional economies).

In the SLQ analysis, if the value of SLQ is greater than 1, the sector is classified as fundamental or prospective. This indicates that the sector not only meets the domestic needs of the reference country (Nigeria) but also has export potential. A higher SLQ value indicates a greater comparative advantage (Cahyono and Wijaya, 2014; Sapriadi and Hasbiullah, 2015; Hartarto, 2016; Jumiayanti, 2018). On the other hand, if the value of SLQ is less than one, the sector is classified as non-basic and lacks advantages or potential. This means that the production of that sector in the local economy (reference country) is insufficient to meet its own demands, requiring external supplies or imports. If SLQ equals 1, the sector is considered non-basic and does not offer any benefits. The output of this sector is limited to meeting the needs of the local economy and cannot be exported.

The Dynamic Location Quotient (DLQ) is employed to assess changes in the local economy over time and identify sectoral transformations. It determines whether a local economic sector is growing at a faster or slower rate compared to the

same sector in the international economy. The DLQ is a modified version of the SLQ that incorporates changes in a sector's value. According to Nazipati (2007), as cited by Patiung and Wisnujati (2020), the fluctuations of DLQ can be depicted for specific sectors across different time dimensions using the following model:

$$DLQ_{ij} = \frac{(1+g_{ij})/(1+g_j)}{(1+G_{ij})/(1+G_j)} \dots \dots \dots (2)$$

where; DLQ_{ij} = sector potential i^{th} index at the local economy; g_{ij} = average growth rate of i^{th} sector of the local economy; g_j = average growth rate of the local economy; G_{ij} = average growth rate of i^{th} sector of the international economy; and G_j = average growth rate of the international economy.

If the DLQ score is greater than 1, the potential development of a local economy sector is faster than the same sector of the international economy. If the DLQ is less than one, the local economy's potential for sector i^{th} development is smaller than the international economies.

The comparison of SLQ and DLQ values can be utilized to determine the status of a particular economic sector, whether it is superior, promising (prospective), dependable (mainstay), or underdeveloped (weak). The following conditions apply (Suyatno, 2007; Dewi and Yasa, 2018):

- If the value of SLQ and $DLQ > 1$, the sector is a leading sector, meaning that the sector will remain basic both now and in the future.
- If the value of $SLQ > 1$ and $DLQ < 1$, the sector is prospective, meaning that the sector will shift from a basic sector to a non-basic sector in the future.
- If the value of $LQ < 1$ and $DLQ > 1$, the sector is reliable (mainstay), meaning that the sector will shift from a non-basic sector to a basic sector in the future.
- If the value of LQ and $DLQ < 1$, the sector is lagging, meaning that the sector will continue to be non-basic both now and in the future.

The Klassen typology model is employed to assess the rate of growth of a local economy in comparison to the international economy. It classifies a sector into the following categories: advanced and fast-growing sector, fast-growing sector, advanced and slow-growing sector, and relatively underdeveloped sector (Patiung and Wisnujati, 2020; Wisnujati and Patiung, 2020). According to Patiung and Wisnujati (2020) and Wisnujati and Patiung (2020), the Klassen typology is as follows:

$$r_{ik} = \frac{P_{ikt} - P_{ik0}}{P_{ik0}} \dots \dots \dots (3)$$

$$y_{ik} = \frac{P_{ik}}{P_{tk}} * 100 \dots \dots \dots (4)$$

$$r_i = \frac{P_{it} - P_{i0}}{P_{i0}} \dots \dots \dots (5)$$

$$y_i = \frac{P_i}{P_t} * 100 \dots \dots \dots (6)$$

where,

r_{ik} = the growth rate of i^{th} sector at local economy

r_i = the growth rate of i^{th} sector at international economy

y_{ik} = the contribution of i^{th} sector to the total local economy
 y_i = the contribution of i^{th} sector to the total international economy
 P_{ikt} = sector i^{th} value at time 't' (current year) at local economy
 P_{ik0} = sector i^{th} value at time 't-1' (base year) at local economy
 P_{it} = sector i^{th} value at time 't' (current year) at international economy
 P_{i0} = sector i^{th} value at time 't-1' (base year) at international economy
 P_{ik} = sector i^{th} value of local economy
 P_{tk} = total value of the local economy
 P_i = sector i^{th} value at international economy
 P_t = total value of the international economy

Table 2: Klassen typology

Growth rate	Contribution	
	$y_{ik} > y_i$	$y_{ik} < y_i$
$r_{ik} > r_i$	The sector is developed/advanced and fast growing	Fast growing sector
$r_{ik} < r_i$	Developed/advanced but slow growing/depressed sector	relatively lagging behind/disadvantaged sector

Source: Cahyono and Wijaya (2014); Wisnujati and Patiung (2020)

RESULTS AND DISCUSSION

Static Dimension of Nigerian Economic Sectors

An examination of the Static Location Quotient (SLQ) results for Nigeria's economic performance over a period of five decades, compared to the West Africa region, revealed that the industry sector (crude oil) and mining-utilities sector are the basic sectors in Nigeria. On the other hand, agriculture-hunting-fishery-forestry, manufacturing, construction, services, trade and tourism, transportation and communication, and other activities are classified as non-basic sectors (Table 3). Decade-wise analysis showed that in the 1970s, industry and mining-utilities were the potential sectors of Nigeria, while the remaining sectors were non-potential. In the 1980s, industry, mining-utilities, and manufacturing were identified as the potential sectors, while the other sectors were non-basic. Similarly, in the 1990s, industry, mining-utilities, and other activities were considered the basic sectors, with the remaining sectors classified as non-basic. In the 2000s, industry, mining-utilities, and services emerged as the potential sectors, while the others were non-potential. In the 2010s, services, trade and tourism, transportation and communication, and other activities were identified as the basic sectors, while the remaining sectors were non-basic. Generally, the first three decades were characterized by low economic diversification, while the last two decades witnessed moderate diversification.

In terms of the sub-Saharan perspective on the SLQ of Nigeria's economic performance, industry and mining-utilities continue to be the potential sectors, while the remaining sectors are identified as non-basic. The first and second decades exhibit a similar scenario under the West Africa viewpoint, maintaining a status quo ante (Table 3). In the 1990s and 2000s, industry and mining were basic sectors in both decades, while manufacturing and services were basic in the former and latter decades, respectively. In the last decade, agriculture, along with the tertiary sector, emerged as the basic sectors of the country's economy. The first three decades witnessed low economic diversification, the fourth decade was characterized by moderate diversification, and the last decade saw high diversification. Therefore, based on the above points of view, it can

be inferred that there has been a paradigm shift from mineral resources as the primary sector of Nigeria's economy, which prevailed in the first four decades, towards the tertiary sector, encompassing goods and services, in the last decade.

Furthermore, from the perspective of developing economies in Africa, the SLQ analysis of Nigeria's economic sectors for the first three decades revealed that agriculture, mineral sectors (primary sector), and manufacturing were identified as potential sectors (Table 3). Additionally, trade and tourism were found to be a basic sector of the country's economy in the first decade. In the last two decades, agriculture, services, and trade-tourism were recognized as potential sectors, with transportation-communication emerging as a basic sector in the 2010s. Over the overall period, agriculture, manufacturing, and trade-tourism were identified as potential sectors. Diversification was low in the fourth decade, moderate in the second, third, and fifth decades, and high in the first decade. Across the different regional perspectives, it can be inferred that the economic diversification of Nigeria's economy is low. Therefore, it can be concluded that the country's economy, in comparison to the West Africa and sub-Saharan regions, has been primarily driven by the mineral sector, while in comparison to the developing economies in Africa, the economy is driven by non-mineral sectors. Thus, from a global standpoint, there is a notable shift in the country's economy from reliance on mineral resources towards non-mineral sectors. One possible reason for this shift is the global transition from fossil fuels to green fuels due to the potential threat of global warming, which poses risks to human existence. Therefore, Nigeria's economy needs to shift its focus towards other potential sectors as a strategy for revenue generation and economic stability. However, from a regional perspective, one possible reason for crude oil and mineral resources being the driving force of the country's economy is to support the industrialization efforts of the fragile economies in the regional countries.

For the basic/potential sectors, it implies that the country's sector has a comparative advantage over the regional sector, resulting in a surplus of the sector's products that can be exported to generate foreign earnings. For the non-basic sectors, it means that the country's sector does not have a comparative advantage over the regional sector, resulting in a deficit of the sector's products that need to be imported to bridge the gap in the economy. The former and latter are referred to as favorable/positive and unfavorable/negative balances of trade, respectively. However, there were no instances observed in any of the sectors of the Nigerian economy where there was a balance of trade, indicating neither a trade surplus nor deficit. In other words, there was no sector in the entire Nigerian economy that could only produce goods for domestic use and had a competitive advantage.

Non-basic sectors serve as a signal to the Nigerian government and regional economies that policies, programs, and development activities have been implemented, and that appropriate policies are needed to facilitate the transition of non-basic sectors into fundamental sectors in the future. This can be achieved by accelerating activities and allocating funds for their development.

Dynamic Dimension of Nigerian Economic Sectors

Except for mining and utilities, manufacturing, and construction, a cursory review of the dynamic location quotient (DLQ) results showed that the potential development of all the remaining sectors was faster than the related sectors in the West Africa region (Table 3). However, the potential developments of the exceptional sectors in the Nigerian economy were lower than those of the related sectors in the West Africa region. Furthermore, except for manufacturing and other activities, the decade-wise results from the 1970s showed that the potential development of all the remaining sectors in the country's economy was lower than that of the West Africa region. Additionally, the potential development of the manufacturing and other activities sectors was faster than that of the regional economy. In the 1980s and 1990s, the potential developments of industry, mining and utilities, and manufacturing were lower than those of the regional economy, while the potential

developments of the remaining sectors were higher than those of the related regional sectors. In the succeeding decade, a similar scenario to the previous decade was observed, except for the construction sector, whose potential development was lower than that of the regional sector. In other words, the potential development of the Nigerian construction sector regressed compared to the regional sector. Likewise, in the 2000s, the country's other activities sector's potential development regressed in comparison with the regional sector. In the last decade, the potential development of the industry and mining and utilities sectors was lower than that of the regional sectors, while the potential developments of the remaining sectors were faster than those of the regional sectors. Therefore, it can be inferred that, in relation to the West Africa region, agriculture and allied activities, services, trade and tourism, and logistics progressed, while mineral resources and the secondary sector retrogressed over the period of study.

A cursory review of the Nigerian economy in comparison to the Sub-Saharan Africa (SSA) economy shows that the potential developments of sectors such as industry, mining and utilities, and construction were lower than those of the regional sectors, while the potential developments of the remaining sectors were observed to be faster than those of the regional sectors (Table 3). Furthermore, the decade-wise analysis showed that the potential developments of all sectors of the Nigerian economy were faster than those of the regional sectors in the 1990s. However, in the 1970s, except for the agriculture and allied sector, the potential developments of all sectors in the country were faster than those of the regional sectors. In the 1980s, the potential developments of Nigerian sectors such as mineral resources, secondary production, and logistics retrogressed, while the agriculture and allied sector and the tertiary production sector progressed in comparison to the regional sectors. In the 2000s, the potential development of the country's mineral resources and secondary sectors retrogressed, while that of the remaining sectors progressed compared to the regional sectors. In the 2010s, the potential developments of the mineral resources, services, trade and tourism, and other activities sectors retrogressed, while that of the remaining sectors progressed over the contemporary regional sectors. Therefore, apart from the agriculture and allied sector of the Nigerian economy, the tertiary production sector witnessed a steady potential development over the studied period.

Furthermore, the DLQ of the Nigerian economy in comparison to developing economies of Africa (DEA) indicated that the potential development of Nigeria's agriculture and allied sector and tertiary sector progressed against contemporary sectors of the region, while the potential developments of its mineral resources and secondary sectors experienced a retrogression in relation to the related sectors of DEA (Table 3). The DLQ decade-wise decomposition revealed no distinct pattern as variations across the decades marked the changes over the studied period. In the first decade, except for agriculture and allied activities, trade and tourism, and logistics sectors, the potential development in the remaining sectors progressed against contemporary sectors of the DEA. In the second decade, the secondary and logistics (a tertiary) sectors of the country's economy witnessed a potential retrogression in their development, while agriculture and allied activities, mineral resources, and most of the tertiary sectors experienced a potential progression in their development against the DEA-related sectors. In the third decade, the potential development of mineral resources, manufacturing, and trade and tourism sectors declined in comparison to the contemporary sectors of the DEA, while the potential development of the remaining sectors inclined against that of the related sectors of DEA. In the fourth decade, except for mineral resources, secondary, and other activities sectors of the Nigerian economy, agriculture and allied activities and tertiary sectors of the nation's economy exhibited a faster potential development than their DEA contemporary sectors. In the last decade, the potential development of the mineral resources sector, secondary sector, and logistics sector were higher than that of the DEA sub-sectors, while agriculture and allied activities and most of the tertiary sectors had a lower potential development than that of the DEA economy. Thus, it can be inferred that agriculture and allied activities and the tertiary sectors of the Nigerian economy

witnessed a remarkable change over the studied period, while mineral resources and secondary sectors lagged behind during the stipulated period.

It is worth mentioning that there were no observed cases of equal potential development in the Nigerian economy in comparison to different regional economies, as evidenced by the absence of any "DLQ equal to one." Generally, the developmental potentials of the country's agriculture and allied activities, as well as the tertiary sector, exhibited significant progress. This can be attributed to the government's efforts towards sustainable growth in agriculture and services, recognizing their potential for food security and foreign exchange earnings. However, the lagging performance of the oil and solid mineral sectors may be attributed to the active emergence of economies with abundant oil resources such as Angola, South Sudan, Chad, and the enhanced exploitation of solid minerals by countries like South Africa and Zambia.

Juxtapose of SLQ and DLQ of Nigerian Economy vis-à-vis three regional economies

The comparison of the SLQ and DLQ of the Nigerian economy in relation to the West African economy for the entire period revealed that the agriculture and allied sector, as well as the tertiary production sector, are considered the mainstay sectors that will transition from non-basic to basic in the future (Table 3). Additionally, the mineral sector shows promise as a prospective sector that will transition from basic to non-basic in the future. On the other hand, the secondary production sector is lagging behind and will remain a non-basic sector both in the present and future.

The decade-wise analysis of the 1970s showed that the agriculture and allied sector, along with the tertiary production sector (except for other activities), lagged behind and remained non-basic throughout that decade. The mineral resource and construction sectors were considered prospective and made the transition from basic to non-basic sectors during that decade. The manufacturing and other activities sectors were considered mainstay economies and transitioned from non-basic to basic sectors during the decade. In the 1980s, the mineral resource and construction sectors continued to be prospective and transitioned from basic to non-basic sectors during that decade. The agriculture and allied activities, as well as the tertiary production sectors, were considered mainstay sectors and transitioned from non-basic to basic sectors during the decade. The construction sector lagged behind and remained a non-basic sector throughout the decade.

In the 1990s, the agriculture and allied activities sector, as well as the tertiary production sector (except for other activities), were considered mainstay sectors that transitioned from non-basic to basic sectors. The mineral resource sector was a prospective sector and made the transition from basic to non-basic during that decade. The other activities sector was a leading sector and remained as a basic sector throughout the decade. However, the manufacturing and construction sectors lagged behind and remained non-basic during the 1990s. Moving on to the 2000s, the agriculture and allied activities, trade and tourism, and logistics sectors were considered mainstay sectors and they transitioned from non-basic to basic sectors during the decade. The industry, manufacturing, and other activities sectors were regarded as prospective sectors and made the transition from basic to non-basic during the decade. Similar to the previous decade, the manufacturing and construction sectors continued to lag behind and remained non-basic throughout the 2000s. The services sector was a leading sector and remained as a basic sector throughout the decade. In the 2010s, except for other activities, the tertiary production sector was a leading sector and remained as a basic sector throughout the decade. The other activities sector was a prospective sector but shifted from basic to non-basic during the decade.

The agriculture and allied activities, manufacturing, and construction sectors were considered mainstay sectors as they transitioned from non-basic to basic sectors during the decade. On the other hand, the oil and solid mineral sectors lagged behind and remained as non-basic sectors throughout the decade. This can be attributed to the steady decline in global oil prices and the prevalence of various forms of terrorism activities, such as the Boko Haram insurgency, armed banditry, and militancy in

the South-South and South-East regions, which have significantly impacted the fortunes of the oil and solid mineral sectors. As a result of these challenges, the Nigerian economy has been compelled to shift its focus towards non-oil sectors for revenue generation. This could explain why the tertiary production sector emerged as a leading sector during the last decade.

Based on the SSA dimension, for the overall period, the agriculture and allied sector, manufacturing, and the tertiary production sectors were considered mainstay sectors, and they are expected to transition from non-potential to potential sectors in the future (Table 3). On the other hand, the industry and mining and utilities sectors are seen as prospective sectors that will shift from potential to non-potential in the future. The shift of potential development from the mineral resources sector to non-oil sectors such as agriculture and tertiary production may be attributed to the global trend of moving away from fossil fuels and towards green energy. This shift is already evident considering the downward trend of global oil prices. However, the construction sector is expected to lag and remain a non-potential sector both in the present and future of the country's economy. In the 1970s and 1990s, the mineral resources sector was considered a leading sector and remained potential throughout each respective decade. However, in the 1980s and 2000s, the mineral resources sector became a prospective sector, but it shifted from potential to non-potential during those decades. In the 2010s, the same sector became a lagging sector and remained non-potential throughout the decade. This outcome reinforces the earlier observation regarding the lack of potentiality in the sector when comparing the Nigerian economy to the West African economy.

Except for the 1970s and 2010s, the agriculture and allied sector was consistently a mainstay sector and transitioned from a non-potential to a potential sector during each decade. However, in the 1970s, it was a lagging sector and remained a non-basic sector throughout that decade. This could be attributed to the fact that the agriculture sector was already vibrant and had potential across the regions of West Africa and SSA, which allowed the Nigerian agriculture sector to be proactive beyond these regions. During the 1970s and 2010s, the manufacturing and construction sectors were mainstay sectors as they transitioned from non-basic to basic sectors during the future of these decades. Additionally, in the 2000s, the construction sector was a mainstay sector, while in the 1980s and 2000s, it was a lagging sector. The manufacturing sector was a prospective sector in the 1980s, a leading sector in the 1990s, and a lagging sector in the 2000s. Across the decades, except in the 2010s when trade and tourism became a prospective sector, it was consistently a mainstay sector. From the 1970s to the 1990s, the services sector was a mainstay sector, then became a leading sector, and later transitioned to a prospective sector in the last decade. The logistic sector was a mainstay sector in the 1970s, 1990s, and 2000s, a lagging sector in the 1980s, and a leading sector in the 2010s. Throughout the first three decades, the other activities sector was a mainstay sector, then became a leading sector in the 2000s, and transitioned to a prospective sector in the 2010s.

From the DEA dimension, it was observed that agriculture and allied sector and trade and tourism sector were leading sectors, manufacturing was a prospective sector, tertiary production (excluding trade and tourism) was a mainstay sector, while mineral resources and construction were lagging sectors for the overall period (Table 3). In the decade-wise analysis, the 1970s showed that industry, mining and utilities, and manufacturing were leading sectors. Agriculture and allied activities, and trade and tourism were prospective sectors. Construction, services, and other activities were mainstay sectors, while logistics was a lagging sector. In the second decade, mineral resources remained a leading sector, while agriculture transitioned to a leading sector. The manufacturing sector became a prospective sector, and construction became a lagging sector. Services, other activities, and logistics maintained their status quo, while trade and tourism transitioned into a mainstay sector. In the 1990s, agriculture and allied activities persisted as a leading sector, while industry and mining and utilities transitioned into prospective sectors. The manufacturing sector maintained its status quo. Except for trade and tourism, which became a lagging sector, the tertiary production sub-sectors remained mainstay sectors. In the 2000s, agriculture and other activities, services, and trade and tourism were leading sectors, while logistics

was a mainstay sector. The remaining sectors of the Nigerian economy were lagging sectors. In the 2010s, the logistics sector advanced to the status of a leading sector, while agriculture and allied activities, services, and trade and tourism transitioned to prospective sectors. Industry, mining and utilities, manufacturing, and construction sectors advanced to the status of mainstay sectors. The other activities sector remained a lagging sector.

Table 3: SLQ, DLQ and its correlation for Nigerian economy vis-à-vis the regional economies

Sector	1970s		1980s		1990s		2000s		2010s	
	SLQ	DLQ	SLQ	DLQ	SLQ	DLQ	SLQ	DLQ	SLQ	DLQ
Nigeria vis-à-vis West Africa (W/A)										
A	0.838	0.979****	0.743	1.005***	0.788	1.006***	0.915	1.013***	0.946	1.003***
B	1.148	0.997**	1.108	0.996**	1.103	0.999**	1.043	0.987**	0.922	0.989****
C	1.157	0.998**	1.120	0.997**	1.121	0.999**	1.069	0.988**	0.937	0.987****
D	0.998	1.018***	1.077	0.990**	0.971	0.991****	0.847	0.987****	0.883	1.012***
E	1.043	0.996**	0.941	0.987****	0.872	0.998****	0.816	0.993****	0.848	1.004***
F	0.841	0.999****	0.919	1.013***	0.963	1.002***	1.005	1.006*	1.052	1.002*
G	0.803	0.988****	0.855	1.015***	0.912	1.003***	0.975	1.012***	1.065	1.002*
H	0.704	0.996****	0.733	1.003***	0.726	1.009***	0.986	1.037***	1.118	1.004*
I	0.899	1.006***	0.991	1.0123***	1.024	1.001*	1.020	0.997**	1.012	0.999**
Nigeria vis-à-vis SSA										
A	0.815	0.973***	0.659	1.008***	0.715	1.011***	0.941	1.037***	1.023	1.002*
B	1.331	1.019*	1.233	0.986**	1.212	1.002****	1.022	0.974**	0.786	0.981****
C	1.378	1.018*	1.280	0.987**	1.265	1.003****	1.088	0.977**	0.847	0.981****
D	0.962	1.06***	1.156	0.984**	1.079	1.003****	0.874	0.978****	0.901	1.020****
E	0.925	1.02***	0.774	0.967****	0.703	1.005***	0.600	0.980****	0.572	1.000***
F	0.719	1.025***	0.838	1.011***	0.896	1.013***	1.007	1.019*	1.112	0.999**
G	0.809	1.001***	0.852	1.011***	0.880	1.004***	0.988	1.028***	1.136	0.999**
H	0.550	1.024***	0.568	0.981****	0.514	1.024***	0.990	1.086***	1.338	1.003*
I	0.692	1.048***	0.880	1.014***	0.973	1.017***	1.013	1.001*	1.007	0.995**
Nigeria vis-à-vis Developing Economies: Africa (DEA)										
A	1.266	0.956**	1.047	1.014*	1.168	1.008*	1.530	1.027*	1.404	0.989**
B	1.046	1.001*	1.025	1.002*	1.023	0.995**	0.865	0.967****	0.720	1.002***
C	1.051	1.001*	1.048	1.006*	1.053	0.995**	0.891	0.967****	0.746	1.004***
D	1.380	1.044*	1.557	0.974**	1.252	0.980**	0.855	0.960****	0.819	1.024***
E	0.989	1.004***	0.760	0.958****	0.688	1.014***	0.638	0.977****	0.611	1.002***
F	0.799	1.000****	0.861	1.009****	0.912	1.008***	1.033	1.017*	1.114	0.995**
G	1.008	0.976**	0.973	1.008***	0.995	0.995****	1.131	1.032*	1.282	0.992**
H	0.607	0.988****	0.545	0.974****	0.467	1.017***	0.974	1.103***	1.427	1.005*
I	0.719	1.028***	0.866	1.015***	0.958	1.014***	0.991	0.992****	0.916	0.990****

Source: Authors' own calculation, 2021 Note: * ** **** mean superior, prospective, mainstay and underdeveloped sectors respectively.

Table 3: Continued

Sector	Nigeria vis-à-vis W/A		Nigeria vis-à-vis SSA		Nigeria vis-à-vis DEA	
	SLQ	DLQ	SLQ	DLQ	SLQ	DLQ
A	0.844	1.002***	0.827	1.007***	1.281	1.001*
B	1.068	0.994**	1.123	0.990**	0.940	0.992****
C	1.084	0.994**	1.178	0.991**	0.962	0.993****
D	0.957	0.999****	0.996	1.007***	1.180	0.995**
E	0.905	0.995****	0.718	0.995****	0.740	0.991****
F	0.954	1.005***	0.910	1.014***	0.940	1.008***
G	0.919	1.005***	0.929	1.009***	1.074	1.003*
H	0.848	1.010***	0.781	1.024***	0.791	1.020***
I	0.989	1.003***	0.911	1.015***	0.889	1.009***

Source: Authors' own calculation, 2021

Note: * * * * * mean superior, prospective, mainstay and underdeveloped sectors respectively.

Klassen Typology of Nigerian Economy vis-à-vis the Regional Economies

A cursory review of the Nigerian economy vis-à-vis the West Africa dimension showed that agriculture and allied activities, manufacturing, and tertiary production (excluding other services) sectors were non-advanced but fast-growing (Table 4). The other activities sector was developed and fast-growing, the industry and mining sectors were developed but not fast-growing, and the construction sector was relatively lagging behind. Furthermore, the decade-wise analysis revealed that during the 1970s, both the mineral resources and secondary production sectors were advanced and fast-growing. The tertiary production sector was non-advanced but fast-growing, while the agriculture and allied activities sector was relatively lagging behind. In the 1980s, agriculture and allied activities and the tertiary production sectors were non-developed but fast-growing. On the other hand, mineral resources and manufacturing were advanced but slow-growing sectors. The construction sector remained relatively lagging. In the 1990s, agriculture and allied activities, services, trade and tourism, and logistics were fast-growing sectors. Industry, mining and utilities, construction, and other activities were advanced but slow-growing sectors. Manufacturing was relatively lagging during this period. In the 2000s, services, logistics, and other activities were developed and fast-growing sectors. Agriculture and allied activities, as well as trade and tourism, were fast-growing sectors. Industry, mining and utilities, and construction were advanced but slow-growing sectors. Manufacturing remained relatively lagging.

From the SSA dimension, for the overall period, manufacturing is an advanced and fast-growing sector, while agriculture and allied activities, along with the tertiary production sector, are non-advanced but fast-growing sectors (Table 4). Mineral resources are an advanced and slow-growing sector, while construction is a relatively lagging sector. The decade-wise analysis reveals that during the first decade, the mineral resources sector was advanced and fast-growing, while the secondary and tertiary production sectors were just fast-growing. Agriculture and allied activities were a relatively lagging sector. In the second decade, agriculture and allied activities, as well as tertiary production (excluding other activities), were fast-growing sectors. Industry, mining and utilities, and manufacturing were developed but slow-growing sectors, while construction remained relatively lagging. During the third decade, mineral resources and manufacturing were advanced and fast-growing sectors, while the remaining sectors of the Nigerian economy were non-developed but fast-growing sectors. In

the fourth decade, services, logistics, and other activities sectors were developed and fast-growing, while mineral resources were an advanced and slow-growing sector. Agriculture and allied activities, along with tertiary production, were fast-growing sectors, while the secondary production sector was relatively lagging. In the last decade, the tertiary production sector and agriculture and allied activities were sectors that advanced and grew slowly. The manufacturing sector grew fast, while the remaining sectors of the economy were relatively lagging behind.

Lastly, from the DEA dimension, evidence from the overall period shows that agriculture and allied activities, manufacturing, and trade and tourism sectors were developed and fast-growing, while all other sectors of the country's economy were growing fast (Table 4). In the 1970s, industry, mining and utilities, manufacturing, and logistics sectors were advanced and growing fast. The agriculture and allied activities sectors were advanced but growing slowly, while the remaining sectors were just fast-growing and non-developed. In the 1980s, agriculture and allied activities, as well as mineral resources sectors, were developed and growing fast. Services, trade and tourism, and other activities were growing fast but non-developed. The manufacturing sector was advanced but growing slowly, while construction and logistics sectors were relatively lagging behind. In the 1990s, the agriculture and allied activities sector was advanced and fast-growing. Industry, mining and utilities, and manufacturing sectors were developed but growing slowly. Construction, services, trade and tourism, and other activities were growing fast but non-advanced, while the logistics sector relatively lagged behind. In the 2000s, agriculture and allied activities, services, and trade and tourism sectors were developed and fast-growing. Logistics and other services sectors were fast-growing but non-advanced, while the remaining sectors relatively lagged behind. In the 2010s, agriculture and allied activities, services, trade and tourism, and logistics sectors were fast-growing and developed, while all the remaining sectors were fast-growing but non-advanced. Generally, it can be inferred that manufacturing is the most stable sector of the Nigerian economy, followed by agriculture and allied activities, and other activities.

Table 4a: Typology of Nigerian economy vis-à-vis the regional economies (growth and contribution)

Year	A	B	C	D	E	F	G	H	I
Nigeria (growth rate)									
1979	0.45449	8.961797	9.040936	12.97338	8.30198	8.572372	5.054746	7.844817	12.01808
1989	3.349367	-0.34959	-0.07718	-0.40879	-3.68988	3.860091	3.546158	-0.29514	4.626327
1999	3.530812	1.031555	0.853836	-1.3002	4.099973	3.487356	2.021856	5.18888	4.088358
2009	10.93906	2.709687	2.16853	1.81898	8.5477	10.48736	12.40216	23.67023	6.802768
2018	4.005215	2.082854	1.199493	7.378011	7.332237	4.613239	4.349506	7.017085	3.690037
Overall	4.548535	2.395502	2.143122	3.680296	4.616589	6.132699	5.51912	8.687138	6.087917
Nigeria (contribution)									
1979	0.806833	7.436388	7.495185	9.263016	6.926521	6.92515	4.581599	6.477885	9.30976
1989	2.96721	-0.1168	0.12691	0.242383	-2.88333	2.477844	1.999999	-0.66615	3.360316
1999	3.063033	1.279199	1.043464	-0.3495	4.462977	3.431385	1.884295	4.449929	4.223063
2009	7.946087	2.9431	2.319988	2.0203	8.152176	8.733844	9.777027	17.87098	6.042248
2018	4.239817	3.683699	2.983222	6.466459	7.307391	4.941097	4.591492	7.071171	4.291776
Overall	3.857982	2.646601	2.384281	3.228055	4.626183	5.238082	4.574851	7.058528	5.317289
West Africa (growth rate)									
1979	0.806833	7.436388	7.495185	9.263016	6.926521	6.92515	4.581599	6.477885	9.30976
1989	2.96721	-0.1168	0.12691	0.242383	-2.88333	2.477844	1.999999	-0.66615	3.360316

Year	A	B	C	D	E	F	G	H	I
Nigeria (growth rate)									
1999	3.063033	1.279199	1.043464	-0.3495	4.462977	3.431385	1.884295	4.449929	4.223063
2009	7.946087	2.9431	2.319988	2.0203	8.152176	8.733844	9.777027	17.87098	6.042248
2018	4.239817	3.683699	2.983222	6.466459	7.307391	4.941097	4.591492	7.071171	4.291776
Overall	3.857982	2.646601	2.384281	3.228055	4.626183	5.238082	4.574851	7.058528	5.317289
West Africa (contribution)									
1979	10.7897	23.18039	21.36278	9.476125	1.817618	16.6867	6.918872	1.724572	8.043251
1989	9.293275	20.65687	19.22288	10.49422	1.433989	19.4177	6.985173	1.744413	10.68811
1999	10.70072	19.15872	17.81134	8.350651	1.347385	21.31559	7.14392	1.679034	12.49264
2009	12.93459	15.82058	14.20285	5.911967	1.617732	24.75614	7.996398	3.453442	13.3063
2018	12.21919	12.01414	9.895411	5.251002	2.118732	29.25076	9.873462	6.16854	13.20876
Overall	11.17429	18.19006	16.52955	7.940895	1.660506	22.25235	7.757709	2.918443	11.5762
SSA (growth rate)									
1979	1.401112	5.101769	5.304992	4.811937	3.436817	4.302675	3.268838	3.663245	5.16943
1989	2.592676	0.77419	0.943078	0.549141	-0.70113	2.684878	2.379127	1.521898	3.102749
1999	2.629879	0.891336	0.585391	-1.65373	3.771831	2.352364	1.815025	2.991137	2.546613
2009	5.58715	4.363366	3.481783	2.949732	9.709489	7.321314	8.09692	12.52017	5.601004
2018	4.341107	4.51559	3.634712	5.596022	7.838893	5.215397	4.94845	7.070608	4.720191
Overall	3.328688	2.937473	2.59361	2.361808	4.711279	4.342448	4.110073	5.5408	4.167479
SSA (contribution)									
1979	11.19199	20.03342	17.99099	9.810833	2.042433	19.46517	6.887788	2.200808	10.37657
1989	10.48004	18.54252	16.79155	9.759217	1.750968	21.31585	7.019037	2.275121	12.0217
1999	11.79749	17.4371	15.77023	7.506451	1.666863	22.91093	7.399518	2.368807	13.14261
2009	12.61032	16.14363	13.91904	5.721865	2.224592	24.69028	7.882395	3.399915	13.40797
2018	11.30885	14.08367	10.94191	5.144975	3.141765	27.68942	9.255794	5.155786	13.27784
Overall	11.48721	17.25984	15.1071	7.614611	2.152735	23.18925	7.670146	3.05744	12.46167
DEA (growth rate)									
1979	1.700428	5.508073	5.596639	4.952791	4.519954	5.202784	4.230208	5.877653	5.610771
1989	2.789615	-0.36147	-0.42966	1.964501	0.700953	3.508048	3.354466	2.85469	3.720715
1999	2.896321	1.416003	1.285869	0.600174	2.871281	2.818948	2.689192	3.627974	2.727572
2009	5.163534	3.770256	3.172929	3.470099	8.559676	6.01127	6.204027	9.427654	5.088209
2018	4.08845	0.931551	-0.0782	3.561325	5.78571	3.971705	4.070545	5.196683	3.526987
Overall	3.345721	2.135461	1.796291	2.880003	4.39624	4.286457	4.102466	5.357762	4.118919
DEA (contribution)									
1979	7.211906	25.38658	23.46658	6.868503	1.919995	17.57322	5.558154	2.013	10.00206
1989	6.60276	22.23551	20.43149	7.315421	1.804026	20.7904	6.156657	2.391899	12.24184
1999	7.21934	20.65637	18.95397	6.471185	1.702396	22.49837	6.541526	2.609096	13.34775

Year	A	B	C	D	E	F	G	H	I
Nigeria (growth rate)									
2009	7.752454	19.10822	17.0213	5.857383	2.086918	24.08686	6.90576	3.476695	13.70441
2018	8.245071	15.40055	12.45907	5.66541	2.941477	27.64421	8.210236	4.8369	14.59707
Overall	7.392882	20.58474	18.50548	6.447836	2.079257	22.4949	6.661135	3.049611	12.78415

Source: Authors' own calculation, 2021

Table 4b: Typology of Nigerian economy vis-à-vis the regional economies (Decision)

Year	A	B	C	D	E	F	G	H	I
Nigeria vis-à-vis West Africa									
1979	L	AF	AF	AF	AF	F	F	F	F
1989	F	AS	AS	AS	L	F	F	F	F
1999	F	AS	AS	L	AS	F	F	F	AS
2009	F	AS	AS	L	F	AFF	F	AF	AF
2018	L	L	L	F	F	AS	AS	AS	AS
Overall	F	AS	AS	F	L	F	F	F	AF
Nigeria vis-à-vis SSA									
1979	L	AF	AF	F	F	F	F	F	F
1989	F	AS	AS	AS	L	F	F	L	F
1999	F	AF	AF	AF	F	F	F	F	F
2009	F	AS	AS	L	L	AF	F	AF	AF
2018	AS	L	L	F	L	AS	AS	AS	AS
Overall	F	AS	AS	AF	L	F	F	F	F
Nigeria vis-à-vis DEA									
1979	AS	AF	AF	AF	F	F	F	AF	F
1989	AF	AF	AF	AS	L	F	F	L	F
1999	AF	AS	AS	AS	F	F	L	F	F
2009	AF	L	L	L	L	AF	AF	F	F
2018	AF	F	F	F	F	AF	AF	AF	F
Overall	AF	F	F	AF	F	F	AF	F	F

Source: Authors' own calculation, 2021

Note: AF = Advanced and fast growing; F = Fast growing; AS = Advanced and slow growing; L= lagging behind

CONCLUSION AND RECOMMENDATION

Based on the empirical evidence of the typology of the Nigerian economy compared to economies in three regions of Africa, it can be inferred that the industry and solid mineral sectors were the foundational sectors of the Nigerian economy. However, when considering the broader African context and competitive advantages, these sectors have lost their potential to agriculture and allied activities, manufacturing, and trade and tourism. Furthermore, in comparison to the economies of

the three regions, agriculture and allied activities, along with the tertiary production chain sectors, have the potential for faster growth and development. This is due to their long-term sustainability and their suitability as reliable alternative sources of revenue, especially in light of the global decline in oil prices and the impact of insurgencies on the mineral resources and secondary production sectors of the Nigerian economy. Therefore, the study advises policymakers to enhance physical, fiscal, and monetary policies in order to strengthen the potential of agriculture and the tertiary sectors for sustainable development. This will help the Nigerian economy absorb any external shocks caused by its heavy reliance on oil as a primary source of economic survival. Additionally, diversification of the economy becomes crucial to address the insecurity arising from resource control issues by South-South and South-East insurgents. Moreover, the global economy is rapidly transitioning from fossil fuels to green energy, making it imperative for Nigeria to shift from a mono-economy dependent on crude oil to non-oil sectors for effective revenue generation both internally and externally.

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