

ASSESSMENT OF LOCAL CONTENT DEVELOPMENT AND ITS IMPACT ON NIGERIA'S OIL AND GAS INDUSTRY POST COVID-19

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Abstract

The study assessed the impact of local content development policies on Nigeria's oil and gas industry post-COVID-19, motivated by the need to evaluate policy effectiveness in fostering indigenous participation and workforce development. The dominance of international oil companies in the sector, despite the implementation of the Nigerian Oil and Gas Industry Content Development Act (NOGICD Act) of 2010, raised concerns about the limited growth of local businesses and the domestic workforce. This study aimed to evaluate the extent to which local content policies influenced the growth of indigenous businesses and workforce localization during and after the pandemic. A quantitative research design was employed, utilizing secondary data sourced from the Nigerian Content Development and Monitoring Board (NCDMB). Key metrics, including Nigerian Content Equipment Certificates (NCECs), expatriate quotas (EQ), Temporary Work Permits (TWP), and Nigerian Content Value retention, were analyzed over the period 2020 to 2023. The findings indicated significant growth in indigenous business engagement, as reflected by a surge in NCEC issuance and increased registrations under the Joint Qualification System (JQS). Workforce localization improved, with balanced EQ approvals and rejections. Nigerian Content Value retention also rose from 33% in 2020 to 54% in 2023. These outcomes highlighted the effectiveness of local content policies in promoting economic resilience, though challenges such as technical and financial barriers persisted.

1.1 INTRODUCTION

Nigeria has long earned itself a name as one of the major oil producing countries globally. The oil and gas industry in Nigeria has for long been the cornerstone of Nigerian economy in that it has been the major source of foreign exchange earnings. However, the sector has historically been dominated by international oil companies, leading to concerns about the limited participation of indigenous firms and workforce (Biragbara, Adaure and Lemuel,

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2023). In response to these challenges, Nigerian government implemented local content policy aimed at increasing domestic participation and value creation within the industry.

According to Adedeji *et al.* (2020), local content development in the oil and gas sector refers to the nurturing of local capabilities to enhance the contribution of the petroleum industry to national economic growth. The Nigerian Oil and Gas Industry Content Development Act of 2010 formalized these efforts. As noted by Nwapi (2020), the act mandated increased use of indigenous products, services, and workforce in the sector's operations. Recent studies have highlighted the potential benefits of local content policies in resource-rich developing countries. Ovadia (2020) argues that well-implemented local content strategies can foster economic diversification and industrial development, which is pertinent for countries seeking to avoid the resource curse.

Despite the potential advantages, the implementation and effectiveness of local content policies in Nigeria's oil and gas industry have faced significant challenges. According to Ablo (2020), the gap between policy objectives and actual outcomes remains substantial, with many indigenous companies struggling to meet the technical and financial requirements of the sector. This disparity underscores the need for a comprehensive assessment of policy impact on indigenous businesses, and workforce development outcomes. Meanwhile, the COVID-19 pandemic disrupted the oil and gas business ecosystem. It exposed the Nigerian oil and gas industry to an unanticipated stress, testing the effectiveness of the local content development policy as there was limited movement of expatriates within the period. It is therefore imperative to critically examine the performance of this policy during and after the COVID-19.

Evaluating the impact of local content policies on the growth of indigenous Oil and Gas businesses is essential for gauging the effectiveness of these interventions. Recent research by Adedeji *et al.* (2020) indicates that while there has been an increase in the number of indigenous companies participating in the oil and gas value chain, many still face substantial barriers in accessing contracts and financing. More so, workforce development is another critical aspect of local content policies in the Nigerian oil and gas industry.

The relationship between local content policies and sustainable development goals has also gained attention in recent literature. Ablo and Osei-Tutu (2019) argued that effective local content strategies can contribute to broader economic diversification and industrial development objectives. However, the authors caution that without proper governance and monitoring mechanisms, these policies may fall short of their intended impact or even exacerbate existing inequalities within the sector. As the global energy landscape evolves, with increasing emphasis on renewable sources and decarbonization, the role and implementation of local content policies in Nigeria's oil and gas industry may require reassessment. Ayoola (2021) suggests that future local content strategies should consider the potential for knowledge and technology transfer in emerging energy sectors. This is to ensure that Nigeria's workforce and businesses are prepared for the energy transition.

A primary concern is the apparent disconnect between the aims of local content policies and their real-world impact. While these policies intend to foster the growth of indigenous businesses and develop a skilled local workforce, many Nigerian companies continue to struggle with meeting the industry's technical and financial requirements. This struggle suggests a potential misalignment between policy formulation and the practical realities faced by local stakeholders. More so, the impact of these policies on workforce development also requires critical examination. It is against this backdrop that this study primarily focused on two specific objectives evaluating the impact of local content policies on the growth of indigenous businesses in the Nigerian oil and gas industry, and examining the influence of local content development policies on workforce development in the Nigerian oil and gas industry. The imperativeness of this appraisal lies in its contribution to the ongoing discourse on effective policy implementation and sustainable economic development in resource-rich nations.

I. REVIEW OF RELATED LITERATURE

2.1 A review of Local Content Policies on Nigeria's Oil and Gas Industry

Local content policies have become a cornerstone of many developing countries' strategies to maximize the economic benefits of their natural resource sectors. Nigeria, as a major oil and gas producer, has implemented stringent local content regulations to promote indigenous participation in the industry. However, the effectiveness and impact of these policies on Nigeria's economy and development have been a subject of ongoing debate. With the growing awareness on the imperativeness of local content development, Nigeria signed the Nigerian Oil and Gas Industry Content Development Act (NOGICDA) in April 2010 (Abe, 2022). The act aims to increase indigenous participation in the nation's oil and gas sector by setting minimum thresholds for the use of local services and materials, while promoting technology transfer in the industry (Onwuka, 2021). Local content is defined by the Nigerian Oil and Gas Development Law 2010 as "the quantum of composite value added to or created in Nigeria through the utilization of Nigerian resources and services in the petroleum industry, resulting in the development of indigenous capability without compromising quality, health, safety, and environmental standards." The establishment of the Nigerian Content Development and Monitoring Board (NCDMB) under NOGICDA has been instrumental in ensuring compliance with local content regulations, providing guidelines, and enforcing the Act's provisions. Zubedah (2022) observed that the success of the NOGICDA in Nigeria has inspired other African nations to adopt similar local content regulations in their oil and gas industries.

However, there have been concerns surrounding local content regulations in Africa. Some external stakeholders perceive these policies as a form of "nationalization". Obviously, this apprehension is as a result of the negative associations with past government interventions. One of such intervention is Nigeria's Enterprise Promotion Decree of the 1970s (commonly referred to as the "Indigenization Decree"), which sought to limit foreign participation in certain sectors while mandating partnerships with Nigerian nationals (Ogbuagu, 1983). This fear of nationalization has often been cited as a reason for foreign investor hesitation. Additionally, issues such as increased bureaucracy, cost inflation, and inefficiencies have been associated with local content policies. According to Arthur (2018), critics argue that, in some cases, local content targets have been difficult to achieve due to the inadequacy of local business ecosystems and educational systems.

One of the challenges highlighted in the literature is the inflationary pressure on salaries and project costs when local content regulations are not matched by adequate capacity development. For instance, Angola experienced significant wage inflation in the mid-1990s following the abrupt introduction of quotas for nationals, with a dramatic 145% increase in wages in 1996 and a 220% increase in 1997 due to insufficient local skills and training infrastructure (Acheampong, *et al.* 2016). Similarly, in Nigeria, between 2003 and 2013, there was a reported 60% inflation in the cost of subsea wells due to local content regulations (Arthur, 2018). This phenomenon, often referred to as the "middleman syndrome," occurs when local companies, lacking the capability to execute large projects, subcontract work to foreign partners, leading to increased costs without delivering substantial local value (Nwankwo & Iyeke, 2022).

Despite these challenges, local content regulations have been shown to create value when effectively implemented. Local content policies that reduce rent-seeking behaviors and promote sustainable economic impact are particularly encouraged. For instance, Klue *et al.* (2009) asserted that strategies that foster backward linkages, where local suppliers and firms can provide goods and services to the oil and gas industry, have shown to have a positive impact on local economies. Nonetheless, the implementation of poorly designed local content laws has often been hampered by long-standing biases against international oil companies. Nwankwo and Iyeke (2022)

noted that this is fueled by the belief that these companies exploit natural resources without contributing to local development.

Evidently, the literature review revealed several insights and also exposed significant gaps in the existing body of knowledge. While many studies have explored the overall benefits of local content policies, such as technology transfer and economic growth, limited attention has been given to how these policies specifically address long-term workforce development. Similarly, there is a dearth of literature on how the local content policy in Nigerian oil and gas industry has impacted the growth of indigenous businesses in the industry. Meanwhile, the growth of indigenous businesses is the pivot around which the local content policy revolves, thus, there is a need to ascertain how local business have benefited from the policy so far. This study, therefore, seeks to address these gaps by focusing on the long-term impact of local content policies on workforce development, providing a more comprehensive understanding of how these policies can foster sustainable workforce growth.

II. METHODOLOGY

3.1 Research Design

The study employs a quantitative research design. This approach is appropriate for understanding local content policies, as well as evaluating their impact on indigenous businesses and workforce development. The quantitative design allows for the collection of measurable and comparable data, which can be analysed statistically to identify trends and correlations (Creswell, 2014).

3.2 Area of Study

The study is carried out in Nigeria which is located in West Africa, and is the most populous country in Africa, with over 200 million people. The nation spans an area of 923,768 square kilometers and is rich in natural resources, particularly oil and gas, which form the backbone of its economy. Nigeria is divided into 36 states and the Federal Capital Territory, Abuja. Its oil and gas industry operates mainly in the Niger Delta region, contributing significantly to GDP and export revenue. As Africa's largest oil producer, Nigeria faces challenges such as resource dependency, environmental degradation, and ensuring local participation in the oil and gas sector.

3.3 Source of Data

The source of the data used in this study is the Nigerian Content Development and Monitoring Board (NCDMB). Established in 2010 under the Nigerian Oil and Gas Industry Content Development (NOGICD) Act, the NCDMB is tasked with promoting the development of local capacity and indigenous participation in Nigeria's oil and gas sector. Key metrics such as Nigerian Content Value retention, biometric records, and evaluation reports are derived from the Board's annual reports and monitoring activities.

IV. RESULTS AND DISCUSSIONS

The analysis focused on secondary data to evaluate the impact of local content policy development on the growth of indigenous businesses and workforce development within Nigeria's oil and gas industry. The findings provide critical insights into how these policies have shaped industry dynamics, particularly in fostering indigenous participation and enhancing workforce localization. The results are presented and discussed in detail across key metrics, offering a comprehensive evaluation of policy outcomes and their implications for the sector.

4.1: Nigerian Content Equipment Certificates (NCEC)

Table 4.1 presents the trend in the issuance of Nigerian Content Equipment Certificates (NCECs) from 2020 to 2023.

Table 4.1: Number of NCEC issued from 2020 to 2023

2020	2021	2022	2023
942	789	783	2,154

Source: NCDMB, 2024

In 2020, a total of 942 NCECs were issued, showcasing an active engagement with indigenous businesses during this period. However, subsequent years (2021 and 2022) saw a gradual decline in the number of certificates issued, reducing to 789 and 783, respectively. This decline could be attributed to multiple factors, such as stricter compliance requirements, disruptions caused by the COVID-19 pandemic and associated reduction in project activities within the sector globally. This dynamic shift in the implementation of local content policies within Nigeria's oil and gas industry is visualized in Figure 4.1.

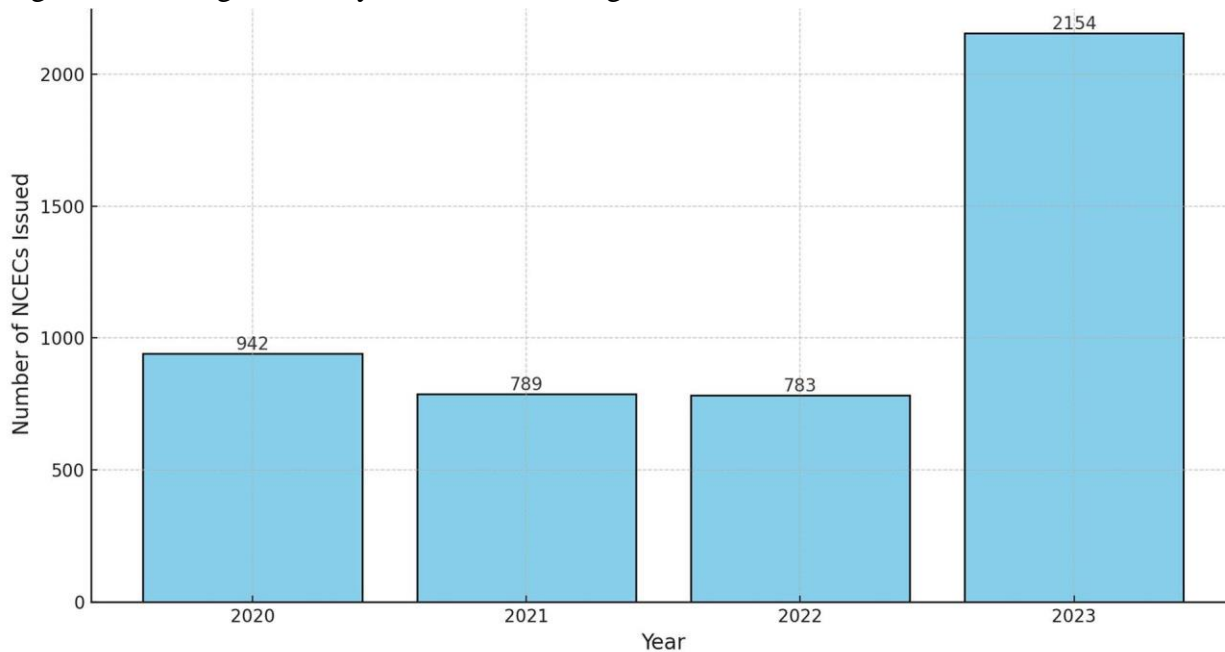


Figure 4.1: A bar chart showing number of Nigerian Content Equipment Certificates (NCECs) issued from 2020 to 2023.

In stark contrast, 2023 witnessed a significant surge in the number of NCECs issued, reaching an unprecedented count of 2,154. This dramatic increase suggests a reinvigoration of the local content drive. It also signifies a recovery in industry activities post-pandemic, with enhanced opportunities for indigenous businesses to participate in oil and gas projects. Furthermore, the substantial growth resulted from strategic initiatives such as the implementation of the NCDMB's 10-year roadmap, which emphasizes deepening in-country capacity and fostering collaborations between project promoters and local firms. This sharp upward trajectory in 2023 underscores the effectiveness of recent policy actions and stakeholder engagement efforts by the NCDMB. The increase in NCEC issuance aligns with broader objectives to boost indigenous manufacturing, enhance the domestic supply chain, and ensure greater retention of economic value within Nigeria.

4.2: Expatriate Quotas (EQ)/ Temporary Work Permits (TWP)

The issuance and rejection of Expatriate Quotas (EQ) and Temporary Work Permits (TWP) from 2020 to 2023 reveal critical insights into the dynamics of workforce localization and policy enforcement in Nigeria's oil and gas industry. Over the four-year period, the number of EQ approvals steadily increased, from 591 in 2020 to 1,359 in 2023 as shown in Table 4.2. This consistent rise indicates a growing demand for specialized expatriate expertise in the sector, driven by new projects and expansions requiring skills unavailable in the domestic labor pool. Despite this increase, the corresponding trend of EQ rejections; from 296 in 2020 to 358 in 2023; demonstrates the NCDMB's commitment to ensuring that local talents are prioritized whenever possible. The slight dip in EQ rejections in 2021 and 2022, followed by a rise in 2023, reflect the Board's strategic recalibration to balance the need for expatriates with workforce localization efforts.

Table 4.2: Number of EQ/ TWP issued from 2020 to 2023

	2020	2021	2022	2023
No of EQ Approvals	591	763	943	1,359
No of EQ Rejections	296	273	181	358
No of TWP Approvals	263	455	342	544
No of TWP Rejections	36	28	25	55

Source: NCDMB, 2024.

As shown in Figure 4.2, the data for TWPs shows fluctuations that align with the industry's operational needs and regulatory vigilance. Approvals for TWPs rose from 263 in 2020 to 544 in 2023, mirroring the upward trend seen in EQ approvals. This growth suggests an increasing reliance on temporary expatriate labor for project-specific roles, likely tied to short-term technical demands. On the other hand, TWP rejections remained consistently low across the years, increasing slightly from 36 in 2020 to 55 in 2023. The low rejection rates compared to EQs reflect the temporary nature of TWPs, making them less contentious than longer-term EQs in workforce planning. The relationship between EQ/TWP approvals and rejections underscores the effectiveness of local content policies aimed at controlling foreign labor influx while accommodating the industry's critical needs. The rising approvals indicate a sector rebound post-pandemic, coupled with increased project activities necessitating a temporary workforce boost. However, the NCDMB's vigilance, as reflected in rejection trends, signals its dedication to enforcing Nigerian Content requirements, ensuring that expatriate reliance is neither excessive nor detrimental to the development of local talent.

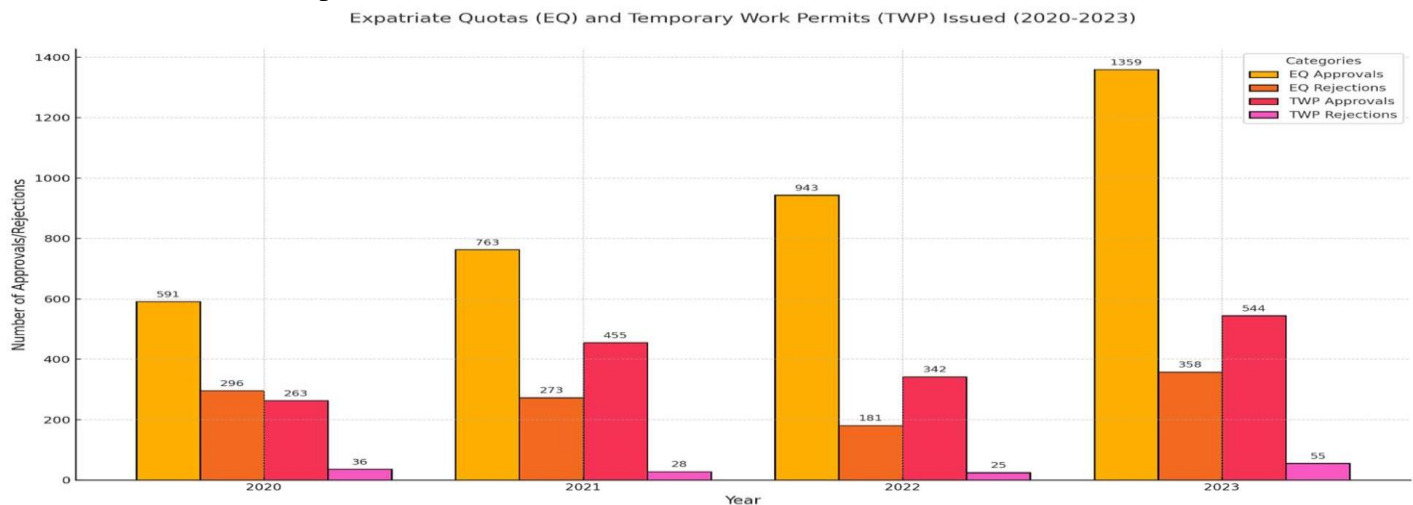


Figure 4.2: A grouped bar chart showing the number of approvals and rejections for Expatriate Quotas (EQ) and Temporary Work Permits (TWP) from 2020 to 2023

These trends highlight a balanced approach to workforce regulation in Nigeria's oil and gas sector. The steady growth in approvals suggests a pragmatic response to industry needs, while rejection patterns demonstrate a firm commitment to workforce localization. The balance achieved in managing EQ and TWP allocations is critical for fostering a collaborative and inclusive environment that empowers indigenous professionals while leveraging expatriate expertise for national development.

4.3 Nigeria Oil and Gas Industry Content Development (NOGICD) Joint Qualification System (JQS)

The Nigeria Oil and Gas Industry Content Development (NOGIC) Joint Qualification System (JQS) serves as a centralized database for tracking the participation of individuals, service companies, and operators in the Nigerian

oil and gas sector. The data from 2020 to 2023 presented in Table 4.3 shows a consistent expansion in all categories, reflecting growing industry activity and a strengthening of local content compliance mechanisms.

Table 4.3: NOGICD Joint qualification system (JQS) records.

NJQS Records	2020	2021	2022	2023
Individuals	222,896 (42,505)	248,780 (25,884)	272,794 (24,014)	396,123 (124,123)
Service Companies	6,935 (1,565)	8,234 (1,299)	9,601 (1,367)	11,294 (1,668)
Operators	68 (4)	85 (17)	97 (12)	114 (17)

Source: NCDMB, 2024.

As depicted in Figure 4.3, the number of individual records grew significantly from 222,896 in 2020 to 396,123 in 2023, marking a net increase of 173,227 individuals over four years. This growth, including notable additions of 42,505 in 2020 and an exceptional 124,123 in 2023, highlights enhanced workforce participation in the sector. The sharp increase in 2023 indicates intensified efforts to integrate local talent, driven by the recovery of industry operations postpandemic and the enforcement of policies favoring indigenous workforce registration.

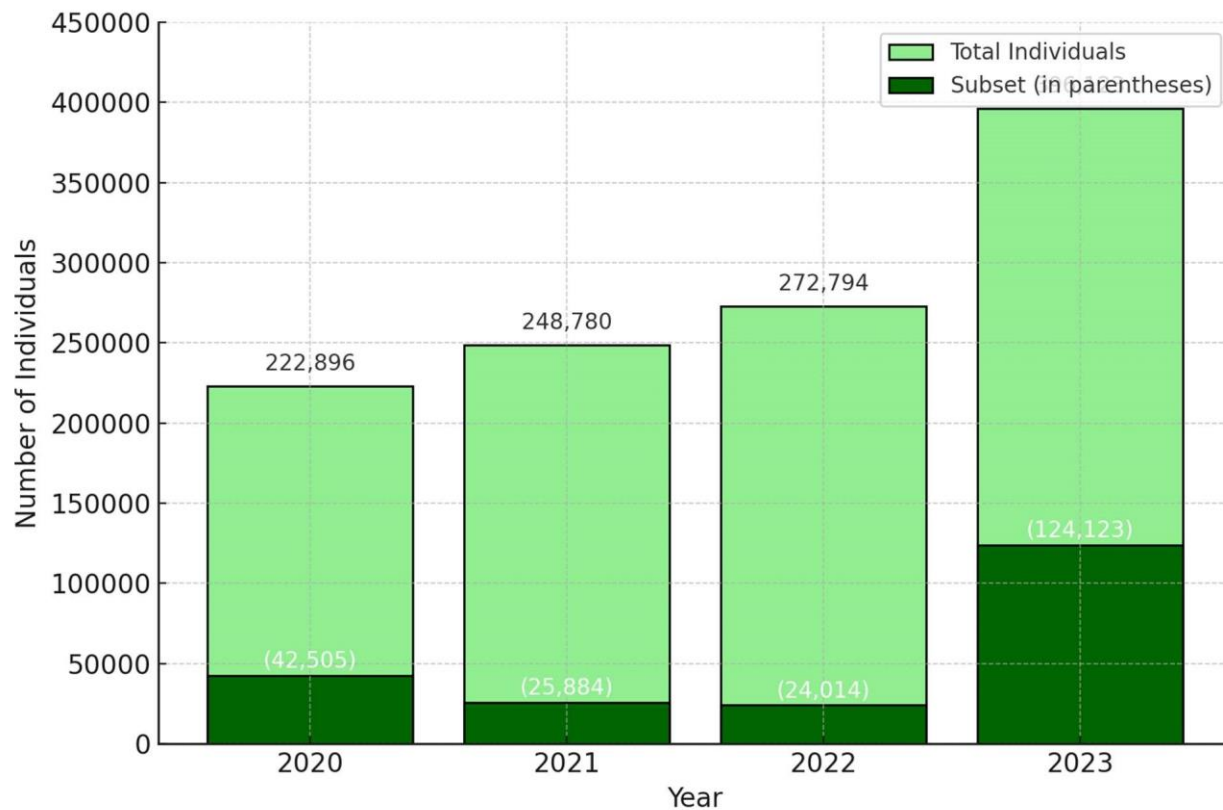


Figure 4.3: bar chart visualizing the NJQS records for Individuals from 2020 to 2023.

Similarly, records of service companies also show a steady rise, increasing from 6,935 in 2020 to 11,294 in 2023, with annual new additions ranging from 1,299 in 2021 to 1,668 in 2023. This growth underscores the expanding role of indigenous firms in providing services across the oil and gas value chain. The consistent upward trend suggests that more Nigerian companies are successfully entering the sector, supported by initiatives like the Project100 program and improved access to industry opportunities. This steady growth is shown in Figure 4.4.

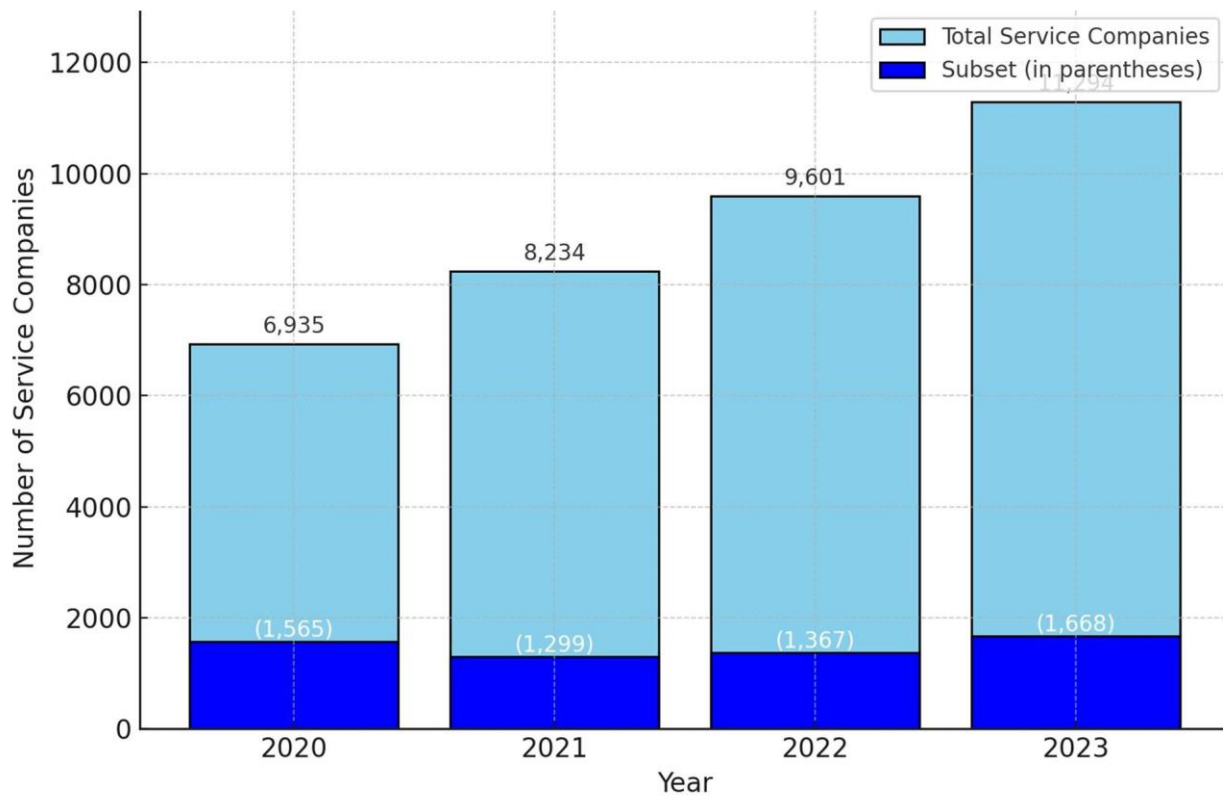


Figure 4.4: bar chart visualizing the NJQS records for service companies from 2020 to 2023.

Furthermore, the operator records exhibit the smallest but steady growth, from 68 in 2020 to 114 in 2023, reflecting an increase of 46 operators. New additions each year remain modest (4–17 annually), which aligns with the more controlled and specialized nature of operator roles in the sector. The rising numbers depicted in Figure 4.5 indicate increased confidence among stakeholders to invest in operational activities under the framework of local content laws.

The robust growth across all categories in the NOGIC JQS database reflects the effectiveness of regulatory frameworks and stakeholder compliance with the Nigerian Content Development and Monitoring Board's (NCDMB) mandates. The substantial rise in individual and service company records, particularly in 2023, signals heightened participation and readiness of indigenous entities to contribute to the sector. Furthermore, the data indicates the ongoing transformation of the oil and gas industry into a more inclusive and locally-driven ecosystem.

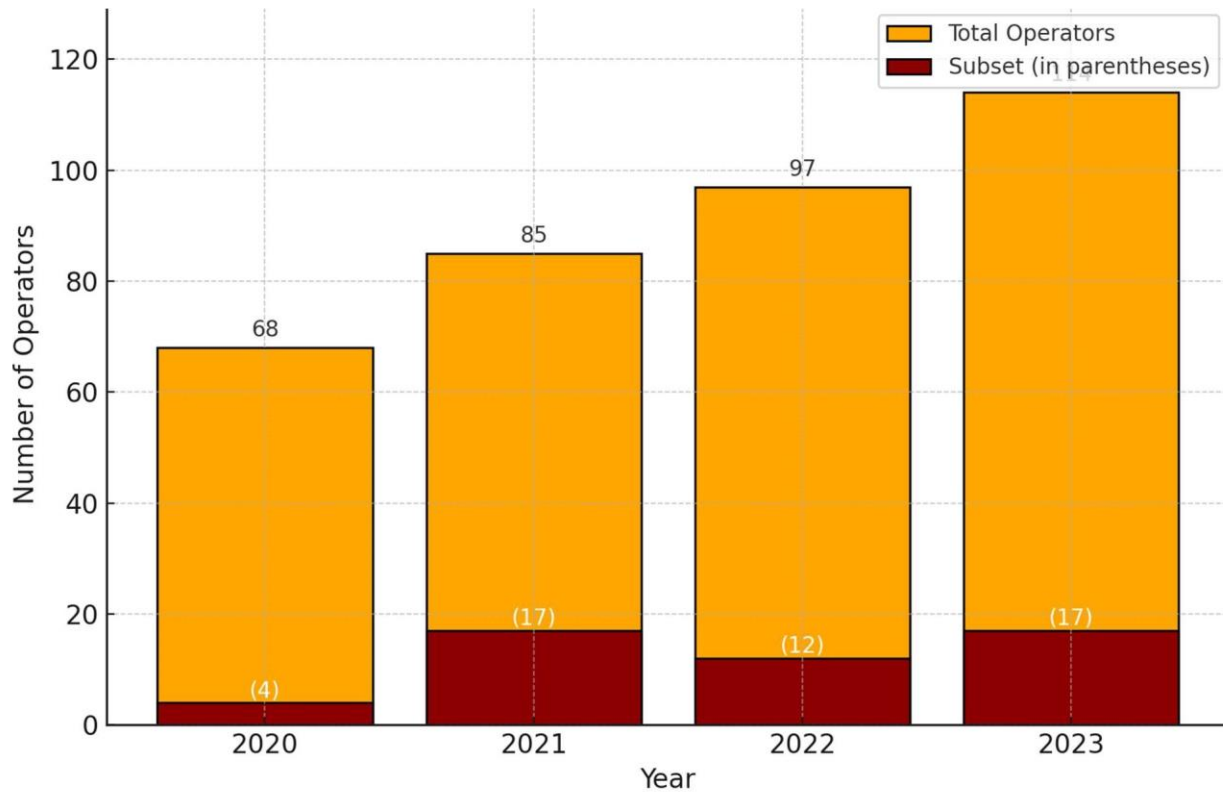


Figure 4.5: bar chart showing the NJQS records for operators from 2020 to 2023.

This trend demonstrates the success of local content development policies in building an indigenous capacity base. However, sustaining this momentum will require continuous investment in skills development, access to finance for service companies, and policy support for operators to scale their activities.

4.4 Nigerian Content Value Retention

The data on Nigerian Content Value retention from 2020 to 2023 presented in Table 4.4 highlights the progressive success of local content policies in ensuring that a greater proportion of economic value is retained within Nigeria's oil and gas sector. This metric reflects the extent to which the industry leverages local resources, workforce, and infrastructure to deliver projects and services.

In 2020, Nigerian Content Value retention stood at 33%, indicating that only about a third of the economic value generated in the oil and gas sector was retained in-country. This relatively low figure underscores the historical reliance on foreign expertise, materials, and services. However, the retention level rose significantly to 42% in 2021, showing marked progress in the implementation of the Nigerian Oil and Gas Industry Content Development (NOGICD) Act and the effectiveness of initiatives spearheaded by the Nigerian Content Development and Monitoring Board (NCDMB).

Table 4.4: Nigerian Content Value Retention

2020	2021	2022	2023
33%	42%	44%	54%

Source: NCDMB, 2024.

As evident in Figure 4.4, the upward trend continued in subsequent years, with retention levels reaching 44% in 2022 and peaking at 54% in 2023. This consistent improvement reflects the success of strategic interventions such as increased issuance of Nigerian Content Compliance Certificates (NCCCs), targeted investments in local

manufacturing (e.g., LPG cylinder plants and modular refineries), and robust training programs aimed at enhancing the technical capacity of the indigenous workforce. The 2023 figure of 54% indicates that more than half of the economic value in the sector is now being captured locally which is no doubt, a significant milestone in the journey toward self-reliance and sustainable development.

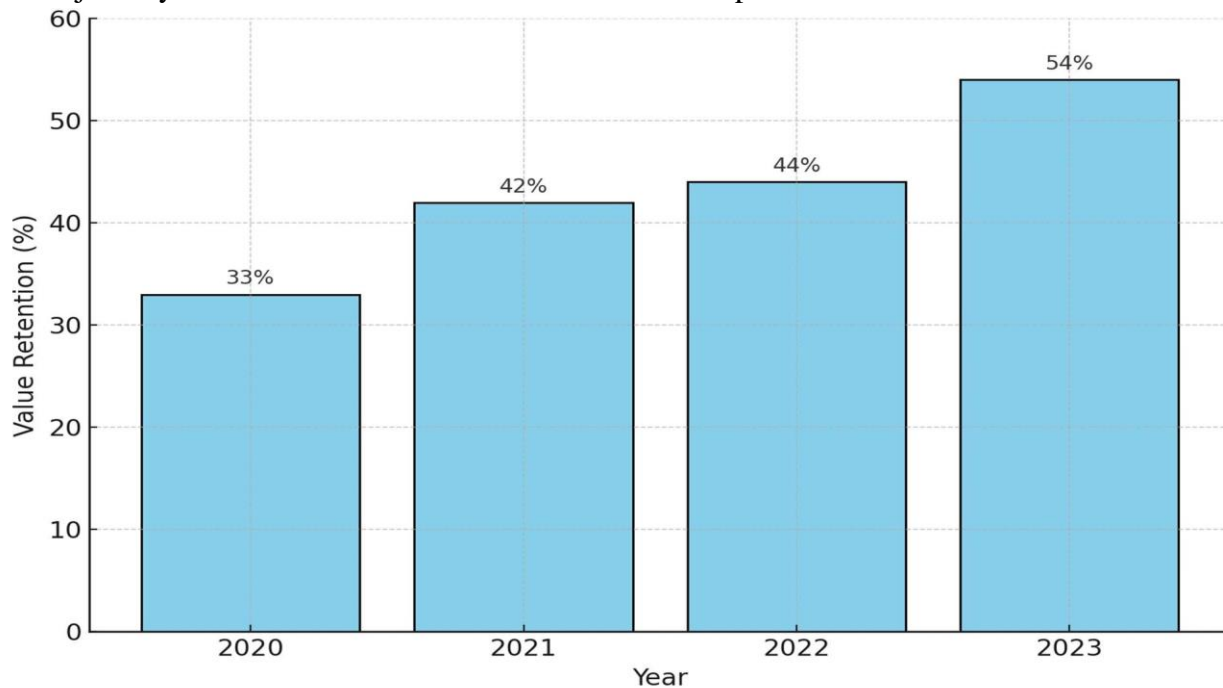


Figure 4.4: A bar chart visualizing Nigerian Content Value retention from 2020 to 2023.

The steady rise in content value retention showcases the alignment of policy frameworks with industry needs and stakeholder cooperation. It also signifies the growing capability of Nigerian firms to deliver competitive, high-value services and products in the oil and gas industry. Moving forward, sustaining this trend will require continuous investment in local capacity building, technology transfer, and infrastructural development to further reduce dependence on foreign inputs.

III. CONCLUSION

The study evaluated the impact of local content development policies on Nigeria's oil and gas industry post-COVID-19, with a focus on the growth of indigenous businesses and workforce development. The findings revealed that local content policies have significantly enhanced indigenous participation in the oil and gas sector. Initiatives such as the issuance of Nigerian Content Equipment Certificates (NCEC) and the Nigeria Oil and Gas Industry Content Development Joint Qualification System (JQS) have demonstrated substantial growth in local business engagement. However, challenges persist, including financial constraints and technical capacity limitations faced by indigenous companies. In terms of workforce development, the study observed that local content policies have contributed positively to workforce localization. There has been a notable increase in the registration of individuals under the JQS, alongside a strategic balancing of expatriate quotas. These measures have prioritized the inclusion of local talents while addressing the need for foreign expertise in specialized roles. The alignment of expatriate approvals and rejections highlights the policy's effectiveness in fostering a collaborative labor environment that supports indigenous professionals. Furthermore, the analysis of Nigerian Content Value retention illustrates a steady and significant rise, indicating a growing capacity to retain economic benefits within the country. This progress underscores the success of local content initiatives in promoting self-reliance and strengthening the domestic supply chain. However, sustaining these gains will require continued

investment in skills development, technology transfer, and infrastructure improvements to further reduce dependence on foreign inputs.

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