

The Political Economy of Energy Resources: Local Content in Petroleum Industry of South Sudan

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Abstract: *The paper explores local content in oil and gas industry. It does so through the analysis of indicators used to measure success of local content. The paper also argues the relevance of local content in global oil and gas. It has detailed this through economic empowerment, employment, training and capacity building, transfer of technology and sustainability of businesses. While the paper delves into local content, the cases of Ghana and Nigeria lead, while South Sudan lags behind. But it has demonstrated its commitment towards local content through local content regulations 2019 that measure local content through procurement of goods and services, national goods and services, local employment and training, knowledge transfer, local content plans and reports. The impacts of local content via negatives and positive impacts are assessed. It has vividly come out that the negative impacts of local content are corruption in the procurement of goods and services to South Sudanese, poor technologies and knowledge transfer and lack of financial capability to implement the local content provisions. On the positive impact is ongoing efforts being exerted by the government and petroleum industry in South Sudan in implementing local content. Examples such as the increase of recruitment of locals that stands at 80% are commendable. The paper deployed a case study of Ghana, Nigeria and South Sudan, comparative method, process tracing and empirical literature review as a methodology for this study. Although the paper concludes that the Government of South Sudan, Ministry of Petroleum and particularly, Petroleum Authority of South Sudan should assign local content implementation and monitoring unit, the entire local content elements and provisions' implementation should be a work of all the stakeholders. While South Sudan should remodel its local content policy to be broad base rather being on target as it is now, the devil that prevents the realization of local content in South Sudan lies in lack of implementation. The paper recommends future research on the importance of local content policy focusing on South Sudanese women in petroleum industry. Nonetheless, political economy of energy, in particularly, local content is quite valuable in the advancement of industrialization and prosperity of mankind.*

Keywords: local content, relevance, employment, procurement, technology, training, empowerment, business, impacts, negatives, positives

1. Introduction

The discovery of hydrocarbons resources in the world has come with massive revenues, investments, environmental degradation, sophisticated technology and participation of local citizens. While the discovery and investments of oil and gas resources turned out to be a foreign dominated affair, the participation of the communities, locals and nationals in the entire value - chain of oil and gas industry becomes a necessity. The local content concept, which emerged in Norway in 1970, was adopted by Nigeria in 1971. through the establishment of Nigerian National Oil Corporation (NOC) to promote indigenization policy of Nigerians in petroleum industry (Subai, 2019). Although top petroleum producing countries in Africa such as Angola, Algeria, Libya and Equatoria Guinea passed local content policies, laws and regulations and commenced implementing them, newly independent states such as South Sudan are yet to implement fully the provisions of local content laws. Whereas the debate of local content in the energy and extractive resources are torn apart by opportunities and incapacitation of the locals' participation, the balancing opportunities with capacity gaps makes this debate intriguing. Then, what is local content in energy and extractives? How can it be effectively achieved in South Sudan? What are the impacts of local content law and regulations? This paper shall answer the above questions. The paper is outlined as follows: section one introduces the question. Section two discusses the concept of local content. Section three appraises the relevant of local content in global oil and gas industry. Section four discusses, local content, the case of South Sudan. Section five analyzes the impacts of

local content laws and regulations in South Sudan. Section six concludes and section seven gives a direction for future research.

1) Understanding the Concept of Local Content

Classical economist Andrea Grossman (1981) first advanced the concept of local content on the examination of content protection and taste affect resources allocation, connecting it to market structure of the domestic goods and service industry. He defines local content as 'a fixed percentage of domestic value - added or domestic sections that are represented in a specified final product of goods and services' (Grossman, 1981). Michael Warner (2013) conceptualizes local content as combined value contribution of the communities and nationals of that particular country to the national economy from the commercialization of hydrocarbon resources (Warner, 2013). Simon Tordo (2013) on the other hand, defines local content as a policy instrument adopted by host government to develop national human and economic capacity for full participation of its citizens in the petroleum and other productive sectors (Tordo, 2013). While its focuses on the local citizens, it embraces their participation together with the foreign investors in order for the locals to have their capacities built and then get the right technologies transferred to them. Thus, local content is regarded as a policy that raises the costs of production for foreign investors (Kolstad and Kinyondo (2017). Local content as an idea as well as a philosophy was popularized then in 2001 in Africa as part of response to the participation of the locals in the oil and gas industry. Two countries in Africa, Ghana and Nigeria have very elaborate local content systems and they are the first countries, which adopted and applied the concept.

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According to the top expert of local content, Michael Warner (2013) in his seminal book “Local Content Policies in the Oil and Gas Sector”, local content is defined as composite value contributed to the national economy by the locals who are also known as nationals from the purchase of petroleum goods and services (Warner, 2013).

The study's significance lies in its comparative analysis of local content policies across African nations, shedding light on the challenges and successes in South Sudan's implementation of local content regulations. This provides critical insights for policymakers seeking to enhance economic empowerment and capacity building in the petroleum sector.

Table 1: Summary of Indicators Used in Measuring the Success of Local Content

Categories	Indicators
Local content in petroleum workforce	% By head count of nationals in the workforce % By share of total gross salaries paid to nationals in senior management, mid - management and low level positions.
Local content in procurement of goods and services	Amount of money spent with a national company value of money added to the local economy
Local content development (training and education of nationals)	Money value spent on training number of man - hours of training (inputs)
	Money earning power of the nationals after training (outputs)
Local content development (Local content supplier development programs)	Number of suppliers targeted in program (inputs)
	Increase in the amount of money in import substitution (outputs)
Local content development (local supply chain investments)	Money invested in local manufacturing
	Increase in the amount of revenues generated from local manufacturers

Source: Summary from Tordo, et al (2013)

2) Relevance of Local Content in Global Oil and Gas Industry

Local content as discussed above is very important and has the greatest significant and relevance in the global oil and gas industry. This is assessed as below:

a) Economic Empowerment: Economic empowerment and emancipation of local people has been a great relevance of the local content. Governments that have desires for the importance of local content have put in place policies, laws and regulations to ripe benefits from this concept. Both governments of Botswana, Ghana and Nigeria have been praised for deepening local content in their countries. For instance, the mining industry in Botswana has seen 90% implementation of local content (Kahika, 2020). Although Botswana is not petroleum producing state, it is the greatest example of the citizens’ economic empowerment through local content in mining. The Botswana’s government has put in place elaborative policies, laws and regulations and has established Local Content Mining Oversight Committee in the National Assembly to check and act as a watchdog in the implementation of every single policy. The citizens of Botswana have continued to hold their government accountable in getting their rights from mining industry in the country. They view the diamond as “our diamond” and have vowed to continue safeguarding and harness its benefits for their economic empowerment (Luwako, 1999). That is why to day in Botswana, diamond is transported with loud sirens to showcase the pride of the government and citizens over this natural resource. Managed by Botswana Chamber of Mines (BCM), diamond has aided to pullout 75% of Batswana from object poverty (Word Bank Report, 2020).

Ghana is another successful story of the implementation of local content in its petroleum, cocoa and construction industry. Many Ghanaians have economically been empowered. For example, 64% of the Ghanaians have been pullout of object poverty through implementation of local content in petroleum, construction and cocoa industry (World Bank Report, 2020). This recorded success has given further

stimulus to the local content argument in Ghana and the country has since seen efforts to imitate local content policies across service sectors notably in the technology, aviation and health (Okotot, 2021). To talk about local content in Accra, Ghanaians proudly refer to local content as national content.

Nigeria is celebrated as the second country in Africa with huge proven oil reserves recoverable of 39 billion barrels after Libya. It is one of the oldest countries with developed oil and gas industry. Because of its old history, local content has matured enough in this populous West African nation. While corruption has affected the performance of Nigerian government in all the spheres of lives, the economic empowerment through local content has been realized. The Nigeria National Petroleum Commission (NNPC) has a dedicated division on local content development and management in all value - chain of the petroleum industry (downstream, mid - stream and upstream). From procurement, supply, logistics, sales & distributions, marketing, refining, exploration and production, the government of Nigeria has achieved 70% of local content (Muzuzwe, 2021). Because of the strict implementation of local content policies, laws and regulations, 60% of Nigerians have been pullout of object poverty (World Bank Report, 2020). Thus, empowering them economically.

b) Employment: This is one of the relevance benefits obtained from the implementation of local content. Local employments of both permanent and short - term contract staff have remained the most successful story of local content in the oil and gas industry. Although this has been implemented with a lot of challenges, the benefits to the locals have been quite enormous. In Botswana for example, employment due to the implementation of local content in mining parachuted to 92% in 2021 (Luwako, 1999). Although Botswana is not a petroleum producing country, its implementation of local content in mining is a great story to tell in the history of natural resources extractions in Africa. In Ghana, the local employment stands at 85%, particularly, petroleum downstream and cocoa sectors (Okotot, 2021). To

be certain, at last quarter of 2020, the Petroleum Commission of Ghana reported some gains in the industry for example, between the period of 2017 to 2020, the Sankofa - Gye - Nyame (SGN) project contributed 420 contracts worth \$2 billion awarded to local Ghanaians and about 80% of the workers on the SGN floating production storage and offloading vessel were Ghanaians (Suloho, 2021). While other sectors such as agriculture and technology have employed thousands of Ghanaians, the cocoa and petroleum downstream division have employed millions of Ghana.

Nigerians have also benefited from local content implementation from the government of Nigeria. Although this is not at the same successful rate as that of Botswana and Ghana, the benefits from local content through local employments are a great story to be proud off in Nigeria. With 68% general employment record rate in the last quarter of 2020, local content employment stands at 35% in Nigeria (Gobololo, 2021). While Nigeria government has a role in fighting massive corruption and maladministration, it has the greatest responsibility in deepening the local content employment and encouraging it.

c) Trainings and Capacity Building: Training and capacity building is a valuable benefit that the developing world has received from the international oil companies (IOCs). While training and capacity building are quite expensive to undertake, the government has a responsibility to include a clause in the Production Sharing Agreements (PSAs) for mandatory trainings for the nationals so as to take up the industry in the foresable future. Trainings and capacity building are critical components for the delivery of results in the organizations. A well - trained and capacity built cadet has a responsibility in passing that knowledge to the next persons or generations and this can enhance organizational development and quality results. Trainings are divided into long, medium and short - terms. Long - term trainings are trainings that go for more than two years. Medium - term trainings are trainings that go for less than two years and more than a year. Short - term trainings then are trainings that go for less than a year. In oil and gas industry, most IOCs have concentrated on short term trainings unfortunately to the support departments but not core petroleum business departments. For example, one month to six months trainings in support skills such as welding, masonry, electrical, mechanics, wastes management, logistics, operations, procurements and so on are important but not as critical as medium and long term trainings in reservoir management, facilities management, well testing, work over, drilling, production and decommissioning.

In Ghana, the trainings and capacity building of the indigenous people has been the government policy in the realization of development. Ghana, the cradle of democracy is one of the countries that have prioritized quality education and trainings in Africa. From petroleum to other sectors, trainings and capacity building programmes is key and it is mainstreamed across governmental and non - governmental education. The basic and higher education departments have been resourced to implement trainings and capacity building across Ghana. In the petroleum industry, Ghana has undertaken several plans to build necessary capacities of the local people by implementing local content wants.

Remarkable, amongst them is the local content and local participation in petroleum activities under regulation number 2205, which was enacted in 2015 (Okotot, 2021). Other issues the regulations pursue and advance is the stake of the people in the oil and gas industry in Ghana so that the people ripe benefits in the petroleum industry, which should help them in the greatest ways.

In Nigeria, the trainings and capacity building programmes have been quite superb. The government of Nigeria through the ministry of education, higher education and ministry of petroleum resources have allocated enormous funding's for the trainings and capacity building of indigenous people. This is quite specific for petroleum industry, which is mandated to enhance local content in this industry. In Nigeria, the process of slowly taking over of the petroleum industry is called *Nigerianization* of petroleum industry by the Nigerian government. So far great results have been realized. From 2010 - 2015, 35% of Nigerians were trained and from 2015 - 2020, 65% were Nigerian trained and are working in petroleum industry divisions serving their country and themselves (Muzuzwe, 2021). According to local content regulations, Nigeria should implement 95% *Nigerianization* of the petroleum industry by 2030 when it transited to gas - destiny state (Monday, 2015).

d) Transfer of Technology: Technological transfer is one of the key relevance of local content in oil and gas industry. The industry is technological intensive and would require more resources to be allocated for the frequent implementation of new edged and smart technology. The successful transferred of petroleum technologies to the local people have been realized in Saudi Arabia and Egypt. Saudi Arabia and Egypt have superb Production Sharing Agreements (PSAs) that prioritize technological transfer. Most of the technologies used in Saudi Arabia and Egypt are American imported and are easiest to be transferred than the eastern technologies. In this case, the Asian technologies. American companies don't have technological disease of hiding technology that the Asian companies have. Hence, most local people trained by American companies in Saudi Arabia and Egypt acquired the best technological training and have so transferred the knowledge and skills to their national oil companies and subsidiaries. In Nigeria, technological transferred was so difficult until the government enacted a law in 2017 mandating a compulsory transfer of technology to the indigenous people working in IOCs (Gendi, 2021).

e) Sustainability of Businesses: Local content has been quite helpful in boosting the local people on the allocation of contracts that strengthen local businesses. In countries such as Angola, foreign companies have been given a threshold to allocate 88% of contracts to the local companies. They only remain with 12%. In Ghana, foreign companies have been given a limit to allocate 82% of contracts to the indigenous companies. This is the same in the case of Nigeria, where 80% of contracts should be set - aside to the local companies. Indeed, countries such as Saudi Arabia, Libya, Algeria, Angola, Egypt, Ghana and Nigeria have strong government local content laws and close supervision of their implementations. The results have been manifestly great and that is why majority of Algeria, Nigeria and Angola local companies are operating in mid - stream and upstream of oil

and gas industry. Therefore, most of them are sustaining their businesses.

3) Local Content, a Case of South Sudan

South Sudan is the 10th petroleum producing country in Africa and the 1st in East Africa with an average production of 165,000 barrels per day (bpd) (MOP Report, 2022). Three oil blocks are currently in operation: block 1, 2 & 4 in Bentiu producing 25,000 barrels per day, block 5A of Tharjiath producing 20,000 barrels per day and block 3 & 7 of Paloch producing 120,000 barrels per day. Foreign companies of Chinese, Malaysians, Indians and Egyptians have formed petroleum - operating consortiums with the state - owned company, Nile Petroleum Corporation representing the government shares in all the blocks. While block 3 & 7, the

main producing block is shutdown due to war and violence in Sudan that affected the pipeline, the resumption of this block is in the offing. In the oil and gas industry, the Government of South Sudan prioritized the participations of South Sudanese nationals in the commercialization of the petroleum resources in South Sudan through the enactments of laws and regulations. For example, Petroleum Act, 2012, Chapter XV stipulates ‘procurement of goods and services and local content’ in the following sections:

- 63. Procurement of goods and services;
- 64. National goods and services;
- 65. Local employment and training;
- 66. Knowledge transfer; and
- 67. Local content plans and reports (Petroleum Act, 2012).



Figure 1: Conceptual Representation of Local Content Provisions in Petroleum Act 2012

While the petroleum Act, 2012 stipulates the above five areas of promotion of the local content in South Sudan, the law doesn’t quantify the extent to which each of the above five areas should enhance locals’ participation. It merely mentions the necessity of participation of South Sudanese nationals in the petroleum industry through procurement of goods and services, national goods and services, local employment and training, knowledge transfer and writing of local content plans and reports. Details of the local content law are presented through Petroleum Local Content Regulations, 2019 as follows:

Table 2: Local content levels to be attained from date of effectiveness of license or petroleum agreement

Item	Start	5 years	10 years
Goods and Services	10%	50%	60% - 90%
Recruitment and Training			
a) Management Staff	30%	50% - 60%	70% - 80%
b) Technical Core Staff	20%	50% - 60%	70% - 80%
c) other staff	80%	90%	100%

Source: Extracted from Petroleum Local Content Regulations, 2019

In South Sudan, the Petroleum Local Content Regulations, 2019 stipulates 80% of the contracts to be awarded to the local companies. While all those allocations are very encouraging in the paper, the implementations of them have been a nightmare. For example, DPOC in South Sudan usually allocate annual budget of about \$1 billion for its operations

and capital projects, about 15% of this budget goes to local companies.

2. The Impacts of Local Content Law and Regulations in South Sudan

The implementation of local content law and regulations in South Sudan has both negative and positive impacts:

2.1 Negative Impacts

While the Petroleum Act 2012 and Petroleum Local Content Regulations, 2019 stipulate the participation of the South Sudanese in the petroleum industry, the implementations of the provisions has been a daunting task. On the use of local goods and services, South Sudanese contractors have not even achieved 10% let alone 50%. Of the procurement budget of Dar Petroleum Operating Company (DPOC) of 2019/2020, which was 600 million USD, South Sudanese companies only utilized 30 million, representing 5% (Mabior, 2020). The rest of 570 million USD was scooped by the Chinese, Malaysian and Indian companies for the procurement of goods and services in the oil fields. There are challenges associated with low participation of South Sudanese in procurement of goods and services in the petroleum industry. The first conundrum is related with lack of capitals for South Sudanese to use in supplying goods and services to petroleum companies.

Secondly is corruption, which is very piercing when it comes to award of the contracts. The South Sudanese nationals presence at the procurement and general services departments at the Joint Operating Companies (JOCs), whether, Dar Petroleum Operating Company (DPOC), Sudd Petroleum Operating Company (SPOC) or Greater Pioneer Operating Company (GPOC) are corrupt to the core. They prefer foreign companies to acquire contracts as the kicks backs maybe enormous and may not be easily leaked by the foreigners. This has strengthened foreigners' confidence, as these foreigners would proudly say during bidding and tendering that it is a matter of time before they are awarded the contract (Valerie et al, 2016).

On recruitment and training, the challenge has been on the transfer of knowledge and technology. The transfer of knowledge is very critical as these operating companies are joint ventures that would leave the country after the expiry of Exploration Production Sharing Agreements (EPSAs). However, there are no credible data to measure the increase in the amount of money in import exchange and revenues generated after the knowledge transfer and capacity improvement of local producers and suppliers (Tiitmamer, 2021).

The final and critical challenge is lack of local content monitoring unit. The regulations specify local content monitoring to be done by the Petroleum Authority of South Sudan (PASS). However, there is not robust unit established at PASS to monitor the implementation of the local content regulations. This practically kills the implementation of local content law and regulations. On the other hand, South Sudan model of local content provisions that focuses on the targets not on the broad base issues needs to be amended. This has led to failures in Nigeria, Equatorial Guinea and Angola. Broad base approach is quite successful as that can be seen in Brazil and Norway. This model is appropriate as it integrates local content to all the sectors of the state and can be easily be implemented by all governmental departments.

2.1.1 Positive Impacts

While negative impacts would surpass positive impacts, there is already an ongoing awareness being championed by state - owned Nile Petroleum Corporation about the rights and privileges of nationals as provided for in the Act and Regulations. This campaign and awareness is realizing some fruits. Currently, the Joint Operating Companies (JOCS) have made it a point that local goods and services should be prioritized in the procurement processes. These include local companies winning a contract and sub - contract it to other foreigner companies. While this may appear to undermine local content, it helps improve the financial capacities of local companies. A positive impact is a an award of 100 million USD contract to the African Resources Consortium (ARC) by GPOC to construct 100km asphalt roads between Parieng and Bentiu in 2022. ARC has sub - contracted international Malaysian company known as Kuala Construction Limited (KCL) to do this work. The benefit is that ARC got its overheads fee of 10% of 100, 000, 000, which is 10 million USD for other investments.

On recruitment and training of locals, there is positive impact, which is encouraging. Of all the three JOCs, the recruitment

of South Sudanese stands at 80% (Tiitmamer, 2021). While this maybe at the technical and other staff levels, the recruitment of South Sudanese nationals at this magnitude explains the ownership of petroleum resources. However, key conundrum is on the remunerations. Whereas a foreign staff, Chinese or Malaysian or Indian, says Manager goes home with monthly salary of 55, 000 USD, his/her counterpart, South Sudanese who is also Manager with the same training at the same division goes home with monthly salary of 10, 000 USD. This discrepancy has been noted by the Ministry of Petroleum leading to the approval of Unified Human Resources Manual (UHRM) in 2021 which is being slowly implemented by the International Oil Companies (IOCs). While the Ministry of Petroleum pushed for salary equalization of both foreign and national staff, as this will be recovered through cost oil, the IOCs had threatened to leave the country but sense later came to their minds to implement the UHRM. While this happened, national staffs at the JOCs have often go on strike demanding for their salaries and wages raise. The dialogue is yet to yield some fruits.

National trainings are also being carried out by the three JOCs. These include general, core and specialized trainings, both at home and abroad. Between 2017 - 2019, the three JOCs trained 400 South Sudanese staff (other, technical and manager levels) (Mabior, 2020). These trainings are impacting on the oil exploration, development and production. Nile Petroleum Corporation (NILEPET) through its Directorate of Training, Research and Development has begun training secondees staff at JOCs. Once it receives the training revenues, these monies are investing in training of NILEPET staff. While this was supposed to be the Ministry of Petroleum role to train South Sudanese to take up the industry, the Ministry has been sleeping on it work. Currently, the state - owned company, Nile Petroleum Corporation has rolled out specialized trainings for geologists, geophysicists, geoscientists, petrophysicists and petroleum engineers in tandem of its 2027 operatorship vision of acquiring a block by 2027. While this operatorship vision may look great in paper, it has its associated challenges such as lack of funding and technology to achieve operatorship comes 2027. It is imperative to note that the EPSA for block 3 & 7 is expiring by 2027. Other blocks such as block 5A and 1, 2, & 4 will expire in 2030s.

3. Conclusions

The study concludes that while South Sudan has made strides in implementing local content laws, significant challenges remain, including corruption, funding limitations, and insufficient technology transfer. The government must broaden its policy focus and collaborate with all stakeholders to achieve comprehensive local content integration. While Petroleum Act, 2012 and Petroleum Local Content Regulations, 2019, regulate local content, it is challenged by lack of monitoring and implementation mechanisms of the provision of the law and regulations. Although the Ministry of Petroleum is legally responsible for overseeing local content implementation, it has not been proactive in this effort. Few positives impact such as recruitment and trainings of South Sudanese have been realized. However, negatives impact such as lack of funding, lack of technology, poor remunerations and above all corruption continue to impede

the full participation of South Sudanese in the realization of their content. As South Sudan is the oldest and the leading petroleum producing country in East Africa, it should now ringfence and implement effectively all the provisions of local content regulations. While local content law and regulations should be effectively implemented, conundrums associated with South Sudanese contractors such as lack of funding; technology and capacities need to be addressed to edge out the foreign companies' dominance. South Sudan should remodel its local content policy to be broad base rather being on target as it is now. Thus, the political economy of energy needs to benefit all South Sudanese.

4. Recommendation for Future Research

Although this question of local content has been substantively discussed, future research is hereby recommended on the necessity of local content policy focusing on South Sudanese women in petroleum industry.

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