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Policy Brief

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The South Sudanization of the Petroleum Industry Through Local Content: Is the Dream within Reach?[1]

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Summary

Before independence, northern Sudanese, Chinese, Malaysians, Indians, and their firms dominated the South Sudanese petroleum industry. After South Sudan declared independence, many South Sudanese had hoped to realize so many dreams through the petroleum sector, including benefiting directly from the petroleum industry through a local content (South Sudanization) policy. The petroleum industry in general is knowledge and skills intensive, so expatriates often dominate it. In order for the industry to meet the local needs, local content policy has become common best international practice. Benefits of such policy practice include building local capacity, employment of locals and diversification of the economy to maximize economic returns (Kazzazi and Nouri 2012, Tordo et al., 2013).

In an attempt to indigenize the petroleum industry, the South Sudanese government enacted the Petroleum Act in 2012 with local content provisions which include (1) procurement of local goods and services; (2) local recruitment, employment and training, including post-graduate training and scholarships, and; (3) transfer of skills, knowledge, competence and know-how in the petroleum sector. This paper assesses the progress of the implementation of these local content provisions.

Using interviews and personnel records, we find that national staff account for 80% in Dar Petroleum Operating Company (DPOC), 88% in Sudd Petroleum Operating Company (SPOC) and 85% in Greater Pioneer Operating Company (GPOC). Most of the South Sudanese employed by these joint-operating companies (JOCs) have been trained several times to be able to effectively and efficiently perform job-related tasks. Analysing information on procurement of goods and services, we also find that these operating oil companies have contracted about 50 South Sudanese local companies to provide goods and services. Although there has been considerable progress in terms of employment, we recommend development of a comprehensive policy and legal framework aimed at continued building of capacity of nationals, local suppliers, contractors and manufacturers to become dominant players in all the value chains of the petroleum industry.

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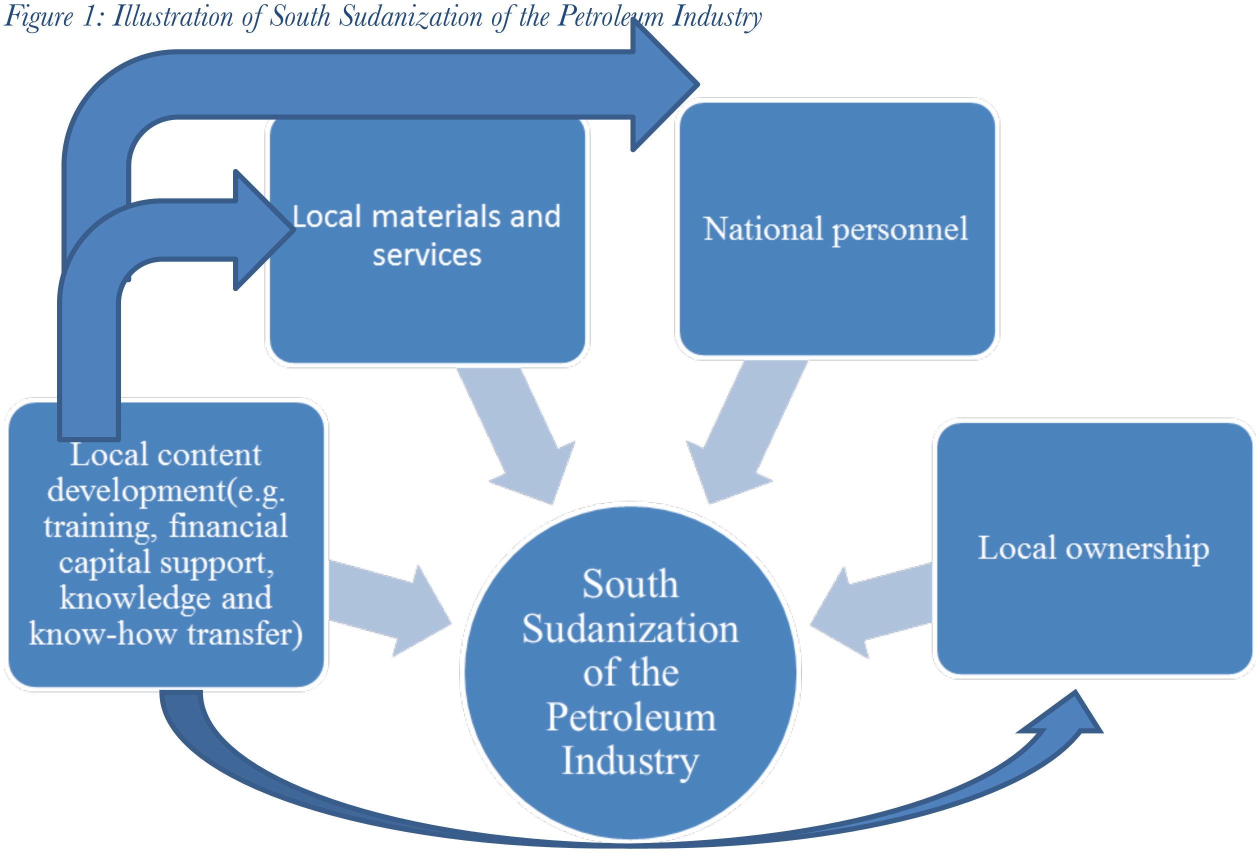
Introduction

South Sudan attained independence in 2011 with a hope to realize so many dreams with its oil sector, including the dream of making the South Sudanese the engine that drives the development and production of petroleum resources for the common good. Before independence, northern Sudanese, Chinese, Malaysians, Indians and their firms dominated the Sudanese oil industry. Literally, there would be no true freedom or independence without correcting the dominance of foreigners and their firms in the oil sector, which is vital lifeblood of our economy. South Sudanization of the petroleum industry is not only the engine of our economy but also a dividend to our citizens for achieving independence.

To realize the South Sudanization dream, the South Sudan National Legislative Assembly enacted the petroleum bill, which was signed into law by the President in 2012. The Act includes local content clauses that require (1) procurement of goods and services produced in South Sudan, (2) employment and training of South Sudanese and (3) transfer of skills, knowledge, competence and know-how. To fulfil these requirements, the companies are required to prepare and implement plans and programmes for procuring national goods and services, employment and training of South Sudanese including in post-graduate training and scholarships and transfer of skills, knowledge, competence and technical know-how. The Act also requires that unskilled labor must be given to South Sudanese. The petroleum companies are also required to prepare and implement local content plans and summit annual reports to the Ministry of Petroleum and Mining. As stipulated in these provisions and based on the common practices, we define South Sudanization of the petroleum industry as a process of building the capacity of South Sudanese and their firms so that they can take a dominant part in the South Sudan's petroleum industry by particularly taking a lead in the workforce, production and procurement of goods and services and equity participation (see figure 1). The capacity building or local content development involves training, knowledge and technology transfer and financial capacity boosting, among others.

Figure 1: Illustration of South Sudanization of the Petroleum Industry



The extent to which the local content clauses have been implemented has not been established. Therefore this research finds out the progress of implementation of local content provisions by comparing the current local content levels to the levels stipulated in the provisions of the Petroleum Act 2012. The broader of objective is to appraise the level of compliance by the oil companies with South Sudanization objectives of the government. The paper also looks at the challenges faced in complying with, and identifies and explains the gaps in the Act.

As a country relatively new to the petroleum industry after having attained independence four years ago, assessing the progress of local content policy is crucial as the results could be used to improve policy and solicit more compliance from the oil companies. In a sense, South Sudan does not only need the South Sudanization in the petroleum industry, it also needs it in other sectors of the economy dominated by expatriates. Therefore, the results of the study not only have policy implications on the petroleum industry but other sectors as well.

Local Content in the Petroleum Industry

Local content is a mechanism deployed by policymakers to develop national human and economic capacity for full participation in the petroleum and other industries[2]. It is about addition of value into the local economy in terms of "local staff, local materials, local services and facilities."[3] It involves training, employment, partnerships and ventures that transfer technology to the nationals and their firms and procurement of goods and services from the local firms and businesses[4]. It is designed by setting a certain threshold in terms of the local people to be trained and employed, goods and services to be procured from the local[5] market by the industry to stimulate the local economy.

After being practiced initially as part of a company's corporate social responsibility, local content mechanism has become a major policy tool by the governments of resource rich countries to attain important domestic economic and social policy objectives (Tordo et al., 2013). Some of the justifications usually used by governments in support of local content policy include building local capacity, employment of nationals and diversification of the economy to maximize economic returns (Kazzazi and Nouri 2012, Tordo et al., 2013).

Local capacity building, which is also known as local content development, is the essence of local content policy because a country new to the petroleum sector often lacks specialized skills and knowledge to effectively manage oil resources. At the initial stages of the industry start-up, the country usually gets technical workforce from other countries, which becomes a disadvantage to the local economy. Therefore, the local content mechanism is designed to develop the capacity of the national labor force and firms to participate fully in the petroleum industry and such participation engenders positive spillover effects and economic growth.

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[2] Monday, J.U. 2015. Local Content Policy, Human Capital Development and Sustainable Business Performance in the Nigerian Oil and Gas Industry. Journal of Management and Sustainability; Vol. 5, No. 1; 2015 ISSN 1925-4725 E-ISSN 1925-4733 Published by Canadian Center of Science and Education.

[3] Kazzazi. A and Behrouz Nouri, B. 2012. A conceptual model for local content development in petroleum industry. Management Science Letters 2 (2012) 2165–2174.

[4] Tordo, Silvana, Michael Warner, Osmel E. Manzano, and Yahya Anouti. 2013. Local Content Policies in the Oil and Gas Sector. World Bank Study. Washington, DC: World Bank. doi:10.1596/978-0-8213-9931-6. License: Creative Commons Attribution CC BY 3.0.

The second justification is that local employment, to an extent, gives foreign corporations a social license to operate, as the local population becomes an integral part of the industry through employment. Therefore governments use local content as a policy tool to mobilize local support for the industry.

The third reason is that local content policy is a tool for diversification of the national economy. Usually, petroleum rich economies heavily rely on the petroleum revenue, which causes Dutch disease[6]. Hence, governments use local content mechanisms to diversify the national economy in a manner that spreads the benefits from the petroleum industry to all economic sectors through backward and forward linkages to the national economy (Kazzazi and Nouri 2012, Tordo et al., 2013). The concept of backward and forward linkages will be revisited later in this paper.

A number of factors determine the success of a local content mechanism. These include national policies, national infrastructure, national context and national capabilities ((Kazzazi and Nouri 2012). National policies, in the context of local content, refer to public and industrial policies which create an enabling environment through suitable macro-economy, reliable institutions and legal systems, incentives for enhancing 'sound business practices', infrastructure for business and social systems for 'inclusion and participation' (INTSOK, 2003, Kazzazi and Nouri 2012). National infrastructure refers to the availability of "information technology, local company's needs, standards, social infrastructure, educational infrastructure, institutional infrastructure and business development infrastructure" (Heum et al., 2011, Kazzazi and Nouri, 2012). National capabilities include the level of education, skills and knowledge, technical know-how and research and development. In addition, national context[7] provides an atmosphere in which the other three factors can thrive. This includes macroeconomic, investment and business environment, which determine issues such as domestic prices, local currency rates and interest rates.

To measure the success of a local content policy, targets and quotas are crucial in quantifying the success. However, they are more applicable to countries with mature petroleum exploration and production sectors. For example, Nigeria requires 95% of the top management positions and 100% of junior and inter-mediate positions to be filled by

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[6] Dutch disease is a situation that results when exploitation of a new natural resource increases foreign exchange earnings through export which makes exports from other sectors such as manufacturing less competitive in the international markets, resulting in decline of these sectors.

[7]We use the phrase 'national context' to refer to local environment in local content literature. See Kazzazi. A and Behrouz Nouri, B. 2012. A conceptual model for local content development in petroleum industry. Management Science Letters 2 (2012) 2165–2174.

Nigerians. Countries with infant petroleum industries usually start with minimum targets that are scaled up over time to allow for capacity building. For example, Ghana, which is a recent entrant to the petroleum industry, requires its citizens to occupy 50% of management positions from the start rising to 80% in the fifth year of implementation. On technical inputs, Ghanaians start with 30% and rise to 80% in year 5 and 90% in year 10. Other staff positions go 100% to Ghanaians (Government of Ghana's Policy Framework, 2010, Tordo et al., 2013).

Most local content policies use a number of strategies to ensure a successful implementation. Some of these strategies include setting targets to allow for easy monitoring and evaluation, regulations to enforce provisions of an enabling legislation or policy and incentives in the forms of subsidies and tariffs for meeting the targets, and administrative and financial penalties for failing to meet a set local content target, among others.

Indicators are as well important and a number of them have been developed by several experts to measure the success of local content policies. The work of Tordo et al (2013) provides a number of options that can be used to measure the success of a local content policy or enabling legislation. Some of these options are reported in table 1 below.

Table 1: Some of the indicators used in measuring the success of local content (Source: a summary drawn from Tordo et al., 2013).

Categories	Indicator
Local content in petroleum workforce	% By head count of nationals in the workforce % By share of total gross salaries paid to nationals (Measuring of nationals in the workforce can also be measured by percentage of head count 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

Some of the indicators measure both backward and forward links from the petroleum industry to other sectors of the economy. Backward links are created when the petroleum industry needs supplies from other industries (e.g. within the local economy) while forward links are created when the industry is able to supply other industries with its outputs. Backward linkages include adding value through technology, local employment, local ownership and control, among others (Kazzazi and Nouri2012). In addition, forward linkages include enabling local firms to participate in establishing or playing key role in the processing of the industry's outputs through activities such as "refineries, petrochemical industry, and the production of fertilizers" (IBID). The final outcomes of a successful local content development include economic growth, industrial growth and positive spillover effects.

Local content mechanism was first applied in the North Sea in Europe in the early 1970s (Tordo et al., 2013). Almost all world petroleum-producing countries have adopted it. It has had mixed results. However, one important principle that can be applicable across all contexts "is to stay dedicated to the fundamental task of involving and enhancing the domestic knowledge base through arrangements that allow for a dynamic industrial and technological development, that gradually expands domestic competences and capabilities to competitive levels" (Heum, 2008).

Assessment and Results

Procurement of National Goods and Services

In this section, we look at South Sudanese materials and services procured as stipulated under the Petroleum Act 2012's section on procurement of national goods and services. To fulfil this requirement, the Act calls for the petroleum companies and contractors to give preferential treatment to South Sudanese firms when they apply for contracts to purchase goods and provide services. In this case, South Sudanese firms must be given the contract to deliver services or to provide goods so long as such goods and services are available for sale and for prompt delivery, are of the same quality as the imported goods, and so long as their prices are not ten percent higher than imported goods' prices[8].

Some of the common best practices that characterize these stipulations worth highlighting include prompt delivery, transparent tendering process of goods at certain threshold, giving preferential treatment to South Sudanese companies, registration as part of the requirement for a national company, requirement of goods and services to be of the same quality as international goods and services, among others. The emphasis on the quality and delivery time is meant to ensure that productivity and quality are not compromised in favor of low quality local goods and services. However, the challenge is the ability of the local suppliers to supply goods and services of international standards as the local suppliers do not often have the same capacity as the international suppliers. Another challenge is that the Act does not mention a specific threshold for goods and services that require transparent tendering process. Such a challenge is often overcome by specifying the amount of money worth of materials, machinery or equipment that should undergo an open and transparent tendering process.

The Act requires petroleum companies to prepare annual local content plans to implement the requirements of the Act. The companies are required to submit the plan to the Petroleum Ministry and have a summary published in the gazette. Officials of the companies reported annual submission of local content plans to the Petroleum Ministry, but they declined to disclose the content to our researchers. The Act requires the companies to give a priority to the South Sudanese companies when awarding services and

[8] See section 64

purchase of goods and materials contracts; however, no specification has been made in the Act in terms of the percentage of South Sudanese pounds worth of goods and services that should be contracted to South Sudanese companies each year. Perhaps, the plan is supposed to lay out this threshold each year; however, it was not availed to us for analysis. It is also a challenge to determine which company qualifies as a South Sudanese company as the Act is silent on several indicators which can determine whether a company is a South Sudanese or not. The Act only mentions incorporation in the Republic of South Sudan as a qualification for being a South Sudanese company. However, this is obviously inadequate because some international companies can seek incorporation here in South Sudan and could claim being South Sudanese by a mere registration.

Based on best international practices, clear definitions are important not only in terms of determining the local companies that can benefit from the local content provisions but also in terms of measuring the achievement of the local content policy. Registration jurisdiction, headquarters location, number of nationals employed and level of equity participation can adequately determine a company to be classified as a national company. For example, in Angola's local content mechanism, an Angolan company is one that is legally registered in Angola, has its headquarters in Angola and is either wholly owned by Angolans or has at least 51% of Angolan's equity participation (Tordo et al., 2013). In Nigeria, a Nigerian company is one that has been formed and legally registered in Nigeria with at least 51% of the shares owned by a Nigerian[9]. South Sudanese Petroleum Act 2012 does not stipulate these indicators and so there is a degree of ambiguity when it comes to what makes a South Sudanese company, a condition that is necessary to determine who benefits from the contracts in accordance with the Act.

In an effort to resolve this legal ambiguity, the Ministry of Petroleum and Mining's proposed draft regulation on Promotion of National Goods and Services defines a national (company) as "any company, partnership, association or body in which the majority capital or financial interest is owned by or controlled by South Sudanese[10]." However, this definition does not factor in indicators like threshold of local staff inputs, jurisdiction of registration, headquarters and other relevant indicators. More importantly, it does not specify what majority capital or financial interest means. These indicators should finally be put into consideration to have a clear picture of what constitutes a South Sudanese company.

Looking at whether there was any progress made on the provision of the Act regarding procuring goods and services locally, we find that about 50 South Sudanese companies

[9] Nigerian Oil and Gas Content Development Act, 2010

[10]The Draft Petroleum (Promotion of National Goods and Services) Regulation. Ministry of Petroleum and Mining.

have been contracted by GPOC (35), SPOC (11), and DPOC (4), respectively, to provide goods and services. We obtained the number of companies being given contracts without the details of monetary scale of local service and procurement contract, local goods and services, jurisdiction of registration, headquarters, level of equity participation by nationals, value of money added to the local economy after local suppliers and contractors were given services contracts, increase in import substitution after the capacity building of local suppliers, and/or increase in revenues generated after the development of local manufacturers, among others. Most of the companies were given contracts to provide storage, stationaries, electrical supplies, newspapers, visa processing, food and pantry, TV subscriptions, fuel supplies, earth moving, petroleum and cleaning services. Even if the data were available, there would be a challenge also to measure the progress in comparison with the provisions of the Act as the provisions do not specify the threshold other than the preferential treatment requirement.

Local Employment and Training

With regards to the provision on the training of South Sudanese, we find that the JOCS are not providing scholarships to the South Sudanese. However, some of the JOCS' stakeholder companies, at some points, provided some scholarships whose value in terms of money has not been stated. While no scholarships were directly provided, JOCs have trained South Sudanese on job specific skills. In other words, majority of the South Sudanese employed by the JOCs have received some forms of job trainings to boost their technical capacity in drilling technology, oil and gas facilities operation and system control and instrumentation, among others. Nilepet, a state owned South Sudanese company, has established a training facility, which the JOCs have used to train South Sudanese.

A close look at the data of employees in the South Sudan's oil sector demonstrates that South Sudanese nationals account for 80% of employment in DPOC, 88% in SPOC and 85% in GPOC (see table 2). This is a significant progress given how small the number of South Sudanese was in the petroleum industry about four years ago. For example, GPOC had employed only 86 South Sudanese compared to 400 today and SPOC had employed 44 South Sudanese nationals compared to 128 today. Of the 86 employees of GPOC in 2012, only five South Sudanese worked in the mid-level and top management positions, which include company's vice president, one manager, two section heads and one team leader. This has changed significantly, as South Sudanese make up the majority in most positions except in the top management (See tables 3, 4 and 5). The dominance of non-South Sudanese in the top management level remains a major problem in terms of the decision-making process. Therefore, the continued domination of the decision-making positions is not a good sign. The number of South Sudanese is higher in the lower levels and decreases from junior engineers to senior engineers and geologists and from mid-level management to top management. For example, in DPOC, the level with the highest number of South Sudanese employees is executive[11] followed by secretaries and other non-professional positions.

We also find that the shutdown of the oil operations in Unity State due to the war in the last 21 months has also affected workforce composition. For example in SPOC, positions of senior engineers, geologists and other technical specialists have been cut almost to zero due to the shutdown of petroleum operations (See table 5). This cut only left two senior engineers, one national and one expatriate and 32 mid-level and junior technical specialists. The 32 mid-level technical and junior specialists that remain are South Sudanese and our understanding is that there are no expatriates in this category due to the shutdown.

Table 2: Current composition *of nationals and expatriates in the total workforce in the three JOCs*

	DPOC	SPOC	GPOC
Nationals	80%	88%	85%
Expatriates	20%	12%	15%

Table 3: Percentage of nationals in position categories in GPOC

	Top management	Senior engineers, geologists and other specialists	Junior to mid-level positions
South Sudanese	33%	58%	96%
Foreigners	67%	42%	4%

[11] Based on a definition given by the department of human resources of JOCs, executives refer to those who have been assigned a task to accomplish. It does not, according to them, refer to top management, as is often the case.

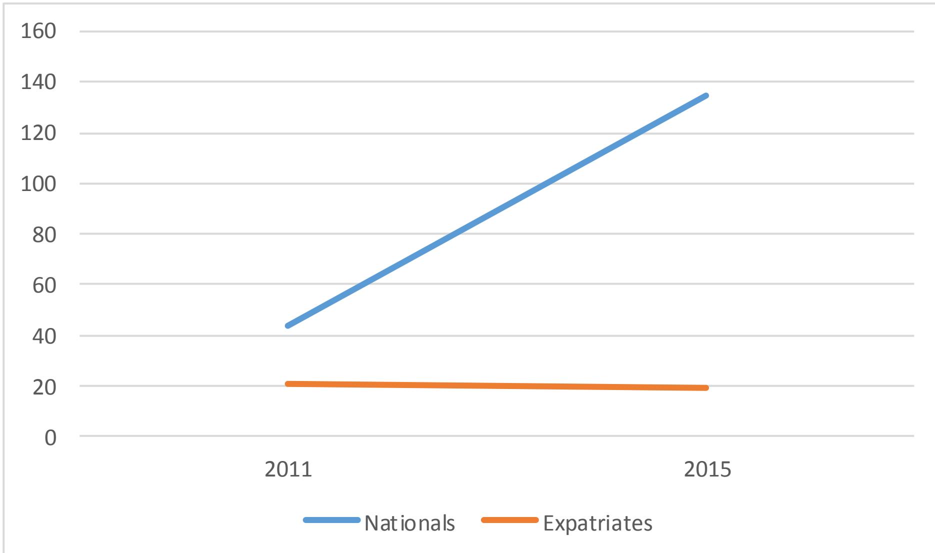
Table 4: Percentage of nationals in position categories in Dar Petroleum Operating Company

	Top management	**Mid-level management (managers)**	**Section heads**	**Executive**	**Secretaries and below**
South Sudanese	**33%**	**57%**	**56%**	**78%**	**100%**
Foreigners	**67%**	**43%**	**44%**	**22%**	**0%**

Table 5: Percentage of nationals in each position category in SPOC in 2015

	Top management	Mid-level management	Senior engineers and geologists	Junior level to mid-level engineers and geologists	Other positions
South Sudanese	40%	62%	1	32	98%
Foreigners	60%	38%	1	0	2%

Figure 2: Comparison of nationals with foreigners in SPOC in 2011 and 2015



Transfer of skills, knowledge, competence and know-how

The petroleum companies are required to "facilitate the transfer of skills, knowledge and know-how to the government through the formation of joint ventures, partnering and the development of licensing agreements with service and supply entities indigenous to the Republic of South Sudan." It is a common knowledge to most people that the main petroleum operators, namely GPOC, DPOC and SPOC are joint ventures between the government of the Republic of South Sudan and companies from China, Malaysia and India. South Sudan is a minor shareholder through its state owned company: the Nile Petroleum Corporation (Nilepet). Nilepet has established three joint ventures namely SIPET, EASTPET and Niledelta with the goal of developing the capacity of the South Sudanese. It has majority stakes and majority of employees in these joint ventures. Of the three joint ventures, SIPET is fully operating while the other two are still in their earliest stage.

Despite the fact that these ventures could impact knowledge and facilitate technology transfer, there are no quality data to measure the increase in the amount of money in import substitution and revenues generated after the knowledge transfer and capacity development of local suppliers and producers. As mentioned early, even if such a data was obtained, it would still be challenging to measure whether the provisions of the Petroleum Act 2012 have been achieved because the Act does not provide a particular threshold to measure the achievement.

Conclusions and Recommendations

This paper has broadly discussed the provisions of the Petroleum Act, 2012 with the aim of establishing whether the provisions related to the local content have been implemented and whether there are gaps hindering the achievement of the South Sudanization process in the petroleum sector. We have assessed the progress of implementation by comparing the current local content level to the provisions of the Act to understand what has been achieved. Specifically, we looked at the South Sudanese materials and services procured and contracted, firms empowered with technology and knowledge through joint ventures and South Sudanese employed and trained, to determine the progress of South Sudanization of the petroleum industry. What we find is that there is a significant progress in the employment of South Sudanese in the petroleum industry. For example, South Sudanese account for 80% of employment in the DPOC, 88% in SPOC and 85% in GPOC. Most of those employed have undergone several job specific trainings. We also find that the oil operating companies namely GPOC, SPOC and DPOC have contracted about 50 South Sudanese local companies to provide goods and services. Last but not least, Nilepet, a state owned South Sudanese company, has been involved in joint ventures as a minor shareholder in the three main JOCs and as a major shareholder in three other services companies formed partly to transfer knowledge and know-how to South Sudanese.

However, we did not find quality data from the companies to measure the outputs in terms of (1) money earning power of the nationals after training, (2) value of money added to the local economy after local suppliers and contractors were given services contracts, (3) increase in the amount of money in import substitution after the capacity building and knowledge transfer to local suppliers, and (4) increase in revenues generated after the development of local manufacturers, among others. Lack of targets or thresholds in the Act and disregards for recording data and sharing it with researchers are some of the factors responsible for non-compliance as well as data inadequacy. For example, the Act has not provided for minimum thresholds on employment, local goods and services and knowledge transfer. It has not also defined what a South Sudanese company is so that the right companies can be awarded services and procurement contracts. Furthermore, it does not provide for incentives and penalties to reward or punish those who meet or fail to meet the targets. If the Act had explicitly stated thresholds, punishment and incentives, the companies would have likely made records in order to prove that they have complied. In addition, some companies did not share some details of the contractors citing confidentiality. The claim that contractual information is confidential is a misunderstanding of confidentiality in our view because the kind of data we requested is not classified per the law as confidential.

These challenges, among others, could be overcome if the following recommendations are given due consideration:

1. While there is considerable progress in the employment of South Sudanese in the petroleum industry, there is still an urgent need to increase these numbers in the top management and highly technical positions and to transfer knowledge and build the capacity of South Sudanese firms to be capable of supplying goods and services in all the value chains of the petroleum industry.
2. While the Petroleum Act 2012 has stated the main requirements for local content, there are significant challenges that need to be overcome by either amending the Act, enacting an elaborate local content regulation or by designing a comprehensive local content policy with an enabling legislation. Whatever option the government takes, it should put into considerations the following suggestions:
    a. Measurable targets in the workforce, procurement of national goods and services and transfer of technology should be considered. Such targets should be made with the current level of local content in the industry in mind. In this case, South Sudanese should, within five years, take about 90% control in the top level management, 80% in the highly technical positions, and 100% in mid-level management, mid-level to junior technical and other key staff positions. South Sudanese materials and services inputs should begin at 30% and move to 60% in five years and 90% in ten years.
    b. What a South Sudanese company is should be clearly defined so that the right companies to benefit from the policy are determined. The definition of a South Sudanese company should include registration in South Sudan, location of headquarters in South Sudan, majority of South Sudanese as shareholders, majority of goods and services produced from South Sudan and majority of South Sudanese as employees. Definition thresholds should be set in a manner that puts the current realities in mind and scale them up in five to ten years.
    c. Tax incentives, administrative and financial penalties should be incorporated to reward achievement of targets or punish failure to meet the targets.
    d. Any local content option should be integrated with other national policies in a manner that can create suitable macro-economic environment, effective and efficient institutions and legal systems, incentives for enhancing 'sound business practices', infrastructure for business environment and social systems.
    e. Industry oriented education curriculum should be developed in order to raise appropriate level of education, skills and knowledge, technical know-how and research and development. Education institutions, such as the University of Juba, should be engaged in terms of developing an industry oriented education curriculum.

f. An institutional framework to implement, monitor and evaluate the policy should be set up in order to ensure such a local content mechanism is successful

3. To fill the gaps in this research, future analyses should determine (1) money earning power of the nationals after training, (2) value of money added to the local economy after local suppliers and contractors were given services contracts, (3) increase in the amount of money in import substitution after the capacity building of local suppliers, and (4) increase in revenues generated after the development of local manufacturers, among others.

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