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Local Content Policy and Its Implications on Marginal Oil Fields Operations and the Nigerian Economy

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Abstract:

The paper assesses local content policy and its implications on the operation of marginal oil fields and the Nigeria economy. The data for this study was obtained from secondary sources: literature review on economic development of marginal field operation and Nigerian local content act. Given the strategic importance of marginal field development and the significant expenditure that occurs in the business, which offer excellent opportunity for wealth creation within the Nigerian economy, the use of local content policy in marginal field operation is of strategic importance since it will lead to cost reduction thereby increasing the profitability of the marginal field projects. However local content policy is also associated with numerous challenges. The contribution of local content policy to marginal field operations over a wide range of countries exceeds that of all other productive factors. The finding shows that local content policy if properly implemented should lead to cost reduction in marginal field operation and job creation in the Nigerian economy.

Keywords: Local content policy, Marginal field, Nigeria economy

1. Introduction

The oil and gas business is technology driven and Nigeria is making frantic effort to hook on to the international grid of technology driven economies. Emphasis therefore has shifted to human, technical and financial capability in the oil and gas development. Business success depends upon the ability of companies to develop local content, build a competitive local supplier base and deliver lasting social- economic benefits where they operate. This phenomenon underscores the central role of local content policy in the oil and gas business, it is therefore the focus of this paper to examine the local content policy from the perspective of marginal oil field operation.

The year 2004 to date is the era of active involvement in which the Nigerian government seeks a greater indigenous participation in upstream operation (Marginal Fields Development Programme) and the internalization of input in the industry by increasing the quantum of composite value created in the Nigeria economy through the utilization of Nigerian human and material resources (Local Content Development programme). The latter programme is thus an attempt at circumventing both the capitalist and the critical social theories of technology transfer and developing an indigenous technology initiative. Physical infrastructure and social macroeconomic environment, institutional frame work as well as attitudinal changes are identified as critical to the successful Nigerianization of the oil industry in Nigeria.

1.1. The Objective of Local Content Policy

The objectives of the local content policy are to promote a frame work that guarantees active participation without compromising standard, to promote value adding in Nigeria through utilization of local raw material materials and human resource, and to promote steady, measurable and sustainable growth of Nigerian content. The Nigerian government is actively promoting the internalization of input in the upstream sector.

The policy obliges the utilization of certain percentage or share of local input in the form of local raw material, human resource and services in all oil and gas project executed in the industry. The benefits of local content development are:

- Stimulates growth in Nigeria companies and diversifies the economy
- Developing in country capacity, local skills and technologies

1.2. Problem Statement

Despite Nigeria efforts in initiating a marginal oil field program and local content policy, marginal oil field development in Nigeria is lagging behind. Fiscal, governance, infrastructure, regulatory, technical and technological issues provide interesting challenges towards the development of marginal oil field in Nigeria.

One of the timeliest and important initiative which can be pursued at this juncture is the local content initiative in the oil and gas development policy. The policy can both contribute to the economic development of marginal oil fields and the multiplier effect of oil and gas operation on the Nigerian economy. Despite obstacles, there is no reason why local content development should not complement the pursuit of marginal field development. The paper is an attempt to address local content policy and its implications on marginal field operations and the Nigeria economy.

1.3. Objectives of Study

We therefore aim at the relevance of local content policy in oil and gas development with emphasis on marginal field operations and the Nigerian economy. It uses local content initiatives as analytical framework to understand the implications on marginal oil field operations and the Nigerian economy. The study also highlights the challenges of local content policy for marginal field operators and provide recommendations.

2. Literature Review

2.1. Local Content Policy in Nigeria

An exposition of the term local content as it applies to the Nigerian oil and gas industry is important to an understanding of the possible developments in the structure of the supply-chain sector in the near to medium term. Local-content development in the Nigerian oil and gas industry has long been viewed as the means by which Nigeria can maximize the benefits of oil and gas exploration and development for the greater good of its economy and its citizens.

In 2010 the Nigeria oil and gas industry content development (NOGID) bill was passed into law with the belief that the oil and gas industry should drive Nigeria industrialization process. The Nigeria oil and gas development law (2010) defines : Nigeria local content as the quantity of composite value added to or created in the Nigerian economy through a deliberate utilization of Nigeria human resources and material resources for the provision of goods and services in exploration, exploitation, transportation and sales of the Nigerian crude oil and gas resources, without compromising quality, health, safety and environmental standards in order to stimulate the development of indigenous capabilities.

The Nigerian Oil and Gas Industry Content Development Act 2010 is robust and comprehensive, running into 107 sections with a schedule of 17 categories and 284 sub items, goods, services and activities to be carried out in the industry. Each sub-activity area prescribes a minimum threshold of local content value ranging from 30 % to 100% of speed, man hour, tonnage, volume number or length.

Local content policy in oil and gas development has been discussed by several authors in different countries. Some countries approach it as an economic tool which will ultimately create local capacity and capabilities, others see it as a protectionist measures to protect local technology and services from foreign competition thereby retaining the value of local technology. John (2011) asserted that local content as an industrial policy can further economic benefits such as net employment and creation of domestic industry. It has been argued that Local content is the development of local skills, technology transfer, use of local manpower and local manufacturing. This is in line with the assertion that Local content is building a work force that is skilled and building a competitive supply base (Oil and Gas, 2010) Also it has been claimed that imposing local content can benefit a certain transfer of technology and knowledge. Because of local content, business is forced to transfer technology so the end quality of their product which is now using local input is sustained (Wong 2006). It has become a very important issue due to the fact that this day and age, every country would like its citizen to capture the commanding height of its economy and thus assist to keep its wealth within its border, as well as providing job to ever-increasing population. Whereas developing and emerging economies claim that they have a more legitimate reason to local content policy due to their low GDP. Industrialized countries deployed this strategy to extract maximum value from natural resources, simultaneously developing indigenous capabilities of its citizens, entrepreneurs and institutions. Local content policy proponent also refers to the alleged benefit that must follow from spillover effect in the medium term. It is argued that local content policy will eventually increase the market size which will in the medium term will increase competition and innovation and thereby lower the technology cost.

Warner (2007) view local from an angle of community content's state that ultimately, community content is about realizing a competitive advantage for an oil and gas company in the eyes of both local populace and the country guardians of economic policy. He observed two distinct policies for achieving higher local content vis-a-vis; firstly, where the state requires oil companies to give greater preference to those nations and national supplier who can compete internationally on cost, quality and timeliness i.e. what can be termed local content participation. This policy is implemented through negotiated conditions and agreements between host countries and multinationals evidenced by issues such as lower pre-qualification and tender appraisals criteria and lower tariffs on imported machinery and semi-finished materials not available in the country. For instance the Trinidad and Tobago case, where oil production operators "shall give preference to national subcontractors where such are competitive with foreign bidders in skills, availability and price and meet technical and financial requirements" and the case in Nigeria where the proposed local content bill requires about 95 percent managerial and supervisory positions, 100 percent risk insurance and legal services to be handed by

indigenous professionals (Warner 2007 cited by Ugwushi, 2010). The second policy strategy is where governments propose a 'step change' i.e. gradual change of local content capacity achieved by consciously building the capability of national and local skills to access opportunities, considered as local capability development (Warner 2007 cited by Ugwushi 2010). It can be argued that while the former strategy can be considered more of a "push" model the latter is more of a "pull model"; and that the latter Model is a potentially more progressive model that would involve considerable understandings from the oil companies such as providing direct and prolonged assistance to indigenous firms to improve their quality and reliability; payment of premiums or subsidies to overcome some of the higher costs incurred in capacity development; payment of additional insurance premiums to support local supplies and contractors' investing in physical infrastructure such as building and utilities; and providing financial services such venture capital, credit guarantees and short term loans to local supplies and contractors. Warner (2007) further stressed that we should not be so naïve as to expect changes in local content and community investment practices to occur in the absence of the right dedicated incentives. However, we argue that while the latter model appears more progressive, it is worth considering that the multinational oil companies are not charity based firms; but strictly profit-oriented organizations, driven by the main objective of maximizing shareholders' funds. Therefore, the model suggested by Warner may be difficult to implement, especially in a country like Nigeria where her recent experience from the issues of gas flaring profitability has displayed laissez fair attitude on the part of the multinational and ineffective regulation from the authorities. We therefore suggest an effective local content policy that would be driven by an optimal balance of both incentives and strict regulations.

Local Content Development is dominant concept in international business dialogue. Past experience reveals that despite strong imperative in favour of local content development these have not been taken advantages of sufficiently. Opponent of local content policy merely use economic argument such as inefficient allocation of resources, inflation of prices due to higher prices of locally produced intermediate goods (Tomsik and Kubuck (2006).

In whatever way local content policy is looked at in the oil and gas development, it is about value addition by optimizing the industrial and other associated values that can be made to a country natural resources for the overall benefit of it economy (Obasa 2010). The successful implementation of local content development will bring about economic diversification. The United Nations Framework Convention on Climate Change UNFCCC, (2009) describes economic diversification as follows: Economic diversification is generally taken as the process in which a growing range of economic output produced. Economic diversification is essential in the sustainable management of petroleum resources and hence marginal oil fields operation, since it enables a State to develop and utilise industrial activities required for the extraction of non-renewable petroleum resources for other industrial activities.

In-effective and inefficient government institutional framework in many instances has hindered optimal resource diversification in Nigeria. Infrastructure and utilities are critical success factors in diversification and value addition components of local content policy until they remain functional and readily available, it is difficult for the benefits of local content to be realised.

2.2. Marginal Field Operations

Right from the start of oil exploration in Nigeria, some fields were termed marginal oil fields due to their low economic returns. In 1999, the Government declared its intension to develop these marginal fields through qualified indigenous oil companies. Also in order to promote indigenous capability in the oil and gas development, in 2001, the government of Nigeria launched a marginal oil fields programme and invited bids from indigenous companies for the 24 out of the 116 identified fields. Twenty-four (24) of the identified 116 marginal fields were awarded to 30 indigenous companies in an openly contested bid round in 2003. Apart from awarding 24 marginal to 30 local companies, the government also encouraged these operators to merge so as to be able to generate enough human and material resources needed to develop and operate these asset. However, despite the restriction of the local operators to only marginal fields according to Business day report (2013) and Wood Mackenzie Report (2012), since 2004, only nine of the 24 marginal fields awarded in the round have been brought on stream or are under development and account for just 2.1 percent of the country's total daily crude production.

In marginal field development, the prevailing technical, social, political and institutional conditions have a great role to play. Together these linked factors provide the foundation of economic development of marginal fields. This typifies the situation in the country that has successfully developed their marginal oil fields. Development strategies in the less developed country like Nigeria should be embrace the initiation of local content policy.

In Nigeria the development of Ogbelle marginal field BAS a wholly indigenous company founded in 1990 provide engineering, procurement, construction and installation supervision and commissioning supervision services for the development of Ogbelle project 's production facilities. BAS also assist PETRE in organizational development specifically, BAS designed the flow lines and pipelines, the interconnection to Rumukpe manifold, the storage facilities, civil works and telecommunication system as well as receiving the flow station design by Chimex.

In the United States small and independent companies (marginal field producer) enter into licensing arrangement, alliances agreement and mergers with overseas companies to assess the supply chain infrastructure. Independent operating companies rarely provide direct funding for specific technology developments, but often participate (along with majors and national oil companies) in research consortia and other cooperative efforts.

According to the marginal well report of (2012): Marginal wells must be monitored, maintained, and serviced on a continual basis by local servicing firms. The daily production of marginal oil and natural gas requires ongoing expenditures for electricity and other fuels, truck transportation, and storage. Well work-overs and stimulation are frequently used to extend the life of existing wells. Manufactured goods produced within the state support a well's operation until final shut-in. Among the best examples of successful

marginal fields incentives is the Texas Railroad Commission's stripper well tax credits. "Currently over 60 percent of Texas' revenue comes from stripper wells, which at 10 barrels of oil or less a day are definitely marginal producers. The state has given tax credits and lowered the tax regime as well as reduced the royalty on stripper wells -- and those efforts have really paid off."

The above is in line with Iledare (2008) submission that in most oil producing provinces of the world, using local content inputs of production, skilled labor, local material, and local business entrepreneurs are the key factors for reduction in production cost. Moreover, there is evidence to suggest that as the proportion of the upstream expenditure spent locally increases, the contribution of the upstream sector to the gross domestic product will increase significantly. This strategic action can also increase arrest the outflow of highly skilled professions in oil and gas to foreign land.

These reveal that success in marginal field operation requires competitiveness in both cost reduction and innovation, in earlier period cost led the way in determining enterprise and national competitiveness in international market. Unless both occur at the same time, a country is not likely able to sustain prosperity and market share.

The process of economic development of marginal oil field embodied a wide array of concern including:

- Adequate funding
- Availability of requisite human resources and skill to make it possible
- The regulatory and incentive frame work that support it
- Alliances partnerships and collaboration
- Risk management and Sharing of infrastructure and knowledge

From an economic stand point. Marginal field operations can no longer be confined to the issue of finance. Other economic areas such as environment sustainability, effective project management, organization of work process and indeed the very concept of local organization competence and capacity issues have become involved in the process of marginal field development. Sustainable local content development is linked to capability and capacity building which must begin with clear vision and a set of properly defined goals formulation in alignment with inherent potential. Better technological capabilities of the nation through availability of in house expertise are needed to get some of the marginal fields into production and profitability.

2.3. Challenges of Local Content Policy and Marginal Field Operators in Nigeria

2.3.1. Inadequate Infrastructure and High Cost of Funds

Finance is a major challenge to the operation of marginal field especially in view of the inherent challenge by funding; making it difficult for them to do a good job as put by Michael (2013). Lack of financial resource by indigenous participants and limited exposure to complex operations can make indigenous marginal field operators less competitive. According to Oroma (2007) financing of oil and gas development in Nigeria is a major factor militating against the development of marginal fields. It is estimated that a marginal field in the Niger Delta Basin will cost about US\$40 to US\$70mm as development cost for a few years as noted by (Offia 2011). Most marginal field awardees are short of cash to execute the work programme.

The infrastructure in Nigeria presently cannot support industrial growth. Some of the infrastructural challenge include: insufficient power supply, poor transportation and telecommunication network. The inadequacy and low performance of infrastructure have constrained the development of indigenous marginal field operators.

2.3.2. Inadequate Partnership Arrangement

According to Vanguard 4th February (2014): *Some of the marginal field owners also have partnership complications as they were strange bed fellows from the outset, thereby stalling whatever fruitful decisions that might signal their take off.*

The technology driven and capital intensive nature of vast business opportunities available in the petroleum industry have limited the involvement of local investors and business entrepreneurs. Typically, these opportunities require a lot of investors to qualify for job in which they claim to have capability. Ironically, the industries are replete with several contractors and supplier who are satisfied playing the role of commission agents to overseas technical partners without the prospect of establishing local manufacturing plants or value adding facilities. Rather they assist their principal to circumvent policies with a view to perpetrating importation of goods and services.

To say the least, such partnership arrangements do not serve the interest of the country irrespective of the number and magnitude of contract awarded to the local surrogate in the name of local content. The situation is not helped by Nigerians' individualistic approach to business, which largely forbid partnership and alliances without which huge capital outlay and critical mass required to operate effectively in the industry cannot be raised.

2.3.3. Limited Exposure to Complex Operation and Bureaucratic Obstacle

Inaccessibility to capital tends to make marginal field operators and other indigenous entrepreneurs (most of them are small and single owner companies) less competitive. Also, some of the petroleum operations for example engineering designs are not open to indigenous entrepreneurships as a result of perceived lack of requisite expertise. Such restrictions further inhibit the development of the latent potentials of the indigenous entrepreneurs. Another problem is the cumbersome bureaucratic obstacle to development of small and medium sized enterprise and the under developed capital market.

Jean (2012) succinctly summarized the constraints of local content this way:

The problems of local companies revolve around executive capacity and critical mass with technical and financial wherewithal. Generally, most local companies are small, fragmented and incapable of packaging or attracting loan.

3. Methodology

The data for this study was obtained from secondary sources, this paper examines the Nigerian local content act, marginal field operations and the implication of local content act on marginal field operation and the Nigeria economy.

4. Results and Discussions

- The local content act and its implication on the marginal field operations and the Nigeria economy

4.1. Adequate Funding

A broad value application of local content to the Nigerian economy is the domiciliation by IOC of a minimum percentages of their profits within the Nigeria bank account which should inject liquidity into the economy and by extension significantly affect the availability of long term funding (Okeke and Ayonnuke, 2015) for the development of the nation industrial base and hence marginal field operations

Skye Bank has funded a number of marginal field projects as follows: Platform Petroleum's Gas Processing Plant, and WalterSmith's Production Boost Project. Recently, Skye Bank approved a loan facility of \$18m for Pillar Oil, to enable the company drill a well at an interest rate of 17% per annum. Former Intercontinental Bank approved \$6m for Niger Delta Petroleum for the 'work-over' of Ogbelle 1, at an interest rate of 18% per annum, a project that led to their crucial first oil.

4.2. Human Capacity Development

Marginal field development has a strong symbiotic relationship with the Local Content because of its value to the Nigerian economy. This value is derived from certain key capacities and capabilities within the Nigerian economy that have significant inter-sectorial applications, that is, local content can be targeted at and used to harness a hub of skills and technical competence which can be applied to a number of industries including marginal oil field operation.

There is limited local organizational competence in oil and gas development capability. The industry is primarily dominated by the multinational institutions especially the specialized service sector like Schlumberger, Halliburton Baker Hughes and so on. While the Nigerian Government have done the right thing by giving concession to Nigerian companies, critical skills still lie with the multi-national organization to manage the complex nature of oil and gas development. The local companies with the licenses have to content with high dollar denominated cost and risk. With little or no affirmative support, these companies cannot undertake such cost and risk solely. Furthermore, core technical skills are the multi-national competitive advantage and will not like to give it away. While policy statement like National Content Development NCD can help there is the need to ensure that Government have a clear line of sight in developing the local industry capability in the complete hydrocarbon value chain.

Among the short comings of Nigerian entrepreneurs are lack of requisite skills and technical expertise. The National Content Development Monitoring Board (NCDMB) and PETROFAC (a reputable global technology and training company) is collaborating with Oil and Gas trainer's association of Nigeria (OGTAN) to develop oil and gas training for Nigeria with a view to developing personnel in the oil and gas.

4.3. Effective Alliance and Partnership

Increase in indigenous inputs through mergers of indigenous companies with foreign technical partners in order to be competitive. Alliance between indigenous and foreign companies would enhance the credibility of indigenous companies and stimulate capacity building in terms of knowledge and technology transfer improves the operation of marginal oil fields. Sections 49-53 exclusively domicile to Nigerian service providers all insurance, financial, and legal and fabrication/welding business, respectively, in the Nigerian petroleum industry. The potential it creates is that it should develop the relevant industry capacities and capabilities, increase exportable expertise in these areas, and position Nigeria as a regional hub for the provision of these services (Umeagudosi, 2012).

The requirement that procurement decisions be carried out locally will also stimulate the development of local capacity in the area of supply and service industry in the catchment areas.

Sections 43-45 require operators to not only support technology transfer through establishment of joint ventures, alliances/partnerships and execution of licensing agreements, but also fashion out programmes that will lead to the actualization of capacity development in the Nigerian supply and service industry. We believe that this is the fundamental function of local content in Nigeria where local capacity is presently unable to adequately meet supply and service needs of operator and project promoters in the petroleum industry (Local Content Act, 2010).

4.4. Provision of Adequate Infrastructure

Section 3 (2) of the Act provides that Nigerian indigenous service companies which can demonstrate ownership of equipment, Nigerian personnel and capacity to execute work on land and swamp will receive exclusive consideration for work in those areas. This provision will stimulate indigenous technical and vocational skills and economic activity in a number of ways, which include establishment of several new service companies(that utilizes local and indigenous technical and vocational skills), strengthening of

existing service companies, in country retention of foreign exchange, increased revenue from taxes and registration fees, capacity development for indigenous personnel, increased availability of commercial funding, deepening of the indigenous service industry across the spectrum of services and the increased impact on the non-petroleum industries (Okiti, 2011).

4.5. The Provision of Local Content and Its Potential on the Nigerian Economy

4.5.1. Job Creation and Capacity Building

The local content policy will generate employment opportunities for qualified and skilled indigenes that can gainfully be employed and engaged in key roles in the industry. This will bring about capacity building of Nigerian Human resource through training of Nigeria personnel. All these have the multiplier effect of aiding the economic development of marginal oil fields.

4.5.2. Contract Award/Contracting Services

Local content policy has led to increase opportunities for Nigerian indigenous entrepreneurs in contract award. This is in line with the overall obligation imposed in respect of transaction within the oil and gas industry as set out in section 3 of local content, which states that Nigerian independent operators shall be given first consideration in the award of oil block, oil field license and all projects for which contract is to be awarded in Nigerian oil and gas industry. This will mean provision of value adding services. Local content will ensure that most of the contract services in the Nigeria petroleum industry especially for marginal oil fields are carried out in Nigeria. Examples of such services are fabrication works carried out in Warri, Port Harcourt and Lagos for the oil industry. Another example is drilling services fairly well developed in Nigeria though accessories required for the job, including drilling fluid and cementing materials are largely imported. A number of indigenous companies currently engage in mud-logging, directional drilling, cementing and other activities. This will prevent capital flight through technical services rendered by foreign companies and goods procured outside the country.

4.5.3. Supply of Local Input

A lot of capital owned by Nigerian is also being brought in and used to fund drilling and production operation by indigenous exploration and production operation. The net effect of capital pool is greater diversification of the industrial economic based, a skilled work force and greater level of employment. Local inputs for the petroleum industry (and also marginal field operators) can be supplied by the Nigerian entrepreneurs. Such inputs include safety wears and gadget. Others are rubbers hoses, paints, wax special muds like barites and bentonites, seals, bearing and so on. This will help in diversifying the economy base of the nation. The use of local raw material for drilling should be encouraged to grow without suffering policy failure. For example, encouraging the use of locally available materials, such as bentonite and barites as drilling fluid. This will reduce the cost of production and eventually impact the cost of production for marginal field operators.

4.5.4. Empowerment of Host Community

Empower host community of marginal field operators to have some form of control over their resource, thus boosting the confidence and morale of the people as they become stakeholders and participant in the business. Indigenous increased sense of belonging will ensure minimizing costly conflicts in terms of disruptions and making endless demand on marginal field operators. Local participation will lead to more cooperation between community and marginal field operators which is necessary for the survival of the marginal field project.

Delivering benefits from local content policies to the communities that host oil extraction is a stated aim of the Nigerian Content Act and is perceived as a way of addressing the ongoing conflict in the Niger Delta. Several clauses in the NOGICD Act are intended to deliver a benefit to host communities by requiring companies to set up offices and production in the areas they operate in.

5. Conclusions

The study has elaborated on the current situation concerning local content policy, the challenges and implication to marginal field operation and the Nigerian economy. This study highlighted that Nigeria Oil and Gas Industry Content Development is an enabler to economic development of marginal oil field and offers huge business opportunities to large number of Nigerians. It is not our intention of the study to generalize but rather to provide useful insight for policy maker. In addition, the developed framework if fully adopted will aid in the economic development of marginal oil fields.

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