LOCAL CONTENT POLICY AS A TOOL FOR KNOWLEDGE TRANSFER BETWEEN INDIGENOUS OIL AND GAS FIRMS AND MULTINATIONAL OIL COMPANIES

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LOCAL CONTENT POLICY AS A TOOL FOR KNOWLEDGE TRANSFER BETWEEN INDIGENOUS OIL AND GAS FIRMS AND MULTINATIONAL OIL COMPANIES

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ABSTRACT

The benefits of linkages or institutional networking for technological capacity building in indigenous firms oil and gas companies in Nigeria cannot be overemphasized. Linkages within the economy is necessary to develop the ability to transmit and receive knowledge, skills and technologies, whether it be suppliers of components and raw materials, consultants, service companies or technological institutions. Both the indigenous and foreign firms stand to gain. For the indigenous firms, linkages present a fast way of upgrading themselves through transfer of technology, knowledge and skills, improvement of business and management practices, and facilitation of access to finance and international markets (UNCTAD, 2006). The Federal Government of Nigeria introduced the Oil and Gas Local Content Policy in the year 2000. In early 2010, an enabling legislation on the policy was signed with a view to strengthening the technological capacity of indigenous firms in the oil and gas industry. The purpose of this paper is to examine the Local Content Policy as a tool for knowledge transfer between indigenous oil and gas firms and multinational oil companies. The paper is largely a conceptual review based on extant literature. The findings from the reviewed literature revealed that as provided for by the Local Content Policy, partnership, training, R&D, funding, infrastructural supports and consultancy are critical linkage activities that significantly influenced the technological capacity of indigenous firms in the Nigerian Oil and Gas Industry.

***Key Words**: Local Content Policy, Knowledge Transfer, Multinational Oil Companies, Indigenous Oil and Gas Firms*

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INTRODUCTION

As developing countries like Nigeria seek to improve their industrial base through the development of human capital, Local Content Policy has been widely viewed as a central part of this effort. Since 1956 when oil was discovered in commercial quantity in Nigeria, human capital development in the Petroleum Industry had been relatively low. The Nigerian Government invested enormously into its Oil and Gas Industry, but only very little portion of the profits from the investments is spent in developing her industrial base as the lion shares were paid to foreign firms for services such as Fabrication, Engineering Procurement Construction (EPC), Front End Engineering Design (FEED), conceptual designs and seismic studies. These often resulted in capital flight as the profits from the oil business were repatriated abroad; thus, providing employment opportunities for citizens of other countries, and in most cases developed countries (Ihua, 2010; Monday, 2012).

In recognition of the anomaly in the Nigerian Oil and Gas Industry, the Federal Government introduced the Local Content (LC) Policy in the year 2000, and precisely a decade after, signed the enabling legislation. The essence was to increase the local content and consequently boost human capital development and competitive capabilities of indigenous firms in the Oil and Gas Industry. The level of human capital is a key factor in explaining the level of technology diffusion from multinational companies to their host countries and it provides a competitive advantage (Xu, 2000).

Since the late 1950s till date, the Oil and Gas Industry has continued to serve as the main stay of the Nigerian economy. The industry has widely been acknowledged as the nation's live-wire and literatures abound on its role and significance to the nation (Agusto, 2002; Atakpu, 2007). Furthermore, it is reported that an estimated $8 billion is spent annually on servicing operations within the industry and this figure is projected to hit $15 billion within the next few years (Business Day, 2008). Regrettably, despite these huge sums of money spent in servicing the industry, only very little proportion of the accruable profit is available to indigenous oil servicing firms or spent in developing Nigeria's industrial base. Majority of the amounts are paid to foreign firms for services such as Fabrication, Engineering Procurement Construction (EPC), Front End Engineering Design (FEED), conceptual designs and seismic studies. This results in capital flight as the profits from the contracts are repatriated abroad, where most of the equipment are manufactured; thus providing employment opportunities for citizens of other countries, and in most cases developed countries.

According to industry experts, the main reason for this situation is attributed to the problem of low local content (LC), which is a situation where most of the service contracts are awarded to foreign firms because local indigenous firms 'allegedly' lack the requisite skills, technical expertise, manpower and production capacity and capability to compete favourably (Aneke, 2002; Ariweriokuma, 2009). Oladele (2001) suggested that low LC in the Nigeria is due to: Deficient capitalisation arising from the tendency of Nigerian entrepreneurs to operate as 'one man' businesses; Capital and structural deficiencies associated with poor training and low managerial ability; and Inability to attract funds due to lack of suitable collateral and positive corporate image. In addition, Olorunfemi (2001) and Ogiemwonyi (2001) in similar papers articulated the problems of low local content to the inability of commercial banks to provide tenured loans to indigenous firms to execute projects; and that of Nigerian firms to foster appropriate alliances and partnerships with foreign firms, stressing that these collaborations needed to be facilitated by the government and the multinational oil producing firms, respectively. Furthermore, Heum et al. (2003) summarized the reasons for low local content to include low technological capacity; lack of funding from financial institutions; inadequate and incoherent policies/legislations; inadequate infrastructure; unfavourable business climate; lack of partnership between indigenous contractors and technically competent foreign companies.

The main aim of this study was to examine the local content policy as a tool for knowledge transfer between multinational oil and gas companies and indigenous small and medium firm in the Nigerian Oil and Gas Industry.

Statement of the Problem

The Oil and Gas Industry in Nigeria plays a crucial role to the sustenance of the nation and fuels her economic and development activities. The industry has been widely described as the nation's live wire and literature abounds on its role and significance in Nigeria (Agusto, 2002; Atakpu, 2007). Nonetheless, an estimated $8 billion is spent annually on servicing the industry in operations such as fabrication, engineering procurement, construction (EPC), Front End Engineering Design (FEED), conceptual designs and seismic studies. This figure is projected to hit $15 billion within the next few years (Business Day, 2008). Regrettably, despite these huge sums of money spent in servicing the industry, only a very little proportion of the accruable profit is spent in Nigeria. Majority of the amounts are repatriated abroad, where most of the equipments are manufactured; and providing employment opportunities for citizens of other countries. The major reason for this situation has been attributed to low local content (LC), which is a situation where most of the service contracts are awarded to foreign firms because local indigenous firms lack the requisite skills, technical expertise, manpower and production capacity and capability to compete favourably.

Oladele (2001) posited that low local content in the Nigerian oil and gas industry results from: deficient capitalisation arising from the tendency of Nigerian entrepreneurs to operate as 'one man' businesses; capital and structural deficiencies associated with poor training and low managerial ability; and Inability to attract funds due to lack of suitable collateral and positive corporate image. More reasons have been adduced for low local content in Nigeria to include: low technological capacity; lack of funding from financial institutions; inadequate and incoherent policies/legislations; inadequate infrastructure; unfavourable business climate; lack of partnering between indigenous contractors and technically competent foreign companies (Aneke, 2002). Going further, the problems include the inability of commercial banks to provide tenured loans to indigenous firms to execute projects and that of Nigerian firms to foster appropriate alliances and partnerships with foreign firms, stressing that these collaborations needed to be facilitated by the government and the multinational oil producing firms, respectively (Olorunfemi, 2001; Ogiemwonyi, 2001).

Historically, Nigerians have had very little share of the country's oil wealth and there was an urgent need to reverse this trend in the wake of the country's return to democracy. To address this anomaly, the Federal Government of Nigeria in the early 2000s introduced the Local Content (LC) policy, christened Nigerian Content (NC) and it was primarily aimed at enhancing increased participation of local indigenous firms in OGI. The policy was targeted at transforming the industry through the development of in-country capacity and indigenous capabilities in the area of manpower development, facilities and infrastructure towards ensuring that a higher representation of local indigenous companies participate actively in the industry (Lawal, 2006; Nwapa, 2007).

LITERATURE REVIEW

Local Content (LC)

The term Local Content (LC), aptly christened 'Nigerian Content' is defined by the Nigeria National Petroleum Corporation (NNPC) as 'The quantum composite value added or created in the Nigerian economy through the utilization of Nigerian human and material resources for the provision of goods and services to the petroleum industry' (NNPC Website, 2008). While it can be argued that this definition seems more of a textbook definition rather than a practical one; Chief Tony Obuaya, one of the leading voices in the clamour for higher local content, views LC from the perspective of 'value addition.' He defines LC in two ways: 'a set of deliberate orientation and actions to build domestic capacity relevant for service and product delivery comparable within that industry' and 'an opportunity to locally build a sustainable culture of service quality and capabilities exceeding customer's expectations and comparable to international standards through key local personnel and management' (Obuaya, 2005). These definitions tend to be more precise, with emphasis placed on certain key indices, which provide insights into how the local content policy can be measured and examined as an academic concept. This position was corroborated by the Chairman of Nigeria's House of Representatives Committee on Petroleum (Upstream), Hon. Tam Brisibe, quoted in the media to have stated that 'Local content means different things to different people…the common denominator is value addition in the country' (Business Day, 2008).

The concept of local content is neither new nor restricted to Nigeria, as it has for long been operated in several other oil-producing countries. Warner (2007:8) views LC from an angle of 'community content'; stating that 'Ultimately, community content is about realising a competitive advantage for an oil and gas development company in the eyes of both the local population and the country's guardians of economic policy.' He observed two distinct policy strategies for achieving higher local content vis-à-vis: firstly, where the state requires oil companies to give greater preference to those nationals and national suppliers 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 LC bill requires about 95 percent managerial and supervisory positions, 100 percent risk insurance and legal services to be handled by indigenous professionals (Warner, 2007:1).

Warner (2007) views local content from an angle of 'community content'; stating that 'ultimately, community content is about realising a competitive advantage for an oil and gas development company in the eyes of both the local population and the country's guardians of economic policy.' Warner (2007) further observed distinct public policy strategies for achieving higher local content targets. The first strategy is where the state requires oil firms to give greater preference to those nationals and national suppliers 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 appraisal criteria and lower tariffs on imported machinery and semi-finished materials not available in the country. Nigeria, a developing country, with low local content and poor R&D intensity (proportion of gross domestic product allocated to research and development) aims to increase the local content in the oil and gas industry to 85% from the present status, which is below 40%, through the local content policy (AIO, 2010; Atakpu, 2007; Jegede et al., 2012b).

The Local Content Policy

In March of 2010, President Goodluck Jonathan signed into law the Local Content Development Act 2010. The Act, among other things envisaged to tackle the problem of insufficient value addition to the Nigerian economy arising from the near lack of local capacity/capability in the industrial sector especially in the petroleum industry (Bello, 2010). The Nigerian Oil and Gas Development Law 2010 defines local content as "the quantum of composite value added to or created in Nigeria through utilization of Nigerian resources and services in the petroleum industry resulting in the development of indigenous capability without compromising quality, health, safety and environmental standards (Gbegi & Adebisi,2013). It is framed within the context of growth of Nigerian entrepreneurship and the domestication of assets to fully realize Nigeria's strategic developmental goals. The scheme, which has the potential to create over 30,000 jobs in the next 5 years, is geared to increase the domestic share of the $18 billion annual spending on oil and gas from 45% to 70%, in addition to enhancing the multiplier effects on the economy, through refining and petrochemicals (Balouga, 2012; Gbegi & Adebisi,2013).

According to Balouga (2012) and Gbegi & Adebisi (2013), the Local Content Policy action started in 1971 through the establishment of the Nigerian National Oil Corporation, (NOC). NOC was established as a vehicle for the promotion of Nigeria's indigenization policy in the petroleum sector. It later became Nigerian National Petroleum Corporation (NNPC) in 1977 through NOC's merger with the petroleum ministry. NNPC flagged off the actual local content initiative through acquisition of interests in the operations of the Indigenous Oil Companies (IOCs). These interests grew to about 70%, with the responsibility of controlling all acreages and other activities. Although conscious efforts were made in the past through Regulation 26 of the 1969 Petroleum Act, enforcement of local content policy, the springboard for sustainable economic transformation of Nigeria, was mere paper work. For an industry that contributes 80% of Nigerian government revenues and 95% of its foreign exchange this is entirely unacceptable to the Nigerian government hence the clamor for change (Balouga, 2012; Gbegi & Adebisi, 2013).

Objectives of the Local Content Act

Government's objectives for the local content policy initiative are quite noble but have remained unrealized. These objectives include the expansion of the upstream and downstream sectors of the oil and gas industry, the diversification of the sources of investment into the sector such that some of the funds would begin to come from local sources, the promotion of indigenous participation and the fostering of technological transfer. Other objectives are the increase in oil and gas reserves through aggressive exploration; employment generation for all categories of Nigerians; increased production capacity, and perhaps most importantly, the integration of the oil and gas industry into the mainstream economy through local refineries and petrochemicals (Balouga, 2012; Gbegi & Adebisi, 2013).

Knowledge Transfer

One likely way to achieve the desired local content status in Nigeria is through a synergy between the industry, academia and government through a robust knowledge management system. Knowledge management can be defined as the discipline of enabling organizations to collectively and systematically create, share and apply knowledge to better achieve their objectives (Al-Dawoud et al., 2011). Knowledge sharing is increasingly recognized as an important mechanism to access external knowledge (Schilling, 2008), and there is a growing literature on knowledge management and its impact on firm's performance (Gulati, 1999; Gilsing et al., 2008; Vanhaverbeke et al., 2009). It has also been established in the literature that crossborder sharing is important and that geographic diversity of collaboration can improve performance (Jegede et al., 2012c; Jegede, 2012; Schilling, 2008).

Knowledge sharing may include the increased regulation of innovation processes that facilitate separation and diffusion of innovation performance, the use of information and communications technologies (ICTs) and strategic technological alliance (STA). As a result, emerging economies have become increasingly important in multinational firms' innovation activities and their international technological alliance and knowledge sharing activity. Against this background, it is surprising that the alliances primarily focused on sharing between partners from developed countries. Therefore, there exists only a limited understanding of the pattern of technological sharing between developed-country and developing-country. Hence, this paper seeks to study the challenges of innovations in the indigenous oil and gas firms in Nigeria, thereby recommending knowledge sharing strategies as one of the main remedies to the challenges of innovation in Nigeria (Jegedea, Ilorib, Sonibarec, Oluwaleb & Siyanbolaa, 2013).

Local Content and Knowledge Transfer to SMEs

The import of the local content is to create an economic engine Energy Technology and Infrastructure for Development for growth, driving employment, wealth creation and improved linkage between the oil and gas industry and other sectors of the Nigerian economy. It implies the development of local skills, technology transfer, use of local manpower and local manufacturing. Nwosu, Nwachukwu, Ogaji and Probert (2006) gives a bit clearer definition by stating that local content is the integrated contributions to any of the myriad of activities, operations or inputs in the crude oil and natural gas extraction process, which are made by Nigerian personnel, local contractors, wholly-owned Nigerian companies or by Nigerian registered companies in which Nigerians effectively own a majority of the equity.

INTSOK Study (2003) summarizes it as value addition activities taking place in Nigeria. According to Obuaya (2005), Local Content is a set of deliberate orientation and actions to build domestic capacity relevant for service and product delivery comparable within that industry. He remarks that it is an opportunity to locally build a sustainable culture of service quality and capabilities exceeding customers' expectations and comparable to international standards through key local personnel and management. His definitions reflect on some salient indices to examining the concept of Local Content such as deliberate orientation, capacity building, sustainable capability, product deliverability systems and comparability (Ihua, Ajayi & Eloji, 2009). Thus, one of the key roles of the Local Content Policy is enhancing technological capacity building of small- and medium-scale oil service companies. This is to bring about service quality, technical expertise, technology transfer, as well as development and use of local technology.

Several authors have conducted researches on Local Content's implications in increasing indigenous technological capabilities in Nigeria's oil and gas industry. Ogiemwonyi (2001) alliancing as a tool to increase Local Content in the Nigerian oil and gas industry. The study emphasised the need for government and multinationals to facilitate the process of joint ventures, partnerships and alliances in order to forestall a situation where indigenous firms engage in unhealthy alliances with just any foreign firm in a bid to desperately gain credibility in the industry, without thoroughly considering salient issues such as compatibility; technical expertise requirements; knowledge transfer expectations; and previous ethical records and transparency considerations associated with such foreign firms.

Heum, Quale, Karlsen, Kragha and Osahon (2003) carried out a study on how local content can be enhanced in the Nigerian upstream oil and gas industry and found the key cause of low local content is low technological capacity due to lack of partnership between indigenous contractors and technically competent foreign companies. It further emphasized that Local Content would only develop when local industrial capacity is sufficiently developed and open to interaction with leading international companies.

In 2004, UNCTAD in collaboration with CALAG conducted a survey on oil and gas service sector and found that lack of access to appropriate financing has been a major obstacle preventing local companies from participating effectively in the Nigerian oil & gas services sector. The study recommended that Nigerian government should substantially increase the share of revenue from oil going to the producing states and that a greater part of these revenues be allocated directly to local communities, with tough guidelines on revenue management. Moreover, foreign investors should be encouraged to participate with local firms by developing enduring technology-transferring partnerships.

Neff's (2005) work to Nigeria National Stakeholders Working Group on International Best Practice in Development of Local Content in the Energy Sector emphasized the need for joint ventures with international oil companies as it has proved to be effective in transferring technology and business acumen, and that government support for local companies in the form of research and development (R&D) assistance has been an important factor in building internationally-competitive local companies as well as labour skills. Investigating the involvement of local companies in harnessing crude oil and natural gas in Nigeria, Nwosu et al. (2006) found that local participation was disappointingly low and recommended that technology transfers should be realized by encouraging local contractors, foreign service providers and the Government to form consortia to ensure that proper training is available, and taken up by prospective members of the workforce and potential entrepreneurs.

Ozigbo (2008) notes that in spite of the huge investment made by Nigerian government in the Oil and gas sector of the economy, the local content in the industry was still very low as over 60 per cent of the work value in the oil and gas sector is carried out abroad. This, he said, has led to dearth in jobs, skills development, capacity building/utilisation and lack of sustained national economic development. He emphasizes that the Petroleum Technology Development Funds (PTDF) should sustain partnerships and alliances to areas of low level indigenous competencies and skills in order to serve as vessel for the development of indigenous manpower and technology transfer/acquisition in the petroleum industry.

Ihua (2010) reveals that the local content policy has not yet achieved significant success in enhancing technological capacity building of SMEs in the oil and gas industry. The study recommends the need for enabling legislation to foster the needed linkages in the industry. Oyejide and Adewuyi (2011) examined the extent of the linkages that the oil sector has created with the rest of the Nigerian economy and found that the linkage between the oil servicing firms and the oil majors as well as with the local research centres or universities to be weak, although Local Content Policy has made some impacts in the oil sector in terms of contract awards. This study was actually carried out early 2010 when the effect of the enabling legislation was scarcely felt. It is, therefore, necessary to appraise the technological capacity building of oil servicing SMEs after two years of signing the enabling legislation.

Technological capacity building begins with development of management capabilities to increase the pool of skilled personnel for institutional networking. Vaaland et al. (2012) expressed that there is a significant knowledge gap between indigenous oil companies and foreign oil companies, especially in the area of management competence such as project management and quality assurance. Their study revealed that indigenous oil companies suffered from fundamental lack of quality management, limited compliance with international quality standards, and poor preventive and operational maintenance attitudes, which lead to poor maintenance of oil facilities. Local Content Policy, therefore, makes it pertinent for local entrepreneurs to upgrade their academic qualifications and professional experience which consequently boost their management capabilities to compete favourably in the industry.

Creating linkages in the Oil and Gas Sector through development of local capacity to participate in the oil sector activities has been found to be a concrete solution to the problem of low technological capacity. The presence of effective linkages is necessary for a balanced growth of an economy, thus it is important that linkages exist between sectors so as to promote an all-round growth and development of an economy (Oyejide & Adewuyi, 2011). Heum *et al.* (2003) carried out in the Nigerian Oil and Gas Industry revealed that local capabilities in terms of technological capability and employment potential exist in some areas with beneficial Linkages. These areas include Fabrication and Construction, Well construction and completion, Modification, maintenance and operations, Transportation, Control system and ICT, Transportation, Control system and ICT, Design and engineering, and Consultancy.

Heum *et al.* (2003) articulated that besides the unconducive service business environment working against the indigenous oil servicing firms, most of them are managed by 'non-technical entrepreneurs'. Ihua (2010) corroborated the findings of Heum *et al*. (2003) that the oil sector in Nigeria lacks adequate locally trained experts and skilled manpower, considering the amount of technical expertise required in the industry. Findings from their study revealed that the technical capabilities of the local oil firms, in terms of the collaboration between the local oil companies and the oil industry as well as the rest of the sectors of the Nigerian economy have actually enhanced the credibility of indigenous oil servicing firms in delivering quality service and products, and boosted their abilities in winning projects, bids and contracts. These were confirmed by about 50 per cent of the firms.

CONCLUSION

The ultimate goal of the Local Content Policy is to promote the technological capacity building of local oil firms through effective linkages with the oil sector as well as the rest of the Nigerian economy. There is no gainsaying that linkages are fundamental tools in the development of the oil and gas industry especially where the required capital and indigenous technical capacity are relatively in short supply (Monday & Agorzie, 2014). The Federal Government of Nigeria introduced the Oil and Gas Local Content Policy in the year 2000 (Ozim, 2010; Ihua, 2010). In early 2010, an enabling legislation on the policy was signed with a view to strengthening the technological capacity of indigenous firms in the oil and gas industry. This ensures that Nigerian capable companies must be given first consideration in the award of oil contracts available in the Nigerian Oil and Gas Industry, and create linkages to drive technological capacity building of indigenous oil firms. The existence of effective linkages between sectors is indispensable for building the technological capacity of indigenous oil firms, and promotes an all-round growth and development of an economy.

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