

**AN ASSESSMENT OF THE EFFECTIVENESS OF LOCAL CONTENT IN GHANA'S
OIL AND GAS INDUSTRY: A CASE STUDY OF RIGWORLD INTERNATIONAL
SERVICES LTD.**

By
KNUST

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DECLARATION

I hereby declare that the submission of this compilation is the true findings of my own researched work presented towards an award of a second degree in Masters in Business Administration and that, to the best of my knowledge, it contains no material previously published by another person nor submitted to any other University or institution for the award of degree except where due acknowledgement has been made in text. However, references from the work of others have been clearly stated.

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ABSTRACT

The discovery of any natural resource in every country often times comes with great exhilaration and a sense of anticipated positive impact because of the expected opportunities that are normally associated with the exploitation of these resources. The study seeks to assess the effectiveness of Ghana's local content policies in Ghana's oil and gas industry. Since the researcher seeks to delve deeper into the topic, both quantitative and qualitative methods were employed for this study. The total sample size for the study involves 80 respondents from IOCs and staff of Rigworld International Services Ltd. The sampling technique used for this study was purposive sampling with selected respondents from IOCs, civil societies and staff of Rigworld International Services Ltd. The study found out that, majority of the respondents stated that local content legislation is in line with its intended goals and objectives. Concerning the practicality of the goals and objectives of the LC legislation, most of the respondents indicated the impracticality of the goals and objectives of the LC legislation. The study further revealed that there are a number of barriers impeding the activities of indigenous companies in the industry, these include- inadequate financing, lack of requisite human capital, lack of technological know-how. In addition, majority of the respondents held the view that the implementation of LC policies have inured to the benefit of indigenous companies, to the extent that one of the indigenous companies has had its management systems certified by International Standards Organization (ISO). The study recommended that the government through the ministries of Trade and Industry and Petroleum should help universities and polytechnics establish training courses in line with the oil and gas industry. Secondly, the study recommends the revision of the LC policies to help address the impracticality and the abuse perpetrated by some OICs. Lastly, there is a recommendation for government to set up Venture Capital Fund

to assist indigenous companies finance their capital intensive projects and expand their operations.

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DEDICATION

This thesis is dedicated to my beloved wife Selina Busia Arthur for her immense support and encouragement, daughter Svitlana Esi Fretsewa Arthur and my family.

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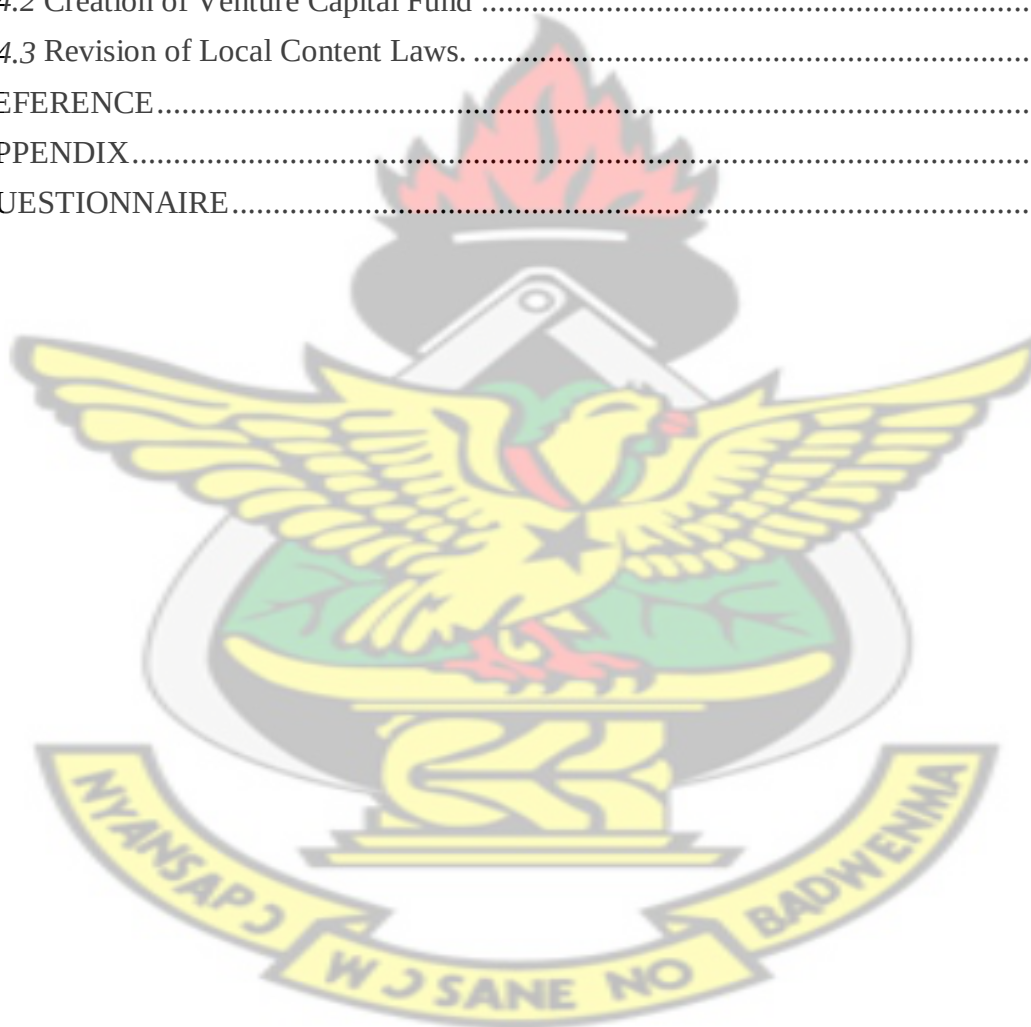
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CHAPTER ONE

INTRODUCTION

1.0 Background of the study

The discovery of any natural resource in every nation constantly generates great exhilaration and a notion of anticipated positive impact due to the expected opportunities that is normally associated with these resources exploitation (Armah and Torku, 2014). In countries where there exist inadequate resources and technical knowledge and skills, foreign expertise is required to exploit these resources. Ghanaians and the world in general have seen evidence of the poor standards of living among citizens of nations such as Nigeria and Angola despite their oil production (Armah and Torku, 2014). This phenomenon, referred to as the resource curse, is clearly discussed in relation to numerous researches that have showed that nations with abundant natural resources are likely to develop more slowly than other countries with fewer resources as a result of many factors (Sachs and Warner, 1997).

There were many expectations held by citizens in one way or the other, everyone anticipated to feel the benefits of this oil discovery reflected in their own life. One significant view held by majority of Ghanaians after the discovery was the decrease in petroleum prices and related products and infrastructure development in the different aspects of the economy by the anticipated oil revenue or proceeds. There was increasing believe that when the nation starts oil production, importation of it will be less, which would result in sharp fall in the costs to the people and enhance quality of life (Clottey, 2007). Secondly, Ghanaians wanted to see major economic opportunities in relation to the oil discovery which would affect their standard of living through employment and related development. Evidence to this view was the rapid overnight

establishment of several schools and courses, offering certificates in oil and gas management and other related fields (Tordo et al., 2013).

The oil and gas industry is a recent emerging sector in Ghana. Ghana until recently was not seen as an oil producing country until 2010 when the nation began producing oil in commercial quantities. In 2011, Ghana's economic structure changed in an impressive manner as a result of the commercial production of oil, there is evidence to show significant growth from 5.6% in 2010 to 36.2% at the end of 2011 in the industrial sector (Abdulai, 2013). The Minister of Finance and Economic Planning in the same year in his 2012 budget statement announced that, the three oil lifts in the past is estimated at 2,980,720 barrels which was worth \$337.3m or Ghc506m. From that amount, \$122m was transferred to the Consolidation account and \$54.8m was channeled into the Stabilization account, and \$14.4m was also transferred into the Heritage fund. The oil and gas sector in 2012 contributed 8.0% to the Gross Domestic Product (GDP) of the country (Ghana Statistical Service, 2013). It must be stated however that, oil production amid the 2nd quarter period of 2012 fell short of the projected output. Since the production of oil in commercial quantities began in the Jubilee Field, Ghana has produced more than 37m barrels of oil (Abdulai, 2013).

Policymakers jumble to glean the maximum benefits for the country from this exhaustible oil and gas resources by setting out suitable strategies and policies to guarantee that the citizens also benefit from this discovery (Tordo et al., 2013). Civil society groups and organizations in Ghana started mounting pressure on the government to establish a legal and regulatory system to safeguard the interests of the country and its citizens and publish in full all information about the

agreements between the foreign companies exploring the oil and the nation (Gyimah-Boadi and Prempeh, 2012).

In stressing the need for a policy in this new industry, a speech delivered by Nana Owusu-Afari as the President of AGI on the theme "promoting local content development" at a forum in December 2011 posited that, "the involvement of Ghanaian businesses along the value chain is essential and critical if Ghana is to benefit fully from the oil resource. He also asserted that, income from royalties and taxes alone cannot meet the developmental needs of Ghana. He emphasized that the AGI believes that the development of local content across all sectors of the Ghanaian economy is crucial if Ghana is to sustain the economic gains it has made in the past years and as well achieve upper middle income level for the industrial development. He also remarked that the AGI is willing to partner with mining companies and other energy companies in their pursuit to develop their own local content and also to support implement their initiatives" (Ghanaweb business news, 2011).

Some of the plans of action include the passing of a Petroleum Law (Petroleum Commission Act, 2011) that govern how oil sales or revenues are split between the Government and International Oil Companies (IOCs). This policy is akin to a Revenue Management Bill which specifies how Governments use the oil and gas revenues. However, it did not take much time for Ghanaians and the government to envision that the oil and gas sector is a very intensive venture in terms of capital, which could not provide employment for majority of citizens as anticipated. Hence, in response to guarantee that the resource curse is obviated, maximized and direct the benefits of this oil resource to other aspects of the economy and guarantee that citizens benefits

from the oil production resulted in the passage of a "Local Content Policy (LCP)" or "Local Content Development Policy" (also referred to as the "Content Requirements) (Ado, 2013).

International Petroleum Industry Environment Conservation Association- IPIECA (2011) define Local Content in the oil and gas sector as the "added value brought to a host country through the activities of the oil and gas industry". To enforce Ghana's policy and give it more acceptances, a legislative Instrument (LI 2204) has been passed into law by the Parliament of Ghana, which seeks to promote the maximization of value-addition and job creation through the use of local expertise, goods and services, business and financing in the petroleum industry. With the intent to gradually increase local control and glean long term benefits of the oil resource. This legislation also involves other regulations that spell out the rules and procedures to follow in the implementation of programmes to comply with the law. The policy aforementioned generally seeks to also provide benefits for the economy of host nations beyond the direct support to the sector but through operations that connect to other aspects of the economy (Tordo et al., 2013). So as to consolidate the purpose of improving local participation in the local content legislative law since its introduction by Ghana's Parliament in 2013, this study seeks to assess the effectiveness of Ghana's local content policies in the development of indigenous firms in the oil and gas industry using Rigworld International Services Ltd. as a case study.

1.1 Problem Statement

Several researchers and experts in policies have long opined that the very fact that a policy is formulated or there are regulations to give it support does not lead to the effective application of that policy and the benefits there of do not inure to the parties concerned (Smith, 1973; Love, 2004; Mehlum, Moene & Torvik, 2006; Jorgensen and Sharman, 2010). Love (2004) opines that

during programme assessments, the outcomes frequently demonstrate that the policies and programmes do not directly attain their intended results as expected. This is predominant as a result of the evident that views that might be perceived as good on paper may fail in practical application or may be as a result of either not used the way they are intended to be used or not used at all (Love, 2004).

After just recent discovery of oil, Ghana may be on the brink of joining the paths of fellow African counterparts such as Equatorial Guinea, Nigeria and Angola in relation to the phenomenon of resource curse if frantic efforts are not taken to guarantee that the gains from the resource does not trickle down to the citizens and drive economic development as expected. A report by Iimi (2006) indicated that poverty rates in oil-rich African countries have generally declined in a slower pace than those in countries without it. The report noted that countries like Angola, Congo-Brazzaville and Gabon have all witnessed an increase in the number of people living in absolute poverty.

As per Smith (1973), government policymakers frequently seek to develop broad policies which lack capacity for implementation. History does not support Ghana's implementation record as Petroleum Law (PNDC Law 84) have some local content Provisions for the oil and gas sector which have not been implemented. This creates a situation to wonder about if these local content policies could assist increase the benefits of oil production to the local population and development of indigenous organizations? Without any doubt, if the Local Content Policy (LCP) is to assist in this regard, it has to be implemented appropriately in order for it to be effective. Therefore, the researcher seeks to evaluate the contribution of local content policies in developing indigenous organizations in the country.

1.2 Research Objectives

The study seeks to assess the effectiveness of Ghana's local content policies in the development of indigenous firms in Ghana's oil and gas industry. The study also aims to achieve the following specific objectives:

- a. To evaluate the alignment of the local content policies with the intended goals and objectives.
- b. To determine the practicality of the goals and objectives of the local content policies for local firms and the country.
- c. To identify the barriers to entry for the local firm to participate in the oil and gas industry.
- d. To investigate how beneficial local content policies will be to the development of domestic firms in Ghana.
- e. To recommend ways for boosting the benefits of local content policies for local firms in Ghana.

1.3 Research Questions

The study intends to address the following questions;

- a. Does any alignment exist between local content policies and its intended goals and objectives?
- b. What is the practicality of the goals and objectives of the local content policies for local firms and the country?
- c. What are the prominent barriers that are confining local firms from entering this sector?
- d. What are the benefits of the local content policies in contributing to the development of local firms in Ghana?

- e. What are the ways for boosting the benefits of local content policies for local firms in Ghana?

1.4 Significance of the Study

This study will be of tremendous importance to stakeholders, as well as contribute to already existing literature in the field of oil and gas. This study will bring to light various issues which need to be addressed by international oil companies (IOCs) in order to partner local industries. The findings of the study will help various policymakers to know if the policies are been implemented as intended to fulfill the goals and objectives. The outcome of the study will also assist Association of Ghana Industries (AGI) members to best position themselves to partner IOCs to improve local participation. The findings of the study will also help the Government of Ghana and its agents such as the Ministry of Trade and Industries, Ministry of Energy, Ghana National Petroleum Company (GNPC) and Ghana Energy Commission to monitor if the regulations set in the LC legislation are being implemented by the IOCs and whether new strategies should be introduced to increase local content. Lastly, the findings of the study will assist civil societies and organizations to measure the impact in relation to local business development so far since its implementation. The ordinary Ghanaian will also benefit from this study will create awareness of this LC law to them and thus, will serve as a secondary data to other researchers who wish to undertake further research in this sector.

1.5 Scope of the Study

The primary data for this study were restricted to only respondents in Ghana. The study was limited to staff of Rigworld International Services Ltd, civil societies and International oil Companies (IOCs) in the upstream sector of the Oil and gas industry in Ghana and companies

which receive the services of Rigworld International Services Ltd. The study was also restricted to management members as well as the frontline operational managers in the various departments who provide these services to the IOCs.

1.6 limitations of the study

Time and financial constraints will not permit the researcher to visit several companies in the Oil region in order to conduct a comparative analysis. The researcher also envisages the collection of reasonable data since the industry is new in the country as compared to other countries such as Nigeria where voluminous data can be gathered because of the long standing of the industry.

1.7 Research Methodology

Qualitative and quantitative approaches were adopted for this study as well as descriptive purpose of research. Case study strategy was employed for the study. The population included all staff of Rigworld international Services Ltd, IOCs receiving services from Rigworld international services Ltd. as well as civil societies with interest in oil and gas industry. The sampling technique used for this study was purposive sampling with selected respondents from IOCs, civil societies with interest in oil and gas industry and staff of RigWorld international Services Ltd. Primary and secondary data were utilized for the study. Questionnaire and interview was the research instrument employed to collect primary data. Primary data collected were analyzed using Statistical Package for Social Sciences (SPSS) for quantitative data and content analysis for qualitative data. Primary data were presented and interpreted using statistical tools such as frequencies, tables, charts and graphs.

1.8 Organization of the Study

The study is structured into five chapters. Chapter One captures the introductory part of the study which outlines issues such as background of the study, problem statement, research objectives and questions, significance of the study, scope of the study, limitations and research methodology. Chapter Two also reviews relevant and related literature about the topic of study. Chapter Three deals with the methodology of the study which highlights issues such as research design, population, sampling technique, sample size, data procedures and analysis. Chapter Four presents analysis and discusses the data collected in relation to the research objective. Chapter Five outlines the summary of findings and concludes the study with a myriad of recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter seeks to review relevant related literature on the topic in relation to the objectives of the study in an attempt to look for gaps in previous studies in Ghana and around the globe.

2.2 History of Ghana's Oil and Gas industry

Several successive governments have made efforts to explore oil in the country until 2007 when a major headway was attained. The production of oil in commercial quantities was commissioned on 15th December, 2010 by the late President Atta Mills and has since contributed immensely to the economy of the country. The production of oil started with 85,000 barrels in a day in the Jubilee field which is located off the coast of Ghana operated by Tullow Ghana Limited, being one of the partners in the jubilee field. Tullow Ghana Limited, EO group and Kosmos Energy are the three (3) main partners in the jubilee field (Kastning, 2011). In their quest to find more oil resource, Tullow Ghana Limited and its partners discovered three other fields during the second half of 2012 and hence, came out with a development plan which was submitted to the government for approval. These new fields discovered include Tweneboa, Enyena and Ntomme which is popularly regarded as 'TEN' (BP Statistical Review, 2013).

The FPSO has the capacity of processing 120,000 barrels of oil and furthermore, it also injects more than 230,000 barrels of water and 160m cubic feet of gas daily. Currently, production accounts for 105,000 barrels per day since the discovery of several wells offshore. Tullow Ghana Limited in 2011 acquired the stake of the EO Group Limited for \$305m which increased its shares in the Cape Three Points by 3.5% to 26.4% in terms of license and by 1.75% to 36.5% in

the Jubilee Field (BP Statistical Review, 2013). The Jubilee Field is a world-class oil field, considerably with approximated retrievable resources of about 1bn barrels. Several development wells exist to be drilled by different licensed companies and the Jubilee partners with some showing signs of gas reserves. Some of the licensed companies who came to settle in Ghana and acquired stakes in Ghana in activities with regards to exploration and production include Tap Oil Ghana Ltd, Vanco Ghana Ltd, Eni Exploration & Production Ltd, Saltpond Offshore Production and Hess E & P Ghana Ltd. Ghana also has a state owned refinery known as Tema Oil Refinery (TOR) which has a limited capacity to refine crude oil (Abdulai, 2013).

2.3 Definition of key Concepts

The history of Local Content Policies (LCPs) in the oil and gas industry dates back to the 1970s where it was introduced by the United Kingdom to exploit its oil resources in the North Sea (Tordo et al., 2011). Since then, LCPs have developed from concentration on increased local content in a specific industry to flowing down gains to other sectors of the economy (Tordo et al., 2011). Academic scholars and industry players have several concise explanations for local content, extensively relying upon the sector and the setting in which it is being referred (Ado, 2013; Tordo et al., 2013; Kazzazi & Nouri, 2012). Michael Warner who is a local content expert defines the concept as the "composite value contributed to the national economy from the purchase on bought-in goods and services" (Warner, 2011). Tordo et al. (2013) further defines local content as the degree to which production in the extractive industry area adds value to the other industry sectors through its activities.

According to Abdulai (2013), local content development and participation refers to the building of indigenous infrastructures and human resource base of a country in order to make its citizens partake in activities of their own. Heum et al. (2003) characterized local content company as one

with ownership and/or infrastructure with the ability to manufacture and render services in Nigeria. In their conclusion, they stated that it is more vital that local content is considered in relation to the value added in the host country; to the local materials, local staff and local facilities and services rather than ownership or location of a company executing those value-added services (Heum et al., 2003).

A definition by the Chairman for the Nigerian House of Representatives Committee on Petroleum in the upstream sector, Tam Brisibe asserts that "local content means different things to different people but the common denominator is value addition in the country" (Ogbodo, 2008; referred to Ihua et al., 2009). In spite of the different aspects expressed on how to characterize and comprehend the development of local content, every definition agree that the effective local content development must bring in some form of value addition to the host country.

2.4 Determining the Alignment of the Local Content Legislation

In formulating local content legislations, governments and policymakers are required to make sure that there exist indeed a necessity for content requirements and the strategy decided on to address the problem rectifies it adequately (Tordo et al., 2013). According to Tordo et al. (2013), countries constantly rely on formulating "ambitious" local content targets in the upstream petroleum industry, along with requirements of local preference for goods and services as a way of building national industrial capabilities. All attention and efforts seems to be channeled towards achieving local content levels with little or no regard on how to increase competitiveness, skills and capabilities of the local sector and advance sustainability.

A study by Tordo et al (2013) posited that not every key stakeholder concurs on the goals and strategies being adopted to attain local content. In terms of employment, they opined that it would be more crucial for a nation to set goals and objectives to attain 100,000 jobs in the oil and gas

sector with 50% local content than to aim to attain 100% local content when there are just 50,000 jobs. In other words, the concentration should be on generating the largest number of jobs for locals rather than on percentages. They concluded that the best way of measurement would be the measurement of absolute values rather than measurement in percentages.

Another scholar sharing his thoughts on local content policy laws also revealed that the regulations (L.I. 2204) passed by the Parliament of Ghana do not apply to foreign firms already in the industry. This is as a result of assertion that Petroleum Agreements which has been signed earlier on for a period of 20years have stabilization clauses which does not apply to changes in industry regulations for the duration of their contracts. The laws of Ghana are not retroactive and hence, do not apply to prior agreements. This makes it very challenging to apply the laws on various firms which already exist. Notwithstanding this situation, majority of these firms are already exercising local content strategies with elaborated local content plans involved in their strategies (Ikediashi, 2014).

2.5 Practicality of the Local Content Legislation

Factors which intend to affect the implementation of the LC legislation are discussed below;

2.5.1 Social Context

Social factors are seen as potential elements which influence the application of local content regulation. However, several stakeholders are not in support as to the threats of unemployment and poverty having big impact on the legislation if proper and adequate monitoring is in place (Ross, 2003). Some scholars have also identified issues which are likely to arise such as the creation of indigenous firms by nationals merely or typically for the intentions of securing contracts and projects at premium prices due to the requirements in the law with regards to

preference ceiling. These companies will later pass them off to more competitive firms and rake in the difference for themselves (Tracy and Arfaa, 2011).

According to Ogiemwonyi (2001), another way is to have a firm established and having people to present themselves to foreign firms as equity partners and satisfying that requirement in the legislation. These strategies are considered ways to be adopted in order to escape poverty and unemployment. These strategies can have great impact on the purpose of the policy to inject more local content levels and influence the successful implementation (Lawal, 2006).

2.5.2 Political Factors

Some scholars support the idea that political factors have impact on local content legislation (Karl, 1997 & Ross, 2003). A study by Ariweriokuma (2009) revealed that the threats of political factors affect the implementation of local content legislation but is considered as been moderate by the majority of respondents. The findings suggest that political factors such as change of government were seen as exerting little impact on the implementation of legislations due to the democratic credentials of Nigeria for some time now and also, the evident that the body responsible for implementation which is independent from the federal Government. However, majority of stakeholders expressed several arguments with regards to the ostensibly excessive unrestricted powers possessed by Ministers to waiver local content requirements in any case. He asserted that this case breeds the grounds for corruption which efforts are being made to avert. Warner (2011) identifies one major political factor which also affects the local content legislations in host countries. The World Trade Organization's agreements in relation to Trade Related Investment Measures (TRIMs) and the General Agreements on Trade in Services (GATS) restrict member nations from implementing local content legislations because these are considered to be anti-trade and discriminatory to free trade. Nonetheless, there are some

exceptions for less developed countries as well as transitioning nations (Ado, 2013). Since Ghana is a middle income developing country, the agreements being TRIMs and GATS apply to Ghana (Suleman, 2012). However, the Parliament of Ghana were adamant and still went ahead to pass the legislation. He is of the view that this is a threat to the institution of the local content legislation since a company may not comply with this legislation citing the excuse that Ghana is violating these agreements (Suleman, 2012).

2.5.3 Economic factors

The present economic setting of the nation and the oil and gas sector is one that is not very encouraging for local industries that are anticipated to be at the receiving end of the local legislation, and this might impact the legislation's effectiveness. A study conducted by Ado (2013) posited that, economic factors which include lack of capital, lack of capabilities, and competitiveness of domestic companies, technical know-how and market size of Ghana were seen as the factors that could likely hinder the implementation in relation to effectiveness of the local content legislation.

Warner (2011) opines that the market size in a country implementing local content legislation is a very crucial variable. With regards to how aggressive and ambitious the objective of the requirements, this variable decides if it is profitable for a foreign firm to remain in a market or appealing enough for an oversea firm to enter the market. Many authors opine that the market size of Ghana is just a fraction compared to other markets in Angola and Nigeria. The requirements of this legislation if implemented to the latter establish an obligation for foreign firms to integrate different levels of just locally manufactured goods and services. Failure to follow the requirements results in fines and in certain situations, imprisonment for offending

firms, as per the legislation. For a firm supplying engines and other equipment to power the oil rigs and drilling wells, this points to the fact that they have to produce these machines in Ghana. In relation to a multinational firm that manufactures this equipment in just two places in the world, it will not be prudent in terms of business sense to establish a factory in Ghana to only manufacture these due to the comparable market size. After a cost-benefit analysis, the firm may conclude to find business in a more convenient and appealing market. With the Jubilee Field presently being the only actively producing field, Ghana does not possess the market size to enforce requirements as specified in the LI 2204. With regards to the market size, foreign investors do not really prefer local content requirements as this might lead to interruption in their investments and returns (Ado, 2013). This may affect the quality of investors and firms coming to Ghana.

As per Warner (2011), the golden thread of procurement is the "Competitiveness Principle Award", and this principle states that "give preference to indigenous contractors and locally produced materials and equipment so long as their performance, quality and time of delivery are competitive with international performance and prices". Non-competitiveness of domestic firms places a premium on domestic products and services, inducing consumers to acquire more competitive goods (Grossman, 1981 as cited in Veloso, 2006).

Tordo et al (2013) posited that there exist realistic problems and hindrances to active SME participation and competition in the sector, despite the existence of the local content requirement. The oil and gas sector is a very capital intensive venture and the absence of available funds is a principal threat to entry for local firms. For those companies who are able to overcome this challenge and enter, they are often confronted with other problems which threaten their ability to perform viably in technical operations.

Furthermore, the nature of the sector needs highly skilled personnel to perform majority of the jobs and the reality is that the majority of local firms do not possess the technical know-how and capacity to perform these tasks. Even if local companies are given the opportunity, they are unable to constantly fund the advanced technology with regards to equipment needed to stay in the sector (Tordo et al., 2013). When a local firm is given the opportunity after breaking the barriers to enter, they may soon notice that there is not enough local talent equipped to make these advanced technologies function. This portrays a picture that at a point in the oil and gas value chain, foreign expertise are sought due to the fact that there exist not enough local expertise with the technical know-how to compete in the sector (Veloso, 2006).

2.5.4 Leadership for Implementation

Strong leadership and commitment is vital to the success of the implementation of Ghana's legislation (Ado, 2013). The policy and legislation were developed by the Ministry of Energy and passed on to the Petroleum Commission for implementation. As pointed out by Nakamura and Smallwood (1980) and Stover and Johnson (1999), this is a norm rather than exception and it is typically done to aid decentralization.

To support implementation, the Petroleum Commission is collaborating with the Ghana Immigration Service, with the duty of issuing work permits to foreign nationals and foreign firms to guarantee that firms comply with the legislation such as having 5% local equity at commencement. For individuals, the Commission is consulted to guarantee that the skills for which they are being employed cannot be satisfied by a citizen. The potential shortfall in this strategy, however, is that unsuccessful implementation could lead to IOC's maintaining highly-skilled labour out of Ghana, as modern technology does not constantly need physical presence of employees who are specialist (Abdulai, 2013).

The Petroleum Commission also work closely with the Ghana Revenue Authority (GRA) to guarantee that firms pay the right taxes and further with the Registrar Generals Department to make sure that firms are credible. There are further collaborations with tertiary institutions to streamline careers to fill the gaps in the educational system. As per the legislation, local content strategies are anticipated to be submitted to the Petroleum Commission before engagement in every petroleum activity for approval. Long term local content strategies are further anticipated to be submitted and reviewed annually to incorporate planned activities to monitor local content levels. As per the commission, monitoring and evaluation will be performed on a case by case premise, so the same indicators are not adapted to measure firms with different capabilities (Larbi, 2013).

According to Oladele (2001), effective implementation also needs planning and the efficient mobilization of resources. To undertake a successful implementation, the Petroleum Commission requires to be furnished with resources to undertake its activities (Adebola, 2006). In order to track the operations of firms, new software and monitoring plans are needed. Ghana's software for monitoring local content is still in the development stage, despite the implementation of the legislation in full force. The software is designed using a common qualification system to guarantee transparency. A web portal is also being designed to permit Ghanaians to upload their curriculum vitae for jobs. This will help develop a database of local skills available for employment and the transfer of technical know-how (Tordo et al., 2013; Esho, 2006). The Petroleum Commission is resolved to guarantee that the local content legislation is undertaken and have established diverse strategies to facilitate implementation (Ado, 2013).

2.5.5 Stakeholder Involvement

The efficient implementation of a policy further relies on how well various stakeholders work together in ensuring this. This is crucial because various stakeholders express and contribute their views, skills and resources that facilitate successful implementation (Okolo, 2006; Acton, 2013). Stakeholder's support or opposition in the formulation and implementation of a policy could tremendously hinder or aid implementation. The principal stakeholders in the industry include IOCs, Civil Society Organizations (CSOs), SMEs, AGI, Government, community, etc. in relation to the legislation (Ado, 2013).

International Oil Companies- IOC's through the E&P forum, which is a shared forum of upstream IOCs conveyed their dissatisfaction at what seemed to be the absence of dialogue between IOCs and the government in developing the policy and eventually passing it into law. Members of the E&P forum after reading through the draft copy of the regulations were obliged to submit response to the Energy Ministry, which was conform to. Some of the issues brought out include the required targets, period of compliance, mandatory local equity and the punishment such as imprisonment for violations and suggested alternatives (E&P Forum, 2013). They also posited that aspects of the regulations will make it difficult for the country to attract the much-required foreign capital, expertise and technology to develop the industry (Larbi, 2013).

However, CSO's who have being advocating for such legislation to protect the nation's oil and gas resources, firmly support the legislation. From a news article contacted on the Civil Society Platform on Oil and Gas (CSPOG), the group has a general distrust in relation to the issues raised by the IOCs at the E&P forum (Larbi, 2013). The CSOs is of the view that the IOCs intend to adulterate the content of the bill in a manner that would deny the local citizens opportunities (Larbi, 2013). SMEs are happy about the opportunities available in the industry currently due to

the passage of the legislation; however, they are also concerned about the absence of capacity to undertake projects regardless of the legislation (Tordo et al., 2013). Larbi (2013) posited that if the effective implementation of this legislation is desired to function well, both sides will be requiring to sit down at a point and have fruitful dialogue on the way forward. The legislation cannot be instituted in vacuum without support from stakeholders (Acton, 2013).

2.6 Barriers to Entry

There are several factors that are regarded as stumbling blocks which limits local companies to participate in the oil and gas sector and these impediments include;

- **Dominance of foreign suppliers**

MacPepple (2002) opines that the capacity of local companies remains enormously underutilized as the sector is presently controlled by international companies or suppliers handling activities which could commonly be undertaken by local firms or SMEs (Tordo et al., 2013; Jankowicz, 2005). Mr. Sapark in a news article posits that though majority of the IOCs for instance are in support of local content, the reality is that they favor to work with their global suppliers for a range of reasons and are unwilling to breach such supplier relationships (New Crusading guide, 2014).

- **Information Gaps**

Mr. Sapark further stated that "information gap" (lack of awareness of contract opportunity and company requirements) is a major issue and concluded that the lack of information is a two-way challenge (New Crusading guide, 2014). Firstly, IOCs in need of local suppliers stated that there is difficulty in identifying and evaluating the suitability of local suppliers as majority of them have comparatively short track of record or reputation (Ihua, 2009 & 2010). Likewise, local firms too are faced by information deficit or what can best be termed as 'information block' particularly

related to 'WHERE' and 'HOW' to obtain information relating to tendering opportunities (Organization for Economic Co-operation and Development (OECD), 2000). Mr. Sapark also noted that where information is given about forthcoming opportunity or project, possibilities are that such often arrives too late to the local SMEs leading to inadequate lead time to prepare and submit a tender (New Crusading guide, 2014). Tordo et al. (2013) cited the difficulty of local suppliers in identifying the entry points to the oil and gas value chain. They posited that the problem here for the local suppliers is 'WHERE TO BEGIN' from and 'WHO TO DEAL WITH'; whether to approach the IOCs in a straightforward way or to become a supplier to the foreign suppliers (Aneke, 2002).

- **Capacity Gaps**

A study conducted by Olurunfemi (2001) in Nigeria's oil and gas industry in relation to local content concerns identified another challenge which is termed the "Capacity Gap" which is in relation to the challenges of local SMEs in sourcing for highly skilled human capital and the essential institutional, financial as well as technical capacity needed to perform technical activities as necessitated by the oil and gas industry. He further stated that majority of local companies possess the fear of investing in staff training because of their high turnover rate. He concluded that more frequently the gap between the local capacity and the IOCs is too wide. A paper by ISODEC on local content implementation indicates that participation in the exploitation of a nation's resources can take the composition of equity holding or joint venture activities where the country lacks the technology, capital and skills to successfully manage the exploitation of the resources; or strong local content provisions in law, which authorize value addition through semi-processing or processing of the resource; increased use of local human resources in the exploitation of the resources; local procurement of goods and services needed by the industry (New Crusading Guide, 2014).

- **Standards and Requirements from International Agencies**

Every industry has its own standards and the oil and gas industry is no exception (Ado, 2013). A qualitative study undertaken by Ihua (2005) in Nigeria revealed that standard with regards to activities in the oil and gas sector is very crucial. He indicated that the main challenge to the principal oil firms are strict standards and requirements such as Environment, Health and Safety (EHS), business ethics and compliance which involves anti-bribery and quality standards as well as insurance requirements. He further discovered that oil firms are often unwilling to source from local suppliers that fell short of international certifications which include ISO, API or ASME regardless of what such local firm is bringing on board. He opined that local content development perform better if local firms are internationally competitive and the local content ambition of oil producing countries is useless unless there are capable local companies to facilitate it. He therefore concluded that it is up to those countries' Standards Authority and players in the oil and gas industry to develop standards and structure for training locals for the industry.

In agreement to the challenges outlined above, Amanze-Nwachukwu (2007) also discovered other inhibiting factors which include lack of standardization. This is been used as the main excuse to deprive many locals from participating in the nation's growing and flourishing oil and gas industry since its inception. Day (2000) contends that instead of portraying this relevant issue as an impediment to deny locals the opportunity to be included in the oil and gas industry, stakeholders should rather be searching for feasible ways of empowering the locals to get over this inadequacy.

- **Lack of Skills, communication and Language Barrier**

According to Ikediashi (2014) in a quantitative survey research paper, ancillary barriers which include communication issue, language barrier etc. improves major issue for the companies operating in Nigeria in oil and gas sector. He further indicated that there is an astronomical

demand for energy but because of lack of experienced candidates, local firms are unable to satisfy them. Koleoso et al. (2012) profess that the standard of education in West African Sub-region is too poor to offer skilled labour to the domestic firms. Deficiency in the domestic education and training system is a main barrier for the local participation. This generates into less skilled labour, hence, demand of oil and gas sector is fulfilled through import of human capital.

Other Barriers

There is a school of thought which has identified corruption as another barrier to entry. This is a critical barrier for local companies for entrance in the sector as corruption does not support any economic growth and it reduces the confidence the public and private institutions have. Nigeria has a legacy of widespread corruption and lack of transparency (Arthur, 2011). A research paper by Watson (1996) and Wennekens & Thurik (1999) has discovered and summarized other barriers to entry which include;

- The ever increasing demand for highly skilled workers
- Lack of funds to attend oil and gas training seminars,
- Lack of oil and gas trainers and consultants,
- High registration fees for workshops and courses in the sector,
- Ageing workforce,
- Environmental policy, etc.

2.7 Benefits to domestic firms in Ghana.

Petroleum (Local Content and Local Participation) Regulation in Ghana is enacted to create jobs and promote the use of local firms, goods, services, and financing in the oil industry. Under this new law, domestic companies would be the first option in bids for petroleum licenses. There will

also be a minimum of 5% equity stake for domestic firms in all oil contracts awarded to a multinational investor. By establishing local adjunct industries, the regulation as well seeks to encourage the international competitiveness of local companies. The government believe the law can help attain at least 90% of local participation in the oil industry by 2020 (The New Crusading Guide, 2014).

The Petroleum (LC & LP) Regulations, 2013 (L.I. 2204) passed by Parliament of Ghana on November 20, 2013, has been given wide support from the various International Oil Companies (IOCs) and domestic industries as representing not the best opportunity of guaranteeing increasing Ghanaian participation in the oil and gas industry but also introducing perhaps more significantly, the nation's best hope of successfully integrating the industry into the rest of the national economy. Among other objectives, the Legislative Instrument (L.I. 2204) aims to achieve the following;

- i. "Advance the maximization of value-addition and employment creation through the use of expertise, goods and services, business and financing in the petroleum sector value chain and their retention in the nation;
- ii. Build local capacities in the petroleum industry value chain through education, skills transfer and expertise development, transfer of technology and know-how and active research and development programmes;
- iii. Attain the minimum local employment level and in-country spend for the provision of the goods and services in the petroleum industry value chain;
- iv. Maximize the capability and international competitiveness of local businesses; and
- v. Achieve and accomplish a degree of control for Ghanaians over development initiatives for local stakeholders, etc" (General Provisions, Regulation 1(a-h).

To make these Regulations (L.I. 2204) feasible, the Government established the Enterprise Development Centre (EDC) in May 2013. The EDC is a 5 year programme jointly sponsored by the Jubilee Partners and is being supervised by the Ministry of Trade & Industry and Ministry of Energy & Petroleum. The EDC supports SMEs in Ghana to empower SMEs in order to position them, so they can have the business avenues in the oil and gas industry (New Crusading Guide, 2014).

According to Mr. Sapark in an a publication stated that, the EDC provides various degrees of services which include capacity building programmes, business training, access to market and information as well as advisory services. He further stated that the EDC also assumes the role as being the focal point for coordination between local SMEs and the oil and gas companies, their sub-contractors and contractors. The EDC posits that in the Ghanaian setting, the concept "Local Content" (LC) as specified by the Petroleum (LC & LP) Regulations, 2013 (L.I. 2204) is "the percentage or quantity of locally produced financing, personnel, materials, goods and services offered in the petroleum industry value chain and which can be measured in monetary terms". Mr. Sapark of EDC states that while acknowledging that local content policies are not important as a fast fix or way to attaining benefits in the short run, he argued that it needs planning, resources, coordination and perseverance to arrive at enhancements which are frequently reaped in the long run (New Crusading Guide, 2014).

The EDC document also states that avenues originate from long term activities centered on supporting to improve locals' staffs and businesses. the EDC document also summarizes the general objectives of the Local Content legislation as creating employment avenues for citizens; training and development of citizens' capacity building of local expertise; increased engagement and participation of locals; reduction in expatriate employees operating in the oil and gas firms; and finally, the adoption of domestic raw materials, goods and services. However, the document

also outlined specific gaps within the oil market in Ghana currently which needs consideration and exploitation with regards to small businesses. These gaps include waste management, fuel and lubricants, lifting and rigging equipment, legal and I.T. services, freight services, hospital insurance and health services, manpower supply, suppliers of office equipment, consultancy and banking services, supply vessels, rental of cranes/lifting equipment, rigid spools and jumpers (EDC, 2013).

In conclusion, despite the inbound avenues, indigenous organizations have the chance to benefit enormously when they effectively integrate into the value chain of the oil and gas industry. Some of the benefits which the local businesses stand to reap include acceleration of knowledge transfer and upgrading of technology; upgrade and increase competitiveness; increased employment and wealth creation; development of skills, standards and capacity; availability of current local and /or overseas markets and opportunities to innovate.

2.6.1 Strategies for boosting the benefits of Local Content Policies for local firms

Policymakers approach local content policies adopting various strategies or a blend of strategies to advance local content development (Tordo et al., 2011). Among the directions local content policies take involve formulating regulations for procurement procedures and processes, creating fiscal incentives, and investing in business-friendly infrastructures (Warner, 2011; Wells & Hawkins, 2008). Local content policies can further concentrate on investing in a host country's human capital by formulating regulations for personnel recruitment and training and focusing on the social investment and domestic supplier development programmes (Warner, 2011).

Governments can also make a decision to concentrate their local content policies on setting regulations to guarantee that production firms prefer the use of domestic goods and services through contractual agreements (Nwapa, 2007), protectionist measure that local firms are

preferred in relation to taxation policies (Cochran & Malone, 1999) and regulations that advance the transfer of technology from IOCs to domestic firms (Tordo et al., 2011). Host countries may further choose to allocate concessionary and licensing advantages to local companies or multinational firms with some level of local ownership (Ado, 2013). Other strategies require the mandatory integration of multinational firms and the direct intervention of government in the industry through government-owned businesses (Tordo et al., 2013).

Norway and Nigeria are among the countries that have efficiently and effectively implemented local content policies despite initial challenges they encountered. Norway have been praised in various oil and gas literatures for their successes attained in the implementation of local content strategies Norway has been recognized as the next nation subsequent to United Kingdom to officially employ a local content policy in 1972 (Ado, 2013; Tehrani, 2006). The local content policy passed in Norway was to focus on the preference of domestic goods and services to create supply industries, the transfer of knowledge and skills to improve research and development, and the establishment of a fund to use proceeds just from 1992 (Tehrani, 2006).

A report of a paper presented to Ghana in 2008 as records on Norway's merits and demerits in the local content policy states that Norway had not implemented its strategies other than the way other nations have adopted it, yet the success of Norway's local content policy approach originated from its strategy to develop local content through competencies and abilities in relation to industries that could help local businesses compete globally (Heum, 2008). He nevertheless acknowledged that the nation might have gleaned the benefits from being a developed and industrial nation before the production of oil and gas began (Ihua, 2009; Heum, 2008). The Norwegians did this by staying committed to their fundamental objective of improving local knowledge and step by step transfer of technological know-how to competitive levels (Heum, 2008).

Rather than speedily improving its resources by inducing foreign expertise like the UK had done, they preferred to grow the industry at a slower pace and gradually to ensure their service industry to grow (Tordo et al., 2011). The policy instead concentrated on how the firms will integrate local content in their operations and needed that the IOCs will establish entirely operational subsidiaries in Norway and recruit indigenes (Heum et al., 2003). The policy further did not specify a local content target but needed that domestic suppliers be chosen if they met competitive global standards (Heum et al., 2003). Among others, the operators in the industry were permitted to work with very little government interference (Heum, 2008).

Ihua et al. (2009) gave a textbook meaning of local content in Nigerian context. They defined Local Content as "the quantum composite value added or created in the Nigerian economy through the use of Nigerian human and material resources for the procurement of goods and services to the oil industry" (Ihua et al., 2009). Regardless of the evident that Nigeria found oil in 1956 and eventually started production, all efforts at implementing different local content policies that were formulated were ineffective and just paperwork (Balouga, 2012). It was just in the beginning of 2000 that the country vibrantly began searching for ways to guarantee that a local content policy was implemented (Ihua et al., 2009; Balouga, 2012; Adefulu, 2008).

The Nigerian Local Content Policy adopted in the initial part of 2005 (Adefulu, 2008) attempted to stimulate growth through product deliverability systems and comparability, capacity building, empowerment of domestic industries and sustainable capability (Ihua et al., 2011). One main policy target was to attain 45% local content by end of 2007 and 70% by the close of 2010. Nevertheless, when the Nigerian National Petroleum Corporation (NNPC) indicated in 2008 that the policy had attained some level of success by maximizing local content to between 35% and 40%, several Nigerian media rejected the claim, citing proof that local content was actually

between 15% and 20% (Ihua et al., 2011). In 2010, the government passed a new policy termed as the Nigerian Oil and Gas Development Law 2010 (Balouga, 2012). This law, modelled after the Norwegian style, attempted at smoothing concerns raised in the first model (Balouga, 2012). In this current policy, "exclusive consideration" is given to service firms which show Nigerian ownership of personnel, equipment and capacity to perform jobs. It also gives a template for assessing local content and specifies roles of the institutions responsible for the successful implementation of the Nigerian content (Balouga, 2012).

Throughout literature, countries such as Norway, Malaysia, Brazil, Trinidad and Tobago, United Kingdom etc are frequently touted as local content successes in the oil and gas sector (Kazzazi & Nouri, 2012; Ihua et al., 2009; Ado, 2013; Tordo et al., 2013; Dawe, 2007; Ovadia, 2012). There is evidence to show that the adoption of these policies and their proper implementation have benefitted these countries and assumed a role in their industrial growth as well as economic development. In conclusion, if the experiences of these countries are studied and various challenges addressed, local content strategies will be of benefit to the country and every aspect of the economy.

There exist a great divide among several researchers and economists in relation to the benefits of local content policies, with most of them taking side of the two extremes. According to Veloso (2006), the scanty empirical evidence accessible to support both aspects of the divide shows that the effects of LCPs are mixed. The major argument for passing local content regulations can be classified under three broad categories which involve increase in added value in order to rectify market flunks and externalities and also as a result of social concerns. On the other hand, as per Tordo et al. (2013) contention against LCPs can be classified into three categories, namely; the

misalignment between policy instruments and objectives; misallocation of resources and/or inefficiencies and; international regulations.

Protecting infant industries is a major argument provided by most scholars as the reason for introducing local content policies into various sectors of the industry (Ado, 2013). Scholars who support this position contend that local industries in developing nations are not mature in comparison to their multinational counterparts who have been in the industry much longer and taking advantage of economies of scale (Warner, 2011). Hence, they contend that these local companies are given some kind of shield to help them catch up and contend effectively with their international competitors (Warner, 2011). Likewise, LCPs will support them partner the multinational companies and take lessons from them, as this is evident in Norway's model (Tordo et al., 2013; Heum, 2008).

In relationship to the above is the market power theory, which provides a view that big multinational companies normally supply the oil and gas sector and likewise, possess the market power to pin local companies at a demerit in the value chain (Tordo et al., 2013). This contention is not the same as the infant industries argument in the reason that by introducing local content law, the infant company may enjoy benefits, but to control multinational market power, LC legislation are particularly passed to deal with the issue. As an example, the Australian LCP has a requirement which demonstrates that domestic suppliers are not disadvantaged (Warner, 2011). According to various researchers another main argument for adopting LCPs is the contention that they can be employed to bolster social objectives such as employment and also be adopted as social compensation for the communities where the natural resource is being extracted (Ado, 2013; Tordo et al., 2013). Some also argue that the nature of oil and gas operations in terms of extraction is prone to economic and social disasters (Arruda, 2014). This is due to the fact that individuals in the communities may transiently or permanently lose their sources of sustenance,

and as such require to be sufficiently compensated in the form of LCPs. (Tordo et al., 2013; Warner, 2011). Adopting LCPs in this nature may require firms to consider suppliers who obtain materials and labour from the local community and may further require that a proportion of local residents are offered employment (Tordo et al., 2013; Warner, 2011). In this way, LCPs can be viewed as another wing of Corporate Social Responsibility (CSR) (Ado, 2013). It can further contend that local content requirements could be employed to attain political harmony by bringing the interest of the government in line with that of the community's interests (Ado, 2013; Warner, 2011; Falola and Achberger, 2013). Ihua et al. (2011) concluded in a study that local content laws have succeeded in averting conflicts in the Niger Delta region in Nigeria.

On the other hand, various economic arguments see the adoption of LCPs as protectionist and reducing the welfare of citizens in the host countries in the long term. A pioneer of local content policy literatures in his study posit that because of lack of technological capability, the cost of goods and services which is being produced by domestic firms is mostly higher than the international price, unless the domestic firm was obtaining its materials from overseas. He further opines that the introduction of an LCP to rectify this flunk will lead to increment in local welfare due to the increase in local output. The misalignment theory against local content policies assumes that there may be various means to tackle externalities and market failures rather than enacting local content requirements (Tordo et al., 2013). Policymakers are required to initially determine if indeed there exist any externality and find out if there are other means to rectify them before employing LCPs. They argued based on the fact that if there exist externalities as a result of insufficient training of locals to work in the industry, a more effective approach will attempt to assess the educational system of that country to find out shortfalls rather than adopting policies because in the long term, locals will still remain without the required training, and the policy will be viewed as failure. They further recommend that, incentives for

training will be deemed appropriate and better in this case as alternative to LCPs (Tordo et al., 2013).

2.8 Conceptual Framework

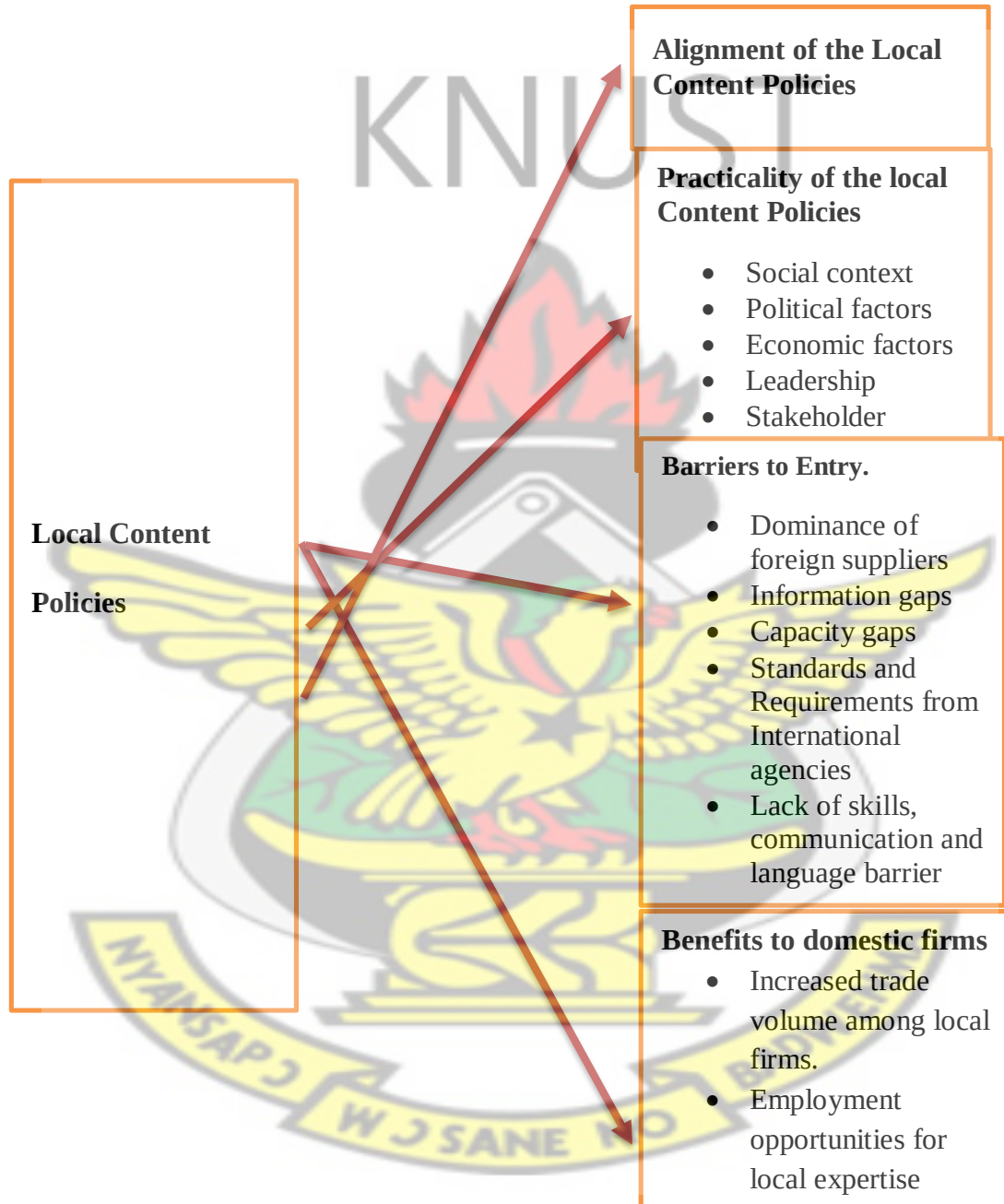


Figure 2.1. A conceptual framework for assessing the effectiveness of local content policies in the Oli and Gas Industry.

After the review of the literature on Local Content Policies, a conceptual framework was developed (as shown in Figure 2.1). The conceptual framework looks at whether the local content policies are aligned with the intended goals and desires of the stakeholders. Consequently, the framework looks at the practicality of the local content policies, in order for the policy to be practicable factors including (social context, political factors, economic factors, the issue of leadership for implementation and stakeholder involvement). MacPepple (2002) opines that capacity of local companies remain enormously underutilized as the sector is dominated by international firms. These barriers include; (information gap, dominance of foreign suppliers, capacity gap between foreign companies and local firms, standards and requirements from international agencies and lack of skills).

The framework in addition looks at the benefits that have accrued to domestic firms, these include (increase in trade volumes among domestic firms, improvement in capacity as most domestic firms have now ventured into other specialized areas of the industry such as supply of drilling equipment, fabrication of subsea infrastructure, supply of technical services).

2.9 Conclusion

The data gathered sets the tone for further information to be gathered in order to conclusively achieve the objectives set out for this research work. In conclusion literature on the impact and definition of local content arises two schools of thought. However, expects seem to agree on the fact that the use of LCPs should in one way or the other bring value addition to the country and citizenry. The benefits of the LCPs should not be for short term and should rather aim at the future generation and long term prospects of the nation.

CHAPTER THREE

METHODOLOGY AND ORGANIZATIONAL PROFILE

3.1 Introduction to Methodology

This chapter highlights the methodology adopted for this research process to achieve the objective as well as to address the research questions. Elements discussed include research design, study population, sampling procedures and sample size, data collection procedures, data analysis, and many others.

3.2 Research Design

Research design is significantly a plan for pointing out the techniques and processes used for gathering and analysing the data required (Hakim, 2012). According to Gill and Johnson (2010), a proper research design ought to address the stated questions in the study as simple as possible. Bell (2010) identifies two approaches used to undertake a research, namely; quantitative and qualitative methods. Research is said to be qualitative when data are collected in non-numerical form which includes text, images and videos (Guercini, (2014). Quantitative research alludes to the method where data is recorded numerically and analyzed statistically (Trochim, 2005; Ravindran, 2008). Since the researcher seeks to delve deeper into the topic, both quantitative and qualitative method was employed for this study.

In order to answer research questions in a right way and to achieve the objective, a research strategy is essentially required (Kuada, 2012). Based on the research method chosen, a case study strategy was adopted for the study. A Case study involves the collection of data from multiple sources and gives the researcher insights into how the phenomenon being studied is

applied in that organization. Case study was chosen because it allows the collection of uniform data from a sizeable population in an economical way, thus, leading to simple comparison (Bell, 2010). This strategy is also deemed appropriate for this study due to the nature of the oil and gas industry fragmentation into diverse areas to create an entire industry.

3.2.1 Research Purpose

There are three research purposes which involve descriptive, exploratory and explanatory (Gill and Johnson, 2010). Questions pertaining to this study are to enquire about how effectively Ghana's local content legislation in the oil and gas industry could be implemented appropriately to render the expected results in order to make the right impact. Hence, descriptive research purpose is adopted to discuss and evaluate the legislation in terms of its effectiveness. It is anticipated that knowledge acquired will intensively provide considerably understanding and plan the way the legislation is further implemented.

3.3 Study Population

Population involves all the elements such as people, events, objects, etc. which is of interest to the researcher (Bell, 2010). The population included all staff of Rigworld International Services Ltd, IOCs receiving services from Rigworld Int. Ltd as well as civil societies with specialized interest in oil and gas industry. This is due to the fact that the local content policies directly target participants or players in the upstream and mainstream level.

3.4 Sample Size and Sampling Techniques

Sampling refers to the procedure used for selecting part of the population identified. There are different types of sampling techniques classified under probability and non- probability (Palys,

2008). The sampling technique used for this study was purposive sampling with selected respondents from IOCs, civil societies and staff of RigWorld International Services Ltd. Purposive sampling is when the researcher uses his own judgement to select respondents who will best help to answer the research questions (Jewell and Hardie, 2009). This enables the researcher to identify major respondents who are into the formulation, rendering, accepting and overseeing the activity or service being assessed and who might also be affected by it otherwise. Because the sector is a closed loop one, strategic choices were used to select respondents whose activities are directly affected by the policy.

Sample refers to choosing part of the population to give their views about the research questions and this must be a true representation of the population (Bell, 2010). The location for samples gathering in terms of primary data was Ghana. The total sample size for the study involves 80 respondents from IOCs, civil societies and staff of RigWorld International Services Ltd. The table below illustrates the sample size employed.

Table 3.0 Sample size

Category	Population	Sample- basis on respondents with the required information linked to the objective.
IOC's	200	35
Civil Society	60	10
Staff of RigWorld	120	35
Total	380	80

Source: Rigworld International Services Ltd's website, (2016)

3.5 Data Collection

Data is very essential for any research. There are two types of data depending on the type and purpose of the research (Olsen, 2011). This involves both primary data and secondary data. Primary data points to the new data gathered in the study from samples chosen and secondary data relates to some aspect of data which has already been gathered by other authors which are relevant to the topic being studied (Bell, 2010). Primary data as well as secondary data was employed in conducting this research.

3.5.1. Questionnaire

Primary data were collected using questionnaires and interviews. Questionnaire was administered to collect quantitative data in order to achieve a high response rate. Most of the questions in the questionnaires were closed-ended questions with a few open-ended questions. Respondents were offered the opportunity to answer the same set of questions.

3.6 Sources of Data

There are two types of data depending on the type and purpose of the research (Olsen, 2011). This involves both primary data and secondary data. Primary data points to the new data gathered in the study from samples chosen and secondary data relates to some aspect of data which has already been gathered by other authors which are relevant to the topic being studied (Bell, 2010). Both primary and secondary data were employed for this study.

3.6.1 Primary Data

Primary data were collected using questionnaires and interviews. Questionnaires were administered to collect quantitative data in order to achieve a high response rate. Most of the

questions in the questionnaire were closed-ended questions with a few open-ended questions. Respondents were offered the opportunity to answer the same set of questions. Specifically, semi- structured interviews were adopted because it allowed flexibility to explore insights to answer the research questions. The various groups of stakeholders were required to answer different kinds of questions through an interview guide. This also allowed new ideas to be collected. The interview guide had similar themes. Sample of the questionnaire and interview guide are attached in the appendix.

3.6.2 Secondary Data

Secondary data were also consulted to give interpretations to data collected from the field. Secondary data assisted the researcher to construct well-meaning analysis of data collected. Some of the sources included books, reports, journals, articles, newspapers and publications. in hardcopy and some of them in softcopy.

3.7 Data Analysis Technique

Trochim (2005) and Singh (2006) refer to data analysis as the process employed to explain the data gathered in order to gain insights into it. There are three phases in data analysis, first, data is organized, then elaborated and classified and eventually trends and ideas are sought and conjoin (Jewell and Hardie, 2009). Statistical Package for the Social Sciences- SPSS was used to analyze the quantitative data.

3.8 Reliability and Validity

The reliability and validity of data gathered and the response attained rely to a large extent on the formulation of the questions (Saunders et al., 2009). A valid question will assist the collection

of accurate data (Polit & Beck, 2006) and one that is reliable will mean the data are collected consistently (Gills & Jackson, 2002). According to Langford (2001), the measuring instrument must be "trustworthy and dependable in providing information". Polit & Beck (2006) asserts that reliability is to "test the accuracy of a measuring instrument" while Parahoo (2006), De Vos (2006), Gills and Jackson (2002) and Brink (2000) define reliability as a "measuring instrument presenting the same results under comparable situations if repeated on the same individual or adopted by two different researchers".

In designing the measuring instrument for this research, relevant questions and options were sought for to address the phenomenon of how best local content policies can help develop domestic firms and the citizens.

3.9 Ethics

Consent from the respondents was taken before the interviews were conducted and questionnaires administered. All ethical concerns or issues specified by the KNUST Graduate School were all considered and duly followed.

3.10 Organizational Profile

The focus of the study is on Ghana's oil and gas industry. The industry consists of three sub-areas, namely; upstream, midstream and downstream activities. The upstream sector is tied to the exploration, development and production of oil and gas from the resource fields. There are three partners involved in the upstream activities in the Jubilee Field which include Kosmos Energy, EO group and Tullow Ghana Limited. Several multinational firms dealing in oil exploration and production have also settled in Ghana to acquire blocks for operations. The midstream sector refers to the activities which relate to transporting of the oil from the fields to

a refinery or a gas processing plant. Downstream operations are centered on the refinement of crude oil and the distribution of the petroleum products to consumers.

Brief History of the Organization including mission and vision

Rigworld International Services Limited is an upstream Oil and Gas service firm which was established in 2011. The company efficiently provides offshore, onshore and near shore logistics services to Exploration and Production companies as well as drilling contractors in Ghana and West Africa as a whole. Rigworld is a transitional member of Trace which denotes the firm's commitment to transparency international commercial transactions. The company can boast of experienced persons for the selected markets and this has resulted into various multinational firms turning to Rigworld to take advantage of their technical know-how and also entirely entrusting everything else they need to their highly trained technical team. Rigworld constantly intend to render a safe and efficient work setting where all staff can develop and where all activities are very challenging. Regardless of the location the company operates, the goal is to vibrantly make contributions to the community and the local environment. An integral part of their belief along their various products and services offering is to be responsible in the environment always and to constantly enhance their performance across every environmental concern wherever possible.

There are varieties of services being provided by Rigworld International Services Limited. In relation to Catering services, the company provides contract catering services, supply and management of offshore labour, laundry and groceries services. The company also has a logistics base located in Takoradi which provides yard rental services.

Staffing Situation

The company has grown from the initial 15 staff the company started with in 2011 to current staff of about 150. The managing director and his assistant constitute the management followed by 4 senior management staff. Rigworld also has 20 administrative staff to help run the clerical and office duties of the company. Majority of the staff about 120 are on the field at the various locations where they execute their respective contracts from Subsea Engineers, Floorhands, and Roustabouts to catering Staff.

Source: Rigworld International Services Ltd's website, (2016)

Main Activities

The company is into the provision of offshore and onshore labour services, consulting and executive search that assists offshore and onshore oil and gas projects and specializes in offering highly skilled local talent to support business growth and professional development. Rigworld International Services Ltd also supplies engineering goods such as equipment and spares to oil and gas drilling firms' across West Africa. Rigworld in addition to the above also provides protocol services and this service function alludes to 'meet and greet services, work and resident permits, visa services, short and long term vehicle rentals services. Well services provided by Rigworld include the sale and rental of oil and gas equipment comprising drill tool rental, tubular rental, casing and tubing services.

Furthermore the company deals in Rig consumables, Rig safety products, Rig Accessories, drill wipers, Rig lubricants and greases, Rigwash and Degreasers, pipe dopes, subsea production control fluids, blowout preventer control fluids, motion compensator tensioner fluids.

Source: Rigworld International Services Ltd's website, (2016)

Relationship between the research area and the company.

Rigworld International Services Ltd was selected for this research, owing to the role it plays as a local player in the Ghana's Oil and Gas industry. And most appropriately, the company itself was incorporated to take advantage of the then newly enacted Local Content L.I. Since then the company has been growing in leaps and bounds and was recently awarded a joint venture contract with Maersk Drilling Ltd. This won the drilling contract to develop the sankofa field belonging to ENI (Italian Oil Giant). The case study would therefore look into how the objectives set out for this research resonate with the company.

3.11 Case Selection

In view of the phenomenon under study and after the creation of the local content policy, a number of local companies were created, prominent among them is Rigworld International Services Ltd. which after its creation has grown from the initial contract to provide several services to a multi service supplier- personnel, logistics, catering and other ancillary services for the upstream OICs. Secondly, it is reported to have struck the most lucrative joint ventureship with a drilling company. Based on the above the company was selected to better assess the objectives set out for this study. The creation of this company and further growth in the Ghana's oil and gas industry was given added impetus by the Local Content Act which reserved equity stake to a wholly owned Ghanaian company, in addition to the supply of locally acquired inputs needed by the upstream companies. The Act also made provision for transfer of knowledge and skills to these local companies in order to boost their capacities to be able to participate fully in the oil and gas industry to the advantage of Ghanaians. The purpose of this research is to evaluate the effectiveness of this knowledge transfer and skills acquisition by local companies using Rigworld International Services Ltd. as a case study.

3.12. Conclusion

The afore Chapter looked at the methodology to be employed for this research work and the profile of the case study organization. Elements such as the research design, purpose, population and the sampling technique were discussed. This ushers in the Chapter 4 which looks at the data to be gathered, presentation, analysis and discussion of the findings.



CHAPTER FOUR

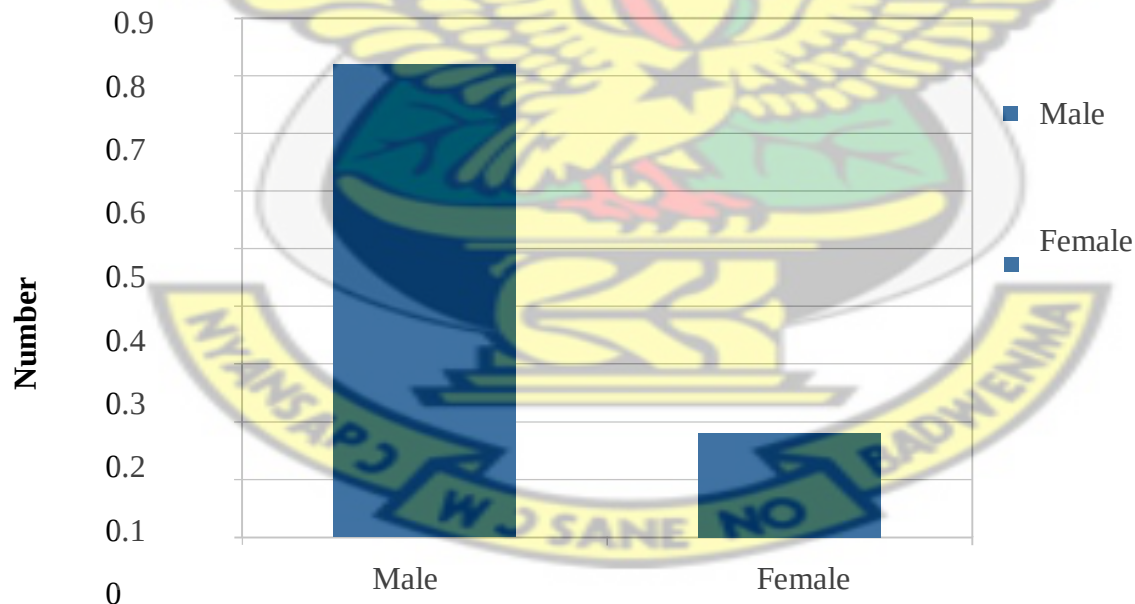
DATA PRESENTATION ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This part of the research outlines the analysis of results gathered from respondents through their responses. It is presented mainly in descriptive form such as tables and graphs and arranged in line with the objectives of the study.

4.1 Demographics

Proctor (2000) states that demographic data are crucial to obtain basic information with regard to the respondents. It serves as a material to identify the respondents characteristics such as age, gender, educational levels, etc. This information is very critical as it indicates whether the respondents have the capacity and the credibility to address the questions with regard to the objectives of the research.



Sex of respondents

Figure 4.1: Gender of respondents

Source: Researcher's Fieldwork

In terms of gender of respondents, the data set shows that 62 (82%) of the respondents were males while 14 (18 %) of the respondents were females. It clearly indicates that most of the respondents are males and indicative of the male dominance of the oil and gas industry and needs affirmative action to encourage women participation.

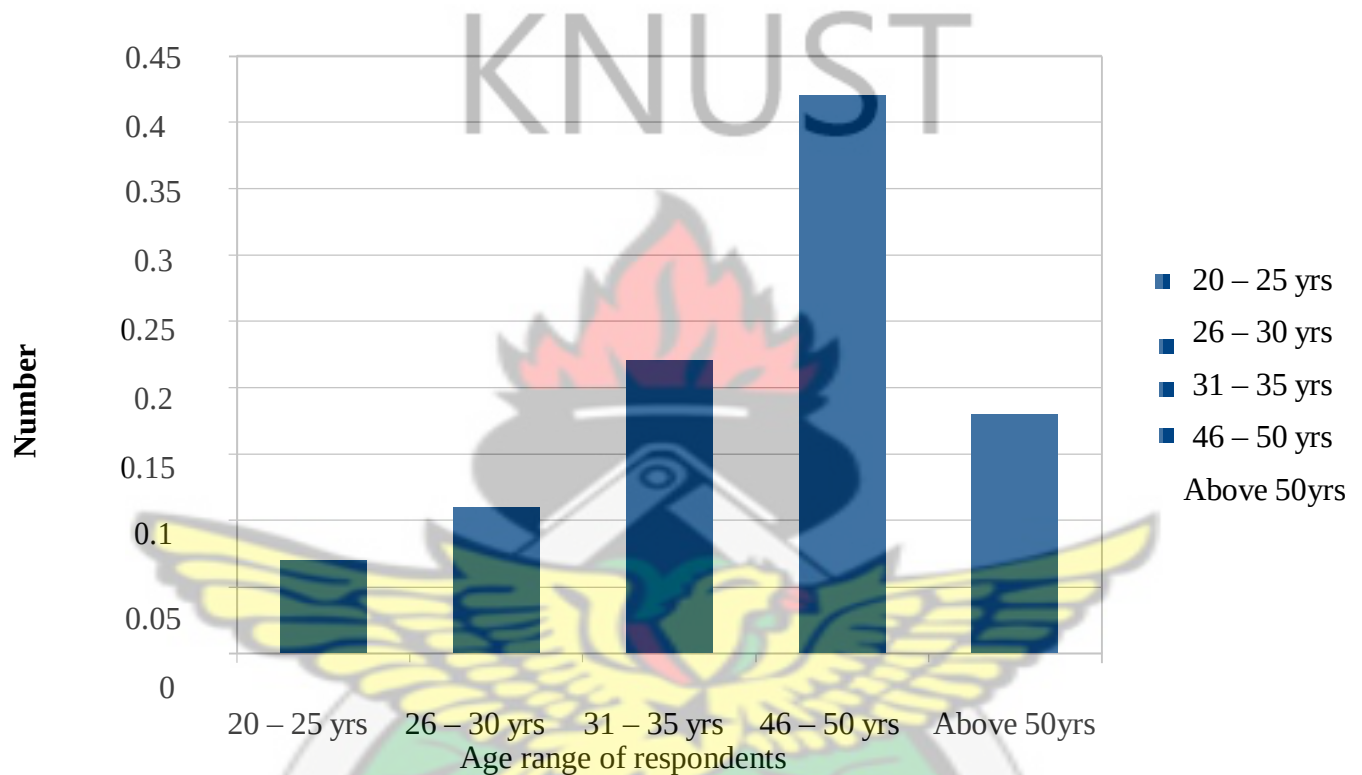


Figure 4.2: Age of respondents

Source: Researcher's field work

The above figure shows that 5(7%) of the respondents were between the ages of 20 and 25 years while between the ages of 26 and 30 were 8 constituting 11% of the respondents. Again the figure indicates that 16 (22%) and 31 (42%) of the respondents were between the ages of 31 to 35 years and 36 to 50 years respectively. Further, 13 out of the sample representing 18% of the total respondents were more than 50 years. A majority of the respondents were more than 30 years probably due to the technical nature of the oil and gas industry which demands that one spends quite a number of years in school to acquire the needed technical know-

how. This buttresses the fact that it takes longer training periods for personnel to gain the requisite knowledge to be able to work in the oil and gas industry according to the researcher. This finding also corroborates the assertion of Koleoso et al. (2012) who posits that the standard of education in West African Sub-region is too poor to provide skilled labour to the domestic firms. This leads to less skilled labour, hence, takes longer periods to get trained to the required standard.

Marital status of respondent

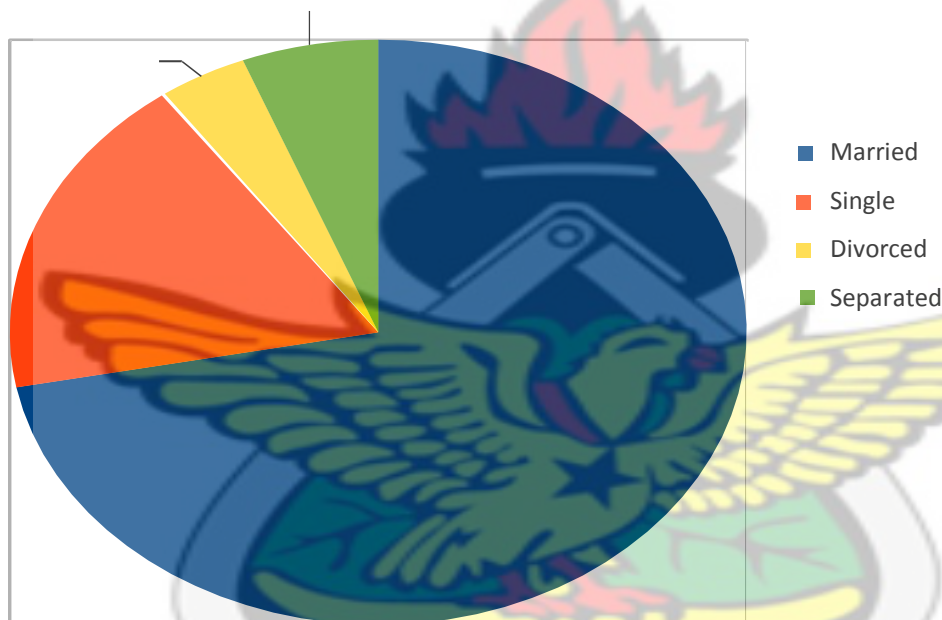


Figure 4.3: Marital status of respondents

Source: Researcher's Field Work

As indicated from the above figure, 54 (72%) of the respondents are married whiles respondents who were single constituted 13 (18%) of the total respondents. Again only 3 (4%) of the respondents were divorced whiles a further 4 representing 6% were separated. This is indicative of the general perception where people of ages beyond 30 are mostly expected to be married.

Educational Background of Respondent

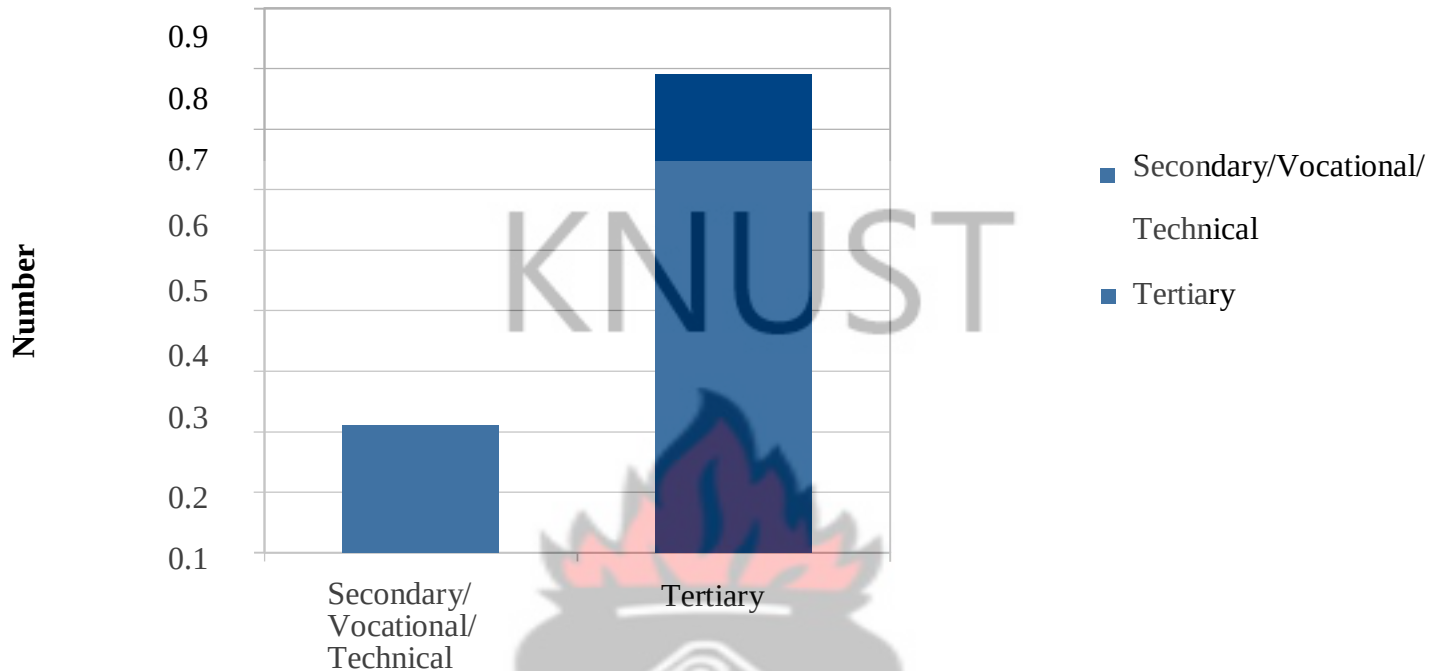


Figure 4.4: Educational background of respondents

Source: Researcher's Data

As indicated by Figure 4.4 above, 60 (79%) of the respondents had tertiary education while 15 (21%) had obtained Senior High/technical education. Thus, all the respondents had the basic level of education to objectively respond to the questionnaire. Again due to the technical nature of the oil and gas industry, tertiary education or technical education is a needed prerequisite. This finding of 79% of respondents with tertiary education is a clear vindication of the position by Weier (2013) which identified an ever increasing demand for highly skilled labour for the oil and gas industry.

4.3 The alignment of the LC legislation with the intended goals and objectives

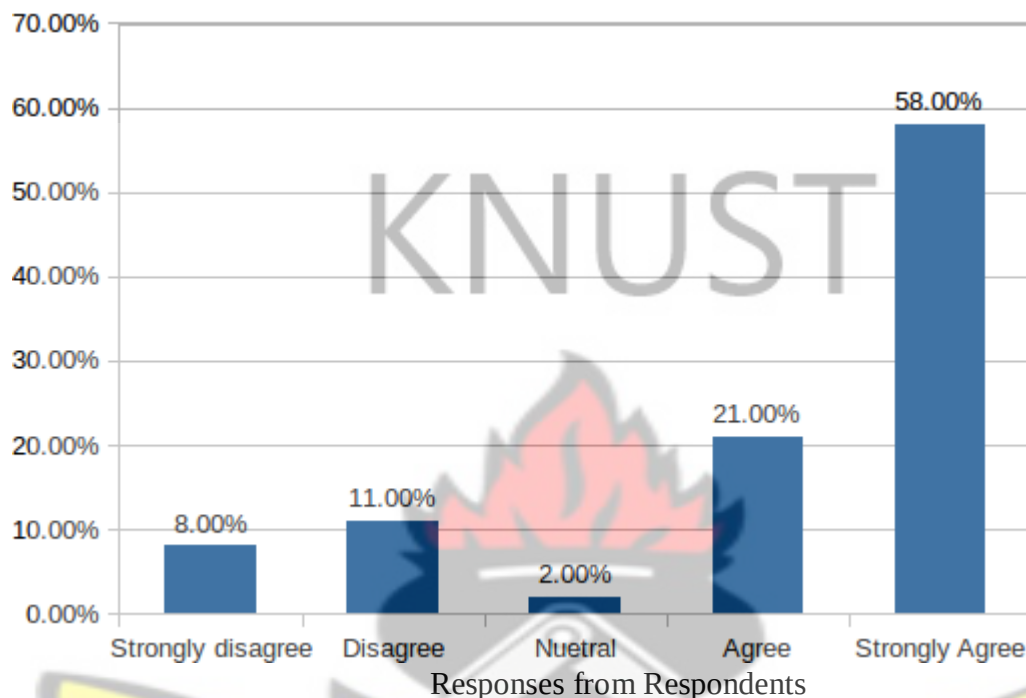


Figure 4.5: Provision of goods and services by national entrepreneurs

Source: Researcher's Field Work

In relation to the alignment of the local content legislation with the intended goals and objectives, the above figure shows that as many as 44 (58%) of the total respondents strongly agreed that the LC legislation ensures that provision of goods and services are done by national entrepreneurs whiles 15 (21%) of the respondents also agreed to the assertion that The LC legislation ensures that provision of goods and services are done by national entrepreneurs. However, 6 (8%) of the respondents strongly disagreed to the assertion that that the LC legislation ensures that provision of goods and services are done by national entrepreneurs whiles a further 8 (11%) also disagreed to the same assertion. Thus, in their view the LC legislation does not ensure that provision of goods and services are done by national

entrepreneurs. Lastly, 1 (2%) of the respondents was neutral. This buttresses the position of Tordo et al (2013) that not all stakeholders concur on the goals and strategies being adopted.

The LC legislation ensures that there is employment and training of citizens of Ghana

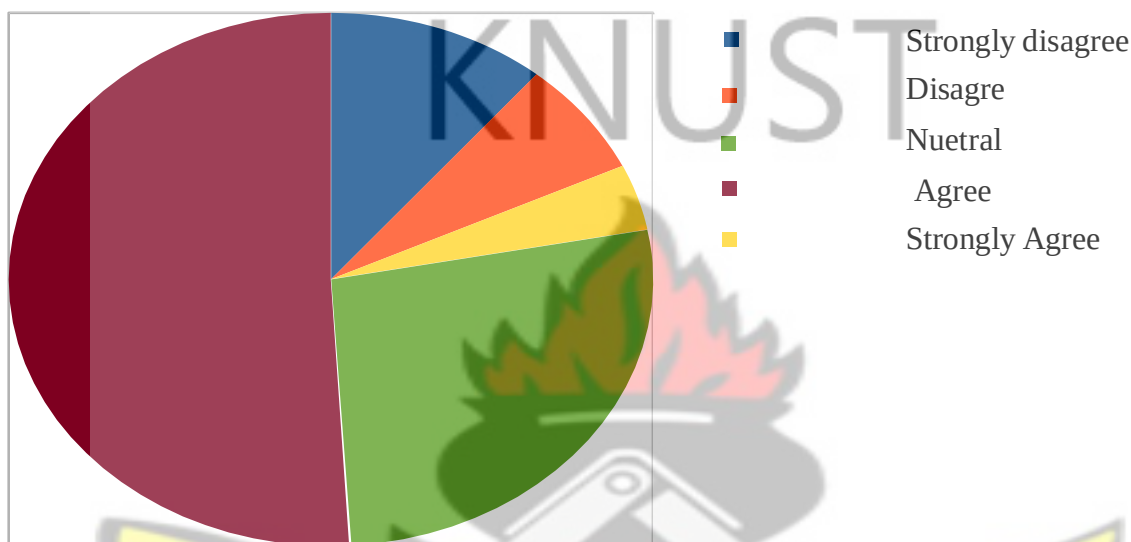


Figure 4.6 Employment and training of citizens of Ghana
Source Research's field work

As indicated by Figure 4.6 above on the assertion that the LC legislation ensures that there is employment and training of citizens of Ghana, as many as 38(51%) of the total respondents strongly agreed that the LC legislation ensures that there is employment and training of citizens of Ghana while 20 (27%) of the respondents also agreed to the assertion that the LC legislation ensures that there is employment and training of citizens of Ghana. However 8(11%) of the respondents strongly disagreed to the assertion that the LC legislation ensures that there is employment and training of citizens of Ghana while a further 5(7%) also disagreed to the same assertion. Thus, in their view the LC legislation does not ensure that there is employment and training of citizens of Ghana. Lastly 2 (4%) of the respondents were indifferent to the assertion that the LC legislation ensures that there is employment and training of citizens of Ghana. This underscore the provisions made by the LC which exclusively reserves certain positions for locals

and ensures there are adequate training programmes in place for knowledge transfer to locals to Take up positions not readily available locally. This ensures there is a constant recruitment of locals for these reserved positions.

This finding confirms again the assertion by Tordo et al (2013) that the LCPs guarantee employment for locals.

The LC legislation ensures that there is transfer of technological know-how and skills relating to petroleum operations to Ghanaians

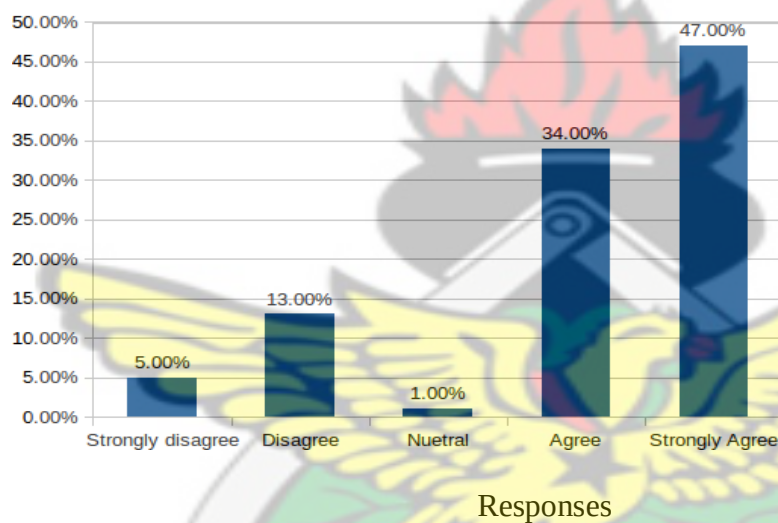


Figure 4.7: Transfer of technological know-how and skills relating to petroleum operations to Ghanaians

Source: Researcher's Field Work

In relation to the alignment of the local content legislation with the intended goals and objectives, the above figure shows that majority 35 (47%) of the respondents strongly agreed that the LC legislation ensures that there is transfer of technological know-how and skills relating to petroleum operations to Ghanaians whiles 25 (34%) of the respondents also agreed to the assertion that the LC legislation ensures that there is transfer of technological know-how and skills relating to petroleum operations to Ghanaians. However, 3(5%) of the respondents strongly disagreed to the assertion that the LC legislation ensures that there is transfer of

technological know-how and skills relating to petroleum operations to Ghanaians while a further 9(13%) also disagreed to the same assertion. Thus in their view the LC legislation ensures that there is transfer of technological know-how and skills relating to petroleum operations to Ghanaians. Lastly 1(1%) of the respondents were neutral. Thus, majority of the respondents are of the opinion that local content legislation is in line with its goals and objectives. This finding seems to agree with the position of Tordo et al, (2013) that countries constantly rely on formulating ‘ambitious’ local content targets in the upstream petroleum industry to build local competencies.

4.4 The practicality of the goals and objectives of the LC legislation

Table 4.1: Descriptive statistics on the practicality of provision of goods and services by national entrepreneurs

Variables	Mean	Mode	Median	Standard Dev.	Min	Max	Sum	Count
All operators in the oil and gas industry, shall as far as practicable use goods and services produced b	2.7	2	2	1.38	1	5	205	76
The Operators shall give priority to the purchase from citizens of Ghana local products and services	2.83	1	3	1.54	1	5	215	76
A preference for Ghanaian entities, even if they are up to 10% more expensive is mandated.	2.49	2	2	1.38	1	5	189	76
Where bids are being evaluated, and where bids are otherwise equal, the bid containing the highest le	2.45	1	2	1.59	1	5	186	76
Where a foreign entity is to provide goods and services for the licensee, the foreign entity shall op	2.05	1	2	1.4	1	5	156	76
After the commencement of operations, the participation of Ghanaians shall be at least ten	2.58	2	2	1.45	1	5	196	76

Source: Researcher’s field work

As indicated in the table above, table 4.1 concerning the descriptive statistics on the practicality of provision of goods and services by national entrepreneurs. There are six assertions under it. To begin with, the assertion that “All operators in the oil and gas industry, shall as far as practicable use goods and services produced by or provided in Ghana for their operations in preference to foreign goods and services.” recorded a mean of 2.70 with a standard deviation of 1.38. It also recorded a mode and median of 2 and 2 respectively. This proves that majority of the respondents disagreed to the assertion that “All operators in the oil and gas industry, shall as far as practicable use goods and services produced by or provided in Ghana for their operations in preference to foreign goods and services.”.

The mode signifies that most of the respondents ticked disagree to the assertion “All operators in the oil and gas industry, shall as far as practicable use goods and services produced by or provided in Ghana for their operations in preference to foreign goods and services..”. It recorded a minimum value of 1 and a maximum value of 5 while the sum total of all the responses was 205. In relation to the assertion that “The Operators shall give priority to the purchase from citizens of Ghana local products and services that are competitive in terms of price, quality and timely availability” it had a mean value and a standard deviation of 2.83 and 1.54 respectively.

Furthermore the assertion that recorded a mode and median of 1 and 3 respectively which proves that most of the responses were skewed towards point 1 on the likert scale which is strongly disagree . It recorded a minimum value of 1 and a maximum value of 5 while the sum total of all the responses was 215. The third assertion under this section

was the assertion that “A preference for Ghanaian entities, even if they are up to 10% more expensive is mandated” which had a mean and standard deviation of 2.49 and 1.38 respectively whiles It also recorded a mode and median of 2 and 2 respectively. It recorded a minimum value of 1 and a maximum value of 5 whiles the sum total of all the responses was 189. In relation to the assertion that “Where bids are being evaluated, and where bids are otherwise equal, the bid containing the highest level of Ghanaian content shall be selected”, it had the mean of 2.45 and a standard deviation of 1.59.

In addition, the assertion that recorded a mode and median of 1 and 2 respectively which proves that most of the responses were skewed towards point 1 on the likert scale which is strongly disagree. It recorded a minimum value of 1 and a maximum value of 5 whiles the sum total of all the responses was 186. Concerning the assertion that “Where a foreign entity is to provide goods and services for the licensee, the foreign entity shall operate from Ghana and partner with a Ghanaian owned and registered company it had the mean of 2.05 and a standard deviation of 1.40. Furthermore the assertion that recorded a mode and median of 1 and 2 respectively which proves that most of the responses were skewed towards point 1 on the likert scale which is strongly disagree. It recorded a minimum value of 1 and a maximum value of 5 whiles the sum total of all the responses was 156.

Lastly the assertion that “After the commencement of operations, the participation of Ghanaians shall be at least ten percent by value in the provision of goods and services”, it had the mean of 2.58 and a standard deviation of 1.45. The assertion that recorded a mode and median of 2 and 2 respectively which proves that most of the responses

were skewed towards point 2 on the likert scale which is disagree. It recorded a minimum value of 1 and a maxim value of 5 while the sum total of all the responses was 196. The average mean is 2.52. The implication is that even though the LC provides avenue for indigenous companies to supply at least 10% of goods and services needed in the oil and gas industry. However, due to the huge capital requirement, the provision is still dominated by international firms pushing the indigenous firms to the background. Ariweriokuma, (2009) also posits that political factors have an effect on implementation and practicality of local content legislation in oil and gas producing nations.

Table 4.2: Descriptive statistics on the practicality of employment and training of citizens of Ghana

Variables	Mean	Mode	Median	Standard Dev.	Min	Max	Sum	Count
Management staff, at least fifty percent of the management staff are Ghanaians from the start of petroleum activities	2.38	1	2	1.44	1	5	181	76
Core technical staff, at least thirty percent of the technical staff are Ghanaians from the start of petroleum activities	2.21	2	2	1.23	1	5	168	76

Source: Researcher's field work

As shown in the table above, table 4.2 concerning the descriptive statistics on the practicality of employment and training of citizens of Ghana. It had two assertions under it. To begin with, the assertion that "Management staff, at least fifty percent of the management staff are Ghanaians from the start of petroleum activities of the licensee and the percentage shall increase to at least eighty percent within five years after the start of the

petroleum activities recorded a mean of 2.38 with a standard deviation of 1.44. It also recorded a mode and median of 1 and 2 respectively. This proves that majority of the respondents strongly disagreed to the assertion that “Management staff, at least 50% of the management staff are Ghanaians from the start of petroleum activities of the licensee and the percentage shall increase to at least 80% within 5 years after the start of the petroleum activities”. The mode of 1 signifies that most of the respondents ticked strongly disagree to the assertion “Management staff, at least 50% of the management staff are Ghanaians from the start of petroleum activities of the licensee and the percentage shall increase to at least eighty percent within five years after the start of the petroleum activities.”. It recorded a minimum value of 1 and a maximum value of 5 while the sum total of all the responses was 181. In relation to the assertion that “Core technical staff, at least 30% of the technical staff are Ghanaians from the start of petroleum activities of the licensee and the percentage shall increase to at least 50% within 5 years after the start of petroleum activities and 90% within 10 years; and” it had a mean value and a standard deviation of 2.21 and 1.23 respectively. Furthermore the assertion that recorded a mode and median of 2 and 2 respectively which proves that most of the responses were skewed towards point 2 on the likert scale which disagree. It recorded a minimum value of 1 and a maximum value of 5 while the sum total of all the responses was 168. The average mean was 2.29. This means that the provision is not followed to the later as management and technical positions are highly dominated by foreigners to the disadvantage of Ghanaians.

Table 4.3: Descriptive statistics on the practicality of technology transfer citizens of Ghana

Variables	Mean	Mode	Median	Standard Deviation	Min	Max	Sum	Count
An Operator shall, while carrying out petroleum operations, prepare and implement plans for	2.14	1	2	1.35	1	5	163	76
An Operator shall, while carrying out petroleum operations, Establish in the country	1.88	1	2	1.21	1	5	143	76

Source: Researcher's field work

As indicated in the table above, table 4.3 concerning the descriptive statistics on the practicality of technology transfer to citizens of Ghana. It had two assertions under it. To begin with, the assertion that “An Operator shall, while carrying out petroleum operations, prepare and implement plans for the transfer of technological know-how and skills relating to petroleum operations to Ghanaians” recorded a mean of 2.14 with a standard deviation of 1.35. It also recorded a mode and median of 1 and 2 respectively. This proves that majority of the respondents strongly disagreed to the assertion that “An Operator shall, while carrying out petroleum operations, prepare and implement plans for the transfer of technological know-how and skills relating to petroleum operations to Ghanaians”. The mode signifies that most of the respondents ticked strongly disagree to the assertion “An Operator shall, while carrying out petroleum operations, prepare and implement plans for the transfer of technological know-how and skills relating to petroleum operations to Ghanaians. “It recorded a minimum value of 1 and a maximum value of 5 while the sum total of all the responses was 163. In relation to the assertion that “An Operator shall, while carrying out petroleum operations, establish in the country any necessary facility for technical work and technology transfer.” it had a mean value and a standard deviation of 1.88 and 1.21 respectively.

Furthermore the assertion that recorded a mode and median of 1 and 2 respectively which proves that most of the responses were skewed towards point 1 on the likert scale which is strongly disagree . It recorded a minimum value of 1 and a maximum value of 5 while the sum total of all the responses was 143. The average mean was 2.01.

Practicality of the LC policies

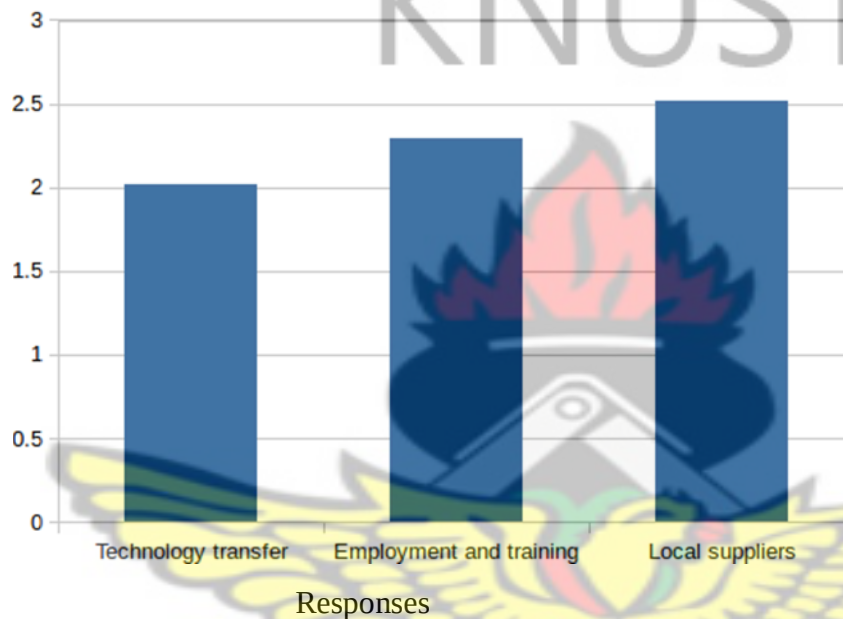


Figure 4.8 Practicality of the Implementation of LC Policies

Source: Researcher's field work

A graphical comparison of the average mean analysis of the practicality of the three objectives revealed as shown by the figure above that the provision of goods and services by local suppliers recorded the highest mean of 2.59 followed by the employment of Ghanaians which had an average mean of 2.05. The last was technology transfer which also recorded an average mean of 2.01. Thus in the view of the respondents the least practical objective was the technology transfer.

4.5 The barriers to entry for the local firm to participate in the oil and gas industry

This section assessed the challenges facing local firms in participating fully in the oil and

gas industry. The results are discussed below:

Capital Requirement for local company

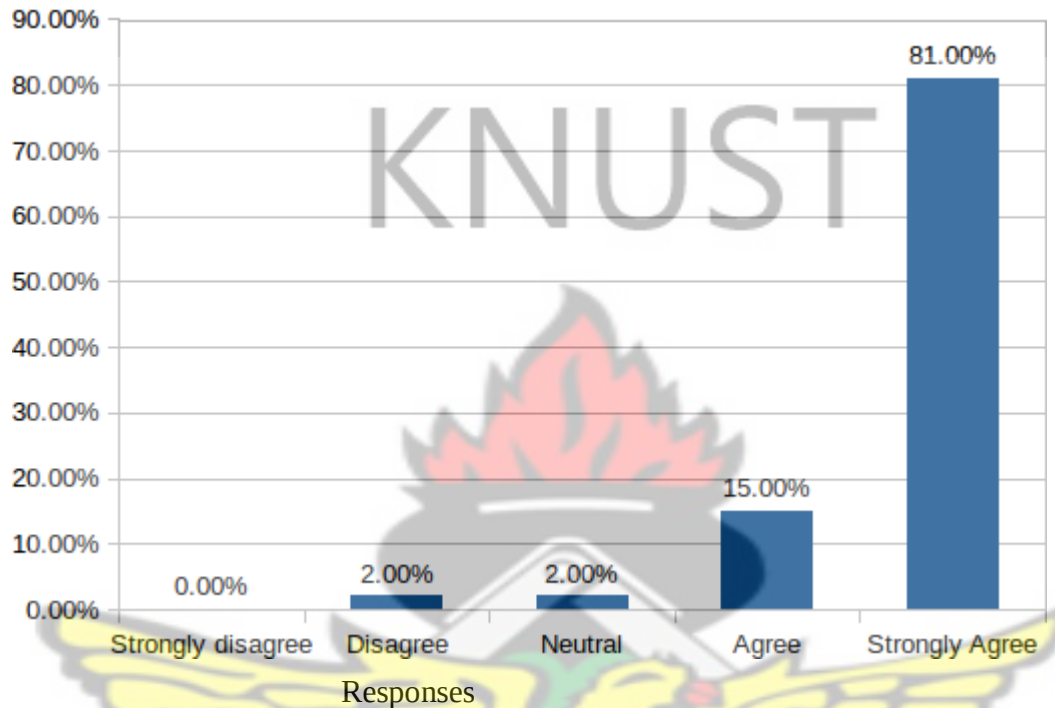


Figure 4.9: Huge capital requirement

Source: Researcher's field work

As indicated by Figure 4.9 concerning the barriers to entry for the local firm to participate in the oil and gas industry, the majority 61 (81%) of respondents strongly agreed that the huge capital requirement is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana while 11(15%) of the respondents also agreed to the assertion that the huge capital requirement needed to operate in the oil and gas industry is a big challenge for local companies in Ghana. However only 1(2%) of the total respondents disagreed to the assertion that the huge capital requirement is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. In other words according to the 1(2%) of the respondents the capital requirement is not a barrier for local firms to operate in the oil and gas sector. Again 1(2%) of the respondents were indifferent.

Human Capital Requirement

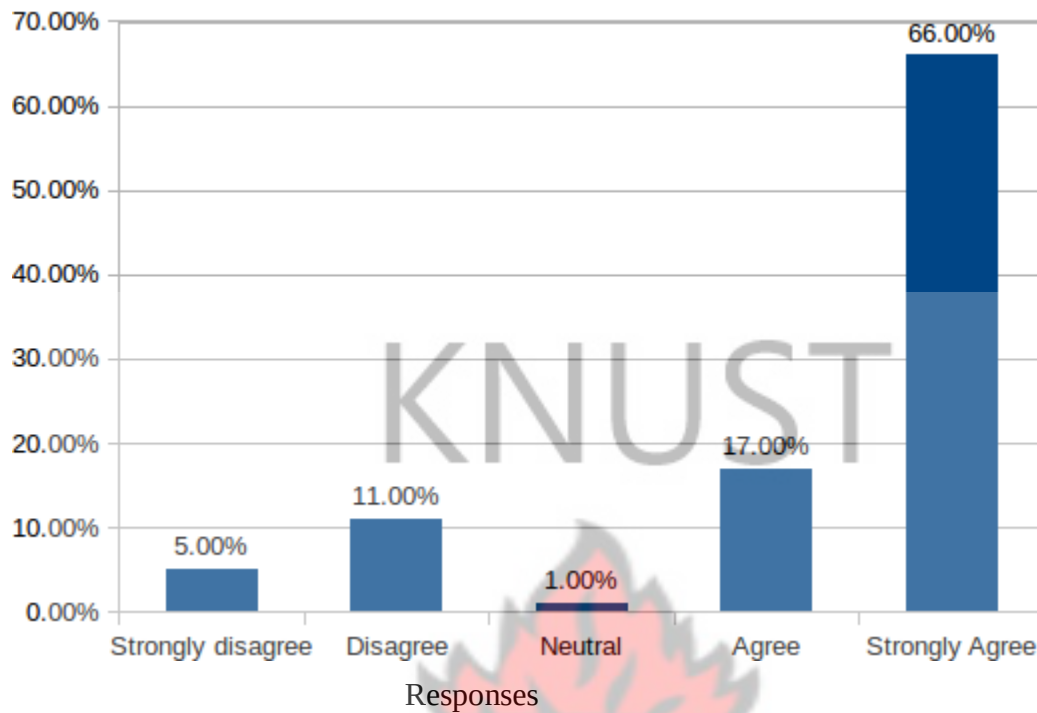


Figure 4.10: Inadequate human resources

Source: Researcher's Field work

In relation to inadequate human resource as a barrier to local firms to participate in the oil and gas industry, as many as 50 (66%) of the respondents strong agreed that the problem of inadequate human resource is a barrier to local firms to participate in the oil and gas industry. A further 12 (17%) of the respondents also agreed to the assertion that inadequate human resource is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. However in the opinion of 3 (5%) of the respondents inadequate human resources is not a barrier to entry for the local firm to participate in the oil and gas industry in Ghana while a further 8 (11%) of the respondents also disagreed to the assertion that inadequate human resource is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. Lastly a further 1 (1%) of the respondents were neutral to the assertion that inadequate human resource is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana.

Technological Demand

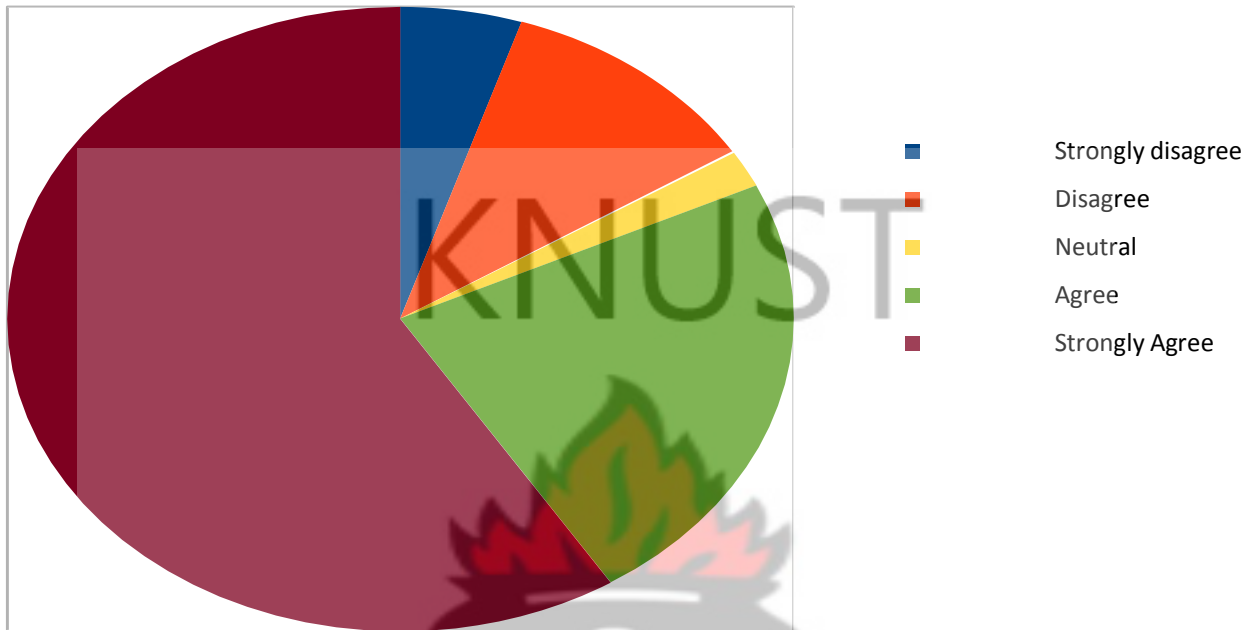


Figure 4.11: Inadequate technology

Source: Researcher's Field work

As indicated by figure 4.11 concerning the barriers to entry for the local firm to participate in the oil and gas industry, the majority 44 (59%) of respondents strongly agreed that the inadequate technology is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana whiles 11(15%) of the respondents also agreed to the assertion that inadequate technology is a huge challenge for local companies in Ghana. However, 3(5%) of the total respondents strongly disagreed to the assertion that inadequate technology is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. Whiles 8(11%) also disagreed to the above assertion. In other words according to the 12(16%) of the respondents disagreed that inadequate technology not a barrier for local firms to operate in the oil and gas sector. Again 1(2%) of the respondents were indifferent.

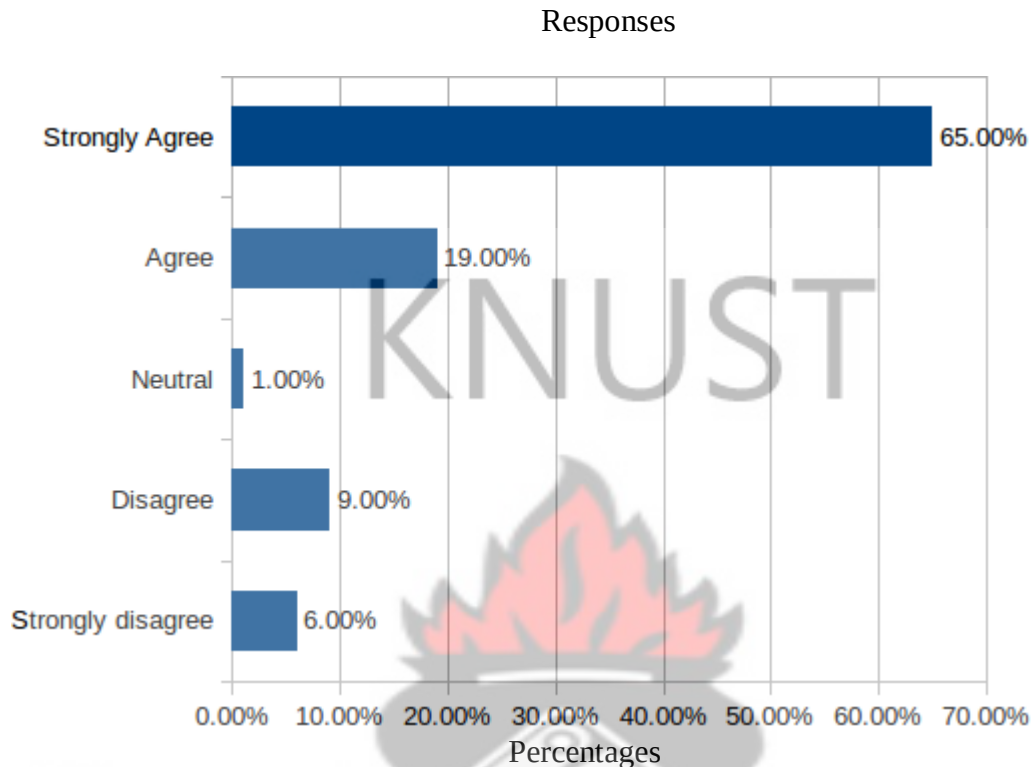


Figure 4.12: Huge technology requirement

Source: Researcher's Field Work

In relation to huge technology requirement as a barrier to local firms to participate in the oil and gas industry, as many as 49 (65%) of the respondents strongly agreed that the problem of huge technology requirement is a barrier to local firms to participate in the oil and gas industry. A further 14 (19%) of the respondents also agreed to the assertion that huge technology requirement is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. However in the opinion of 4 (6%) of the respondents disagreed that huge technology requirement is not a barrier to entry for the local firm to participate in the oil and gas industry in Ghana whiles a further 6 (9%) of the respondents also disagreed to the assertion that huge technology requirement is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. Lastly a further 1 (1%) of the respondents were neutral to the assertion that huge technology requirement is a barrier to entry for the local firm to participate in

the oil and gas industry in Ghana. This would largely affect the implementation of the LC policies and the derivation of the intended benefits thereof. Indigenous companies would not be able to compete with international companies operating in the industry. This confirms the view of McPepple (2002) that capacity of local companies remain underutilized as the sector is controlled by international companies handling activities which could commonly be undertaken by local firms.

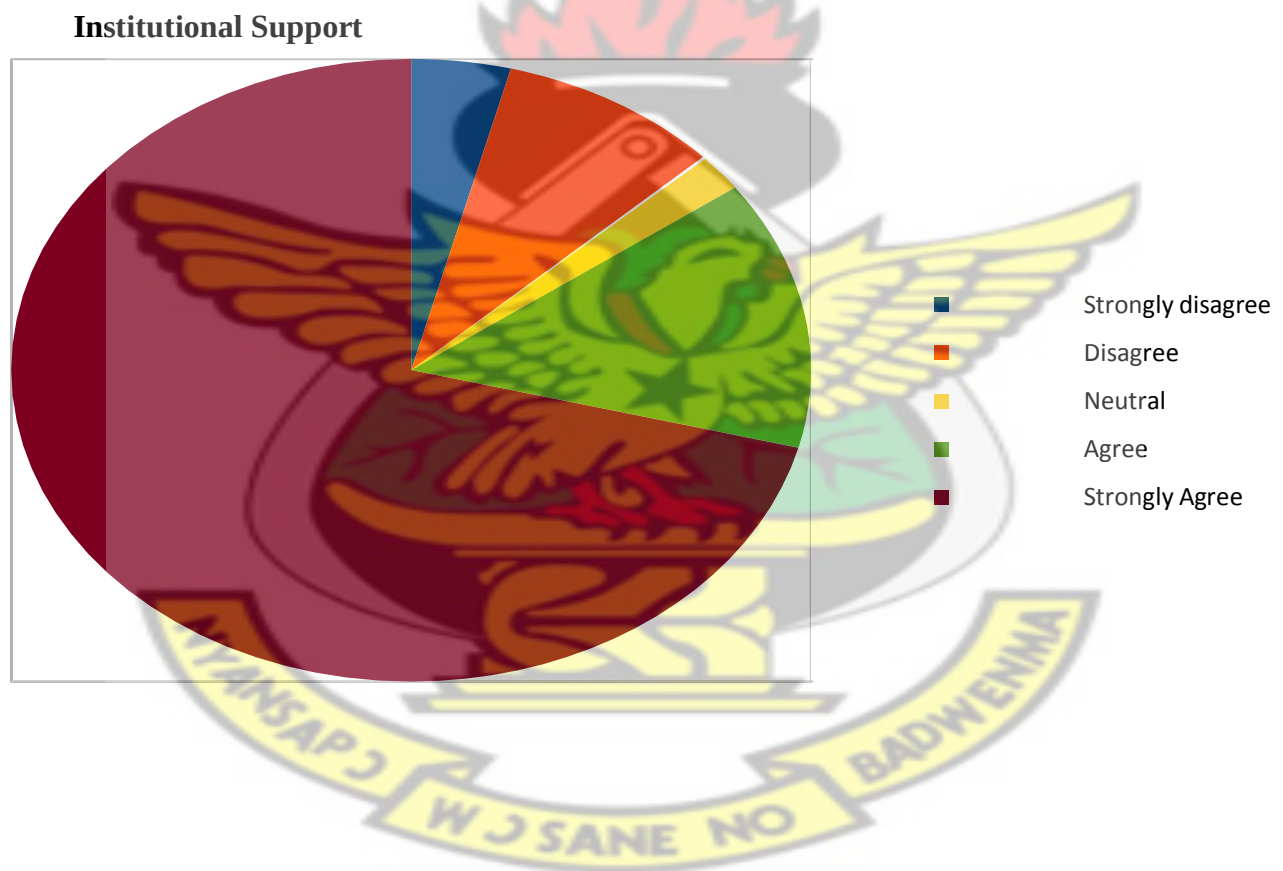


Figure 4.13: Inadequate institutional support

Source: Researcher's field work

Figure 4.13 indicates that, Majority 53(71%) respondents strongly agreed that the inadequate institutional support is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana whiles 10(14%) of the respondents also agreed to the assertion that inadequate institutional support is a huge challenge for local companies in Ghana. However 3(4%) of the total respondents strongly disagreed to the assertion that Inadequate institutional support is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. However 6(9%) also disagreed to the above assertion. In other words according to the 9(13%) of the respondents disagreed that Inadequate institutional support is not a barrier for local firms to operate in the oil and gas sector. Again 1(2%) of the respondents were indifferent.

Barrier to Entry-Local Capacity Development

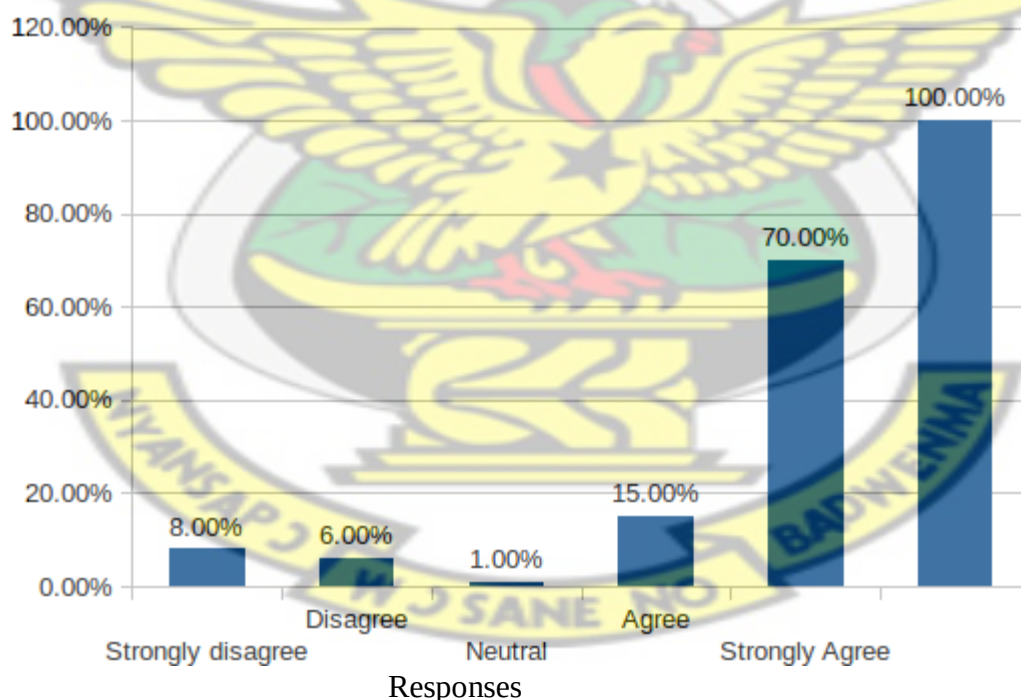


Figure 4.14: Local Capacity Development

Source: Researcher's field work

In relation to local capability development as a barrier to local firms to participate in the oil and gas industry, as many as 53(70%) of the respondents strongly agreed that local capability development is a barrier to local firms to participate in the oil and gas industry. A further 11(15%) of the respondents also agreed to the assertion that local capability development is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. However in the opinion of 6(8%) of the respondents disagreed that local capability development is not a barrier to entry for the local firm to participate in the oil and gas industry in Ghana while a further 4(6%) of the respondents also disagreed to the assertion that local capability development is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. Lastly a further 1(1%) of the respondents were neutral to the assertion that local capability development is a barrier to entry for the local firm to participate in the oil and gas industry in Ghana. This finding confirms the position of Koleoso et al (2012) that deficiency in domestic education and training system accounts for this development which generates into less skilled labour, hence the demand of skilled labour is fulfilled through import of human capital.

4.6 How Beneficial LC Legislation will be to Ghanaians and the nation as a whole

Table 4.4:

Descriptive statistics on the benefits LC legislation to Ghanaians and the nation as a whole

Variables	Mean	Mode	Median	Standard Dev	Min	Max	Sum	Count
Attracting increased local value-added investments in the oil and gas sector;	3.99	5	4	1.19	1	5	303	76
Creating job opportunities Ghanaians in the oil and gas and related industries;	4.46	5	5	0.84	1	5	339	76
Indigenizing knowledge, expertise and technology in the oil and gas and related	4.01	4	4	0.95	1	5	305	76
Provision of goods and services by national	4.22	4	4	0.9	2	5	321	76
Employment and training of citizens of Ghana	3.87	5	4	1.48	1	5	294	76

Source: Researcher's field work

Some indicated in the table above, table 4.4 concerning the descriptive statistics on the benefits LC legislation to Ghanaians and the nation as a whole. It had six assertions under it. To start with, the assertion that “Attracting increased local value-added investments in the oil and gas sector” recorded a mean of 3.99 with a standard deviation of 1.19. It also recorded a mode and median of 5 and 4 respectively. This proves that majority of the respondents strongly agreed to the assertion that “Attracting increased local value-added investments in the oil and gas sector”. The mode signifies that most of the respondents ticked strongly agree to the assertion “Attracting increased local value-added investments in the oil and gas sector”. It recorded a minimum value of 1 and a maxim value of 5 whiles the sum total of all the responses was 303. In relation to the assertion that “Creating job opportunities Ghanaians in the oil and gas and related industries” it had a mean value and a

standard deviation of 4.46 and 0.84 respectively. Furthermore the assertion recorded a mode and median of 5 and 5 respectively which proves that most of the responses were skewed towards point 5 on the likert scale which is strongly agree. It recorded a minimum value of 1 and a maxim value of 5 while the sum total of all the responses was 339. The third assertion under this section was the assertion that “Indigenizing knowledge, expertise and technology in the oil and gas and related industries.” which had a mean and standard deviation of 4.01 and 0.95 respectively while it also recorded a mode and median of 4 and 4 respectively. It recorded a minimum value of 1 and a maxim value of 5 while the sum total of all the responses was 305. In relation to the assertion that “Provision of goods and services by national entrepreneurs”, it had the mean of 4.2 and a standard deviation of 0.90. Furthermore the assertion that recorded a mode and median of 4 and 4 respectively which prove that most of the responses were skewed towards point 4 on the likert scale which is agree. It recorded a minimum value of 1 and a maxim value of 5 while the sum total of all the responses was 321. Concerning the assertion that “Employment and training of citizens of Ghana”, it had the mean of 3.87 and a standard deviation of 1.48. Furthermore the assertion that recorded a mode and median of 5 and 4 respectively which proves that most of the responses were skewed towards point 5 on the likert scale which is strongly agree. It recorded a minimum value of 1 and a maxim value of 5 while the sum total of all the responses was 294. Lastly the assertion that “Local Capability Development”, it had the mean of 4.21 and a standard deviation of 0.81. Furthermore the assertion that recorded a mode and median of 4 and 4 respectively which proves that most of the responses were skewed towards point on the likert scale which is agree. It recorded a minimum value of 1 and a maxim value of 5 while the sum total of all the responses was 320.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the findings derived from the field work and the analysis of the data. Conclusion and recommendations for continues improvement are also addressed below.

5.2 Summary of findings

The following are the summaries of the findings:

5.2.1 Alignment of LC legislation with the intended goals and objectives.

The study found out that the majority of the respondents stated that local content legislation is in line with its intended goals and objectives-reserving at least 10% equity stake in International Oil Companies operating in Ghana, reservation of all in country services to local companies, financial services and employment of locals. Thus, LC legislation ensures that provision of goods and services such as catering, financial services, insurance, legal services are done by national entrepreneurs. Under employment, the study revealed that positions with comparable expertise available locally are all reserved for locals- positions such as Roustabouts, Roughnecks, Crane Operators, Rig Mechanic are all reserved for nationals and training of citizens of Ghana and transfer of technological know- how and skills for positions not readily available but key to the offshore industry. This involves the submission of Local Content road map and training plans by international companies to Petroleum Commission for review and approval before Work Permits

and Licenses are issued. This in variably concurs with Tordo et al (2013) that not all stakeholders concur on the goals and strategies of the LCPs hence the finding where minority thinks otherwise.

5.2.2 Practicality of the goals and objectives of the LC legislation.

The study found out that most of the respondents indicated the impracticality of the goals and objectives of the LC legislation. Thus, they disagreed with the assertion relating to provision of goods and services by national entrepreneurs, employment and training of citizens of Ghana and technology transfer. The study further revealed that although the goals and objectives of the LC policies are desirable and beneficial to the Country, however held the view that implementing them would be difficult. This is due to the numerous challenges facing local players in the industry- huge capital requirement, unavailability of local expertise, financial institutions with low capital base. These would hinder practicalisation the LC policies. This position is shared by Warner (2011) which identified major bottleneck among them is political factor affecting the practicalization of the LCPs.

5.2.3 Barriers to entry for the local firm to participate in the oil and gas industry.

The study found out that the major barriers to entry for local firms to participate in the oil and gas industry in Ghana are the huge capital requirements, Inadequate human resource, inadequate technology, advanced technology requirement, Inadequate institutional support and Local capacity Development. It was revealed that local players are faced with bottlenecks in their attempt to take advantage of the LC policies these include lack of capacity building. Most of the International companies have been in existence for many years and most often have governmental support to develop a good example is ENI(Italian oil production giant) which has the backing and financial support from the Italian government. Other bottlenecks are in the areas of finance and

human capital, these are hard to be obtained by local firms thereby affecting their operations. Drilling equipments, fluids and other consumables are expensive and require huge capital to be able to procure. In the area of human capital, a lot more of the lucrative positions offshore have not been occupied by locals even though the LC policy gives the upper hand to locals owing to the lack of the skills and experience vital for the industry. Acton, 2013, Todo et al 2013 all posit that there are barriers affecting the activities of domestic firms, hence the need for dialogue to address these.

5.2.4 Benefits of the local content policies to the development of domestic firms.

Even though the study found out that most of the objectives are impractical the study further revealed that the country has derived great benefits from the oil and gas industry since its inception. Some of the benefits are: Attracting increased local value-added investments in the oil and gas sector; creating job opportunities for Ghanaians in the oil and gas and related industries; Indigenizing knowledge, expertise and technology in the oil and gas and related industries; Provision of goods and services by national entrepreneurs; In addition to that local players have expanded their capacities, have improved systems, the study revealed that owing to the transfer of knowledge Rigworld International Services Ltd has been able to expand its operations to other ancillary services, improved technology and systems- the first local oil and gas company to be assessed by Bureau Veritas and ISO and have same institutions certify their processes and management systems. Trade volumes and service lines for local firms have increased from merely providing manning services to now entering into joint ventures with International oil giants.

5.2.5 Abuse of the LC policies

The study also revealed that owing to the rigorous reporting regime adopted by the Petroleum Commission and strict adherence to the LC policies, some international companies have found a dodgy way to abuse the system most often with the collusion of Ghanaian business owners. They would front for these international companies and have it legally satisfy the requirement of the law, however, the real owners are foreigners and use this medium to deceive officials and government agencies.

5.3 Conclusion

Based on the above findings of this study, the study can conclude that emergency of the oil and gas industry in Ghana will offer some benefits to Ghanaians and the country as a whole. The development of the local content legislation will further bring more benefits to Ghanaians if the implementation is strict so as to make the objectives of the local content legislation achievable. The development of the local content policy and legislation are not enough. It must have a sound implementation scheme to be able to achieve its intended goals and objectives. The researcher posits that having the local content legislation is not enough guarantee to achieving the intended goals, thus, political will from the executive and cooperation from the citizenry would be needed during the implementation stages.

5.4 Recommendations

The researcher recommends the following:

5.4.1 Empowerment of universities and polytechnics in the country to introduce oil and gas courses

Training and continues improvement are key elements for the oil and gas industry and to be able to take advantage of the LC policies and in addressing the issue of lack of human capital and local expertise needed for the industry with its attendant benefit to the local economy. It is therefore recommended that there should be deliberate governmental training programmes aimed at building the human resource needed for the oil and gas industry. Further recommend that there should be scholarship opportunities to students and interested pursuing programmes and courses in the oil and gas industry.

5.4.2 Creation of Venture Capital Fund

The study also found that the industry requires huge capital requirement needed to be able to participate in the offshore industry by local firms. The recommendation therefore is that, the government should set aside funds to finance local players in the oil and gas industry to be able to venture into the capital intensive aspects of the industry currently dominated by foreign companies. Further, exempting local players in the industry from the payment of corporate tax and other taxes will incentivize them to be able to compete favorably with their international counterparts. These would go a long way to address the barriers identified from the research.

5.4.3 Revision of Local Content Laws.

The study revealed that majority of the provisions are impracticable and most international companies have found a way to abuse the system. It is therefore recommended that the LC policies should be reviewed using best examples from similar oil producing countries around the world

taking into consideration Ghana's economic circumstances and socio-economic factors to avoid having laws that do not suit our local conditions.

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APPENDIX

QUESTIONNAIRE

This questionnaire is designed to know your opinion in relation to the study that seeks to assess the effectiveness of Ghana's local content policies in the development of indigenous firms in Ghana's oil and gas industry. This survey is a part of my master's degree thesis, and your kind support is crucial for the successful completion of this research project. Your responses will be anonymous; data will be combined and analyzed as a whole. Please attempt to answer all the questions and tick one appropriate box that best suits your perspective for each statement. Thank you very much for your time and assistance

SECTION A: DEMOGRAPHICS

1. What is your gender
 - a. Male []
 - b. Female []
2. What is your age group?
 - a. 20 – 25 []
 - b. 26 – 30 []
 - c. 31 – 35 []
 - d. 46 – 50 []
 - e. 50 and upwards []
3. Marital status
 - a. Married []
 - b. Single []
 - c. Divorced []
 - d. Separated []
4. What is your level of education?
 - a. No formal education
 - b. Primary / Middle/ JSS
 - c. Secondary/ Vocational/ Technical
 - d. Tertiary
 - e. Others (specify)

SECTION B: The practicality of the goals and objectives of the local content policies for local firms and the country.

STATEMENTS	SD	D	N	A	SA
Provision of goods and services by national entrepreneurs					
All operators in the oil and gas industry, shall as far as practicable use goods and services produced by or provided in Ghana for their operations in preference to foreign goods and services					
The Operators shall give priority to the purchase from citizens of Ghana local products and services that are competitive in terms of price, quality and timely availability					
A preference for Ghanaian entities, even if they are up to 10% more expensive is mandated.					
Where bids are being evaluated, and where bids are otherwise equal, the bid containing the highest level of Ghanaian content shall be selected					
Where a foreign entity is to provide goods and services for the licensee, the foreign entity shall operate from Ghana and partner with a Ghanaian owned and registered company					
After the commencement of operations, the participation of Ghanaians shall be at least ten percent by value in the provision of goods and services					
Employment and training of citizens of Ghana					
Management staff, at least fifty percent of the management staff are Ghanaians from the start of petroleum activities of the licensee and the percentage shall increase to at least eighty percent within five years after the start of the petroleum activities					
Core technical staff, at least thirty percent of the technical staff are Ghanaians from the start of petroleum activities of the licensee and the percentage shall increase to at least eighty percent within five (5) years after the start of petroleum activities and ninety percent within ten (10) years; and					
Technology transfer					
An Operator shall, while carrying out petroleum operations, prepare and implement plans for the transfer of technological know-how and skills relating to petroleum operations to Ghanaians and to establish in the country any necessary facility for technical work and technology transfer.					

SD= Strongly Disagree, D=Disagree NS= Not Sure, SA= Strongly Agree, A=Agree

SECTION C: The barriers to entry for the local firm to participate in the oil and gas industry.

STATEMENTS	SD	D	N	A	SA
Huge capital requirement					
Inadequate human resource					
Inadequate technology					
Huge technology requirement					
Inadequate institutional support					
Local Capability Development					

SECTION D: How beneficial local content policies will contribute to the development of indigenous firms in Ghana.

STATEMENTS	SD	D	N	A	SA
Attracting increased local value-added investments in the oil and gas sector;					
Creating job opportunities Ghanaians in the oil and gas and related industries;					
Indigenizing knowledge, expertise and technology in the oil and gas and related industries.					
Provision of goods and services by national entrepreneurs					
Employment and training of citizens of Ghana					
Local Capability Development					

SD= Strongly Disagree, D=Disagree NS= Not Sure, SA= Strongly Agree, A=Agree