

**UNIVERSITY OF GHANA**

**CENTRE FOR SOCIAL POLICY STUDIES**

**LOCAL CONTENT POLICY AND HUMAN CAPITAL DEVELOPMENT IN GHANA'S**

**OIL AND GAS UPSTREAM SECTOR**

**BY**

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**A THESIS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL  
FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF PHD DEGREE IN  
SOCIAL POLICY STUDIES**



**DECLARATION**

I hereby declare that this work is the result of my own research and has not been presented by anyone for any academic award at this or any other university. All references used in the work have been duly acknowledged.

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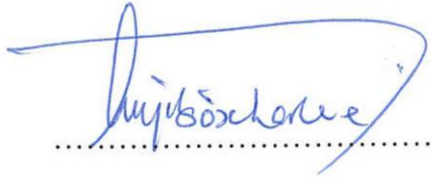
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**CERTIFICATION**

We hereby certify that the supervision and the final outcome of the study are in accordance with the standards of the doctoral thesis of the University of Ghana.

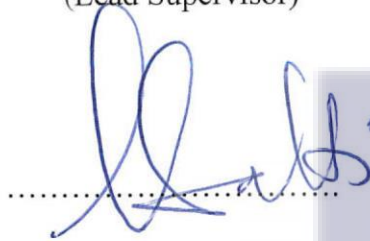
  
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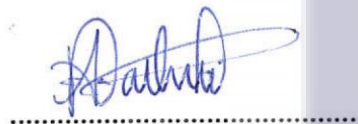
  
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**DEDICATION**

This thesis is dedicated to the Almighty God and my family.



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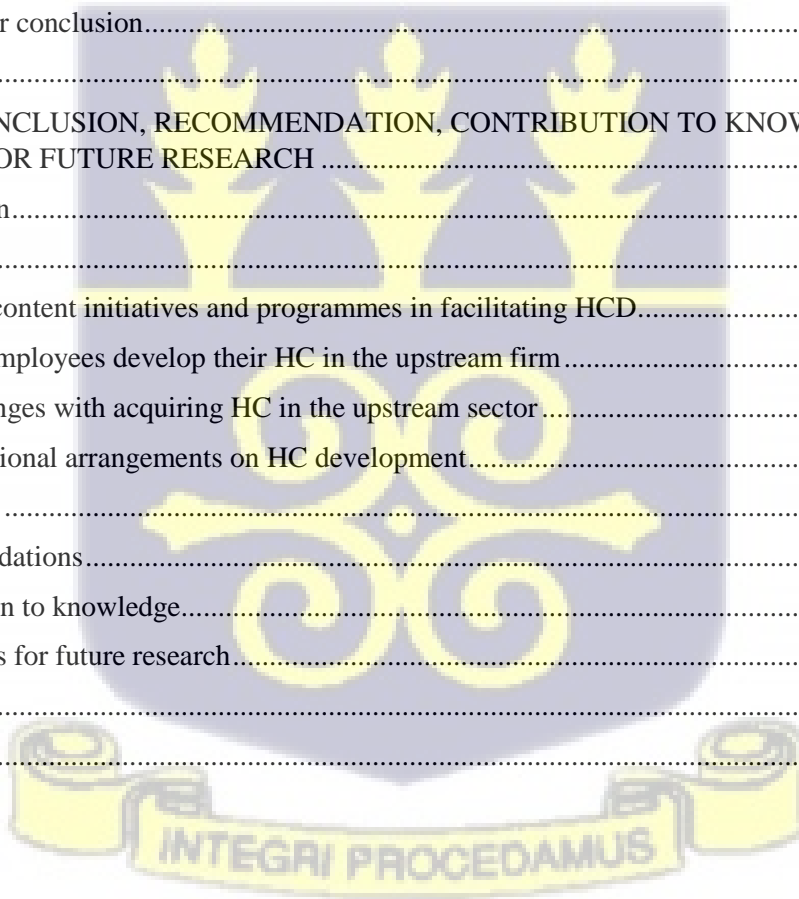
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TABLE OF CONTENTS

DECLARATION .....	i
CERTIFICATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
LIST OF ABBREVIATIONS.....	viii
LIST OF FIGURES .....	x
Abstract.....	xi
CHAPTER 1: GENERAL INTRODUCTION .....	1
1.0.Introduction and background .....	1
1.2. Problem Statement .....	7
1.3. Aim, objectives and research questions of the study .....	12
1.4. Research focus and delimitations.....	11
1.5. Significance of the study.....	14
CHAPTER TWO .....	17
LITERATURE REVIEW .....	17
2.0. Introduction.....	17
2.1. Institutional Theory.....	17
2.2. Human Capital Theory.....	22
2.3. Conceptual framework.....	27
2.4. Overview of Ghana’s oil and gas sector. ....	36
2.5. Overview of the LCP in Ghana’s oil and gas sector .....	41
2.6. Global perspective of local content in the oil and gas sector.....	43
2.7. How firms facilitate human capital development in the upstream sector .....	51
2.8. Challenges in developing human capital in the upstream sector in line with the LCP .....	52
2.9. Institutional arrangements and HCD in the oil and gas sector.....	57
2.10. Chapter conclusion (Emerging issues from the literature review).....	60
CHAPTER THREE .....	62
RESEARCH METHODOLOGY.....	62
3.1 Introduction.....	62
3.2. Philosophical foundation .....	62
3.3. Research approach .....	65
3.4. Research design .....	67
3.5. Study population .....	71

3.6. Case selection and profile of Tullow Ghana plc .....	72
3.7. Sampling and sampling technique .....	74
3.8. Data collection .....	77
3.9. Data analysis .....	79
3.10. Ethical consideration.....	80
3.11. Enhancing validity and reliability .....	80
3.12. Challenges encountered in data collection.....	81
3.13. Chapter conclusion.....	82
CHAPTER 4 .....	83
ANALYSIS AND DISCUSSION OF FINDINGS (PART 1) .....	83
Local Content initiatives and programmes by firms in facilitating HCD .....	83
4.1.0 Introduction.....	83
4.1.1. Localization/succession plan.....	83
4.1.2. The use of assessment and development tools .....	97
4.1.3. The use of the HC Development Policy.....	102
4.1.4. Infrastructural development .....	106
4.1.5. Chapter conclusion.....	109
CHAPTER 5 .....	110
ANALYSIS AND DISCUSSION OF FINDINGS (PART 2) .....	110
How employees develop their HC in the upstream firms. ....	110
5.1.0. Introduction:.....	110
5.1.1. Internal training.....	110
5.1.2. External training.....	116
5.1.3. E-learning.....	119
5.1.4. Personalized learning initiative .....	121
5.1.5. Chapter conclusion.....	125
CHAPTER 6 .....	126
ANALYSIS AND DISCUSSION OF FINDINGS (PART 3) .....	126
Barriers to developing employees' HC.....	126
6.1.0. Introduction .....	126
6.1.1. Perceived deliberate delay in skills transfer.....	126
6.1.2. Occasional misunderstanding between PC and the firm.....	132
6.1.3 Risky and expensive nature of business.....	135
6.1.4. Difficulty in finding experienced professionals.....	138

6.1.5 Cultural diversity.....	143
6.1.6. Inadequate educational infrastructure and curriculum in Ghana .....	145
6.1.7 Limited capacity of the stakeholder organizations (PC and upstream firms) .....	152
6.1.8. Lack of employee motivation .....	157
6.1.9. Accessing adequate information .....	162
6.10. Chapter conclusion.....	165
CHAPTER 7 .....	167
ANALYSIS AND DISCUSSION OF FINDINGS (PART 4) .....	167
Institutional arrangements on developing HC in the upstream sector .....	167
7.1.0. Introduction.....	167
7.1.1. Provisions of the LCP on HCD.....	167
7.1.2. Rules and regulations on the LCP for HCD.....	174
7.1.3. Effectiveness of the institutional arrangements .....	182
7.1.4. Chapter conclusion.....	188
CHAPTER 8 .....	189
SUMMARY, CONCLUSION, RECOMMENDATION, CONTRIBUTION TO KNOWLEDGE AND SUGGESTION FOR FUTURE RESEARCH .....	189
8.0. Introduction.....	189
8.1. Summary .....	189
8.1.1. Local content initiatives and programmes in facilitating HCD.....	189
8.1.2. How employees develop their HC in the upstream firm.....	193
8.1.3. Challenges with acquiring HC in the upstream sector .....	194
8.1.4. Institutional arrangements on HC development.....	196
8.2. Conclusion .....	198
8.3. Recommendations.....	201
8.4. Contribution to knowledge.....	203
8.5. Suggestions for future research.....	207
References.....	208
APPENDICES .....	228



**LIST OF ABBREVIATIONS**

ACEP	Africa Centre for Energy Policy
ADB	Africa Development Bank
BTA	Bilateral Trade Agreement
CERI	Canadian Energy Research Institute
CSO	Civil Society Organization
CSPOG	Civil Society Platform for Oil and Gas
CCSI	Columbia Centre on Sustainable Investment
CDD	Center for Democratic Development
DFID	Department for International Development
ENI	Eni Exploration and production Ghana ltd
EITI	Extractive Industry Transparency Initiative
FPSO	Floating Production, Storage, and Offloading
GHEITI	Ghana Extractive Industry Transparency Initiative
GCM	Ghana Chamber of Mines
GNPC	Ghana National Petroleum Corporation
GoG	Government of Ghana
GOSCO	GNPC Operating Services Company Limited



GRIDCO	Ghana Grid Company
HC	Human Capital
HCD	Human Capital Development
HCT	Human Capital Theory
HR	Human Resources
IEA	Institute of Economic Affairs
ILO	International Labour Organization
ISO	International Standards Organization
IOC	International Oil Company
IHRDC	International Human Resources Development Corporation
ITA	International Trade Agreement
IT	Institutional Theory
IDEG	Institute of Democratic Governance
ISODEC	Integrated Social Development Center
KNUST	Kwame Nkrumah University of Science and Technology
LCP	Local Content and Participation Policy
LCF	Local Content Fund
LCC	Local Content Committee



MP	Member of Parliament
MOE	Ministry of Energy
MOF	Ministry of Finance
NRGI	National Resource Governance Institute
OECD	Organization for Economic Cooperation and Development
OTL	Operations Team Leader
PLCPR	Petroleum (Local Content and Participation) Regulations
PIAC	Public Interest and Accountability Committee
PC	Petroleum Commission
PNDC	Provisional National Defense Council
SDG	Sustainable Development Goals
STEM	Science, Technology, Engineering and Mathematics
WOAFCO	West Africa Oil and Fuel Company
UNDP	United Nations Development Programme
UNITAR	United Nations Institute for Training and Research

**LIST OF FIGURES**

- Figure 1 Conceptual framework for the study
- Figure 2 Map of petroleum producing fields in Ghana

## ABSTRACT

Ghana formulated the Local Content and Participation Policy in petroleum activities in 2010. One of the objectives of the policy is to develop local capability through education and skill development. Skills shortage among Ghanaians persists in the upstream sector, and the issue of human capital development is looked at. This study examined the local content policies on human capital development in Ghana's upstream sector, with a focus on upstream firms' local content initiatives and programmes on human capital development, how employees acquire human capital and the challenges faced, and the institutional framework on human capital development in Ghana's upstream sector. Through a qualitative approach and a case study design, this study made use of a semi-structured interview guide and document sources to collect data. The study made use of data collected from participants in upstream firms, civil society organizations, the Petroleum Commission, the Ministry of Energy, the Local Content Committee, and members of parliament. The findings of the study revealed the facilitation of human capital development through localization and succession planning, the use of competency assessment and development tools, the establishment of a human capital development policy, and infrastructural development. Further, employees were acquiring human capital through internal training, external training, e-learning, and personalized learning initiatives. However, there were several challenges to human capital development, including a perceived deliberate delay in skills transfer, difficulty finding experienced professionals, the limited capacity of stakeholder organizations, a lack of employee motivation, and inadequate information on localization. The study argues that the implementation of the local content policy has enhanced the development of human capital in Ghana's upstream sector; however, it has not translated into targeted employment outcomes. The institutional arrangements have aided the development of human capital, though there are gaps that need to be addressed. As part of the recommendations, the government of Ghana should facilitate the capacity building of the Ghana National Petroleum Corporation to train more Ghanaians, and the local content regulations should specify the maximum number of years that expatriate employees can work in the country while the Petroleum Commission improves the monitoring of the progress of employees' training and succession through direct communication with them.



## CHAPTER 1: GENERAL INTRODUCTION

### 1.0. Introduction and background

The oil and gas industry continues to wield influence in international economies. For instance, the U.S. oil and gas industry has provided at least ten million jobs to the U.S. economy (American Petroleum Institute, 2017). The Norwegian petroleum industry employs more than two hundred thousand people (Norwegian Petroleum, 2022) and accrues other economic benefits to the nation. Furthermore, the petroleum industry in Canada has provided social and economic benefits to the nation, improving the living standards of its citizens (Kaplan, 2021).

Nations endowed with extractive resources like oil and gas formulate policies aimed at guiding the extraction and usage of their resources (Tordo et al., 2013). Such policies intend to ensure that maximum benefits are accrued from their oil and gas resources. There are potential benefits when the resources are managed well, and some of these can be enjoyed by citizens. Conversely, the resources may result in unfavourable outcomes if citizens in extractive communities are dissatisfied with the benefits of the extractive resources (Frankel, 2010; Onyeukwu, 2007). Local Content Policies (LCPs) have thus become one of the instruments being used by nations to integrate oil and gas production with their local economies (Tordo et al., 2013).

LCP is a policy instrument instituted by national governments to ensure that a certain share of factors of production (such as labour, supplies, technology, and knowledge) required at each stage of the petroleum value chain are sourced from the domestic economy (Ramdoo, 2015). Local content refers to the quantum or percentage of locally produced materials, personnel, financing, goods, and services rendered to the oil industry (Gov. of Ghana, 2013). According to Tordo et al. (2013), it is sometimes difficult to transfer policies from one nation to another because LCPs are

implemented under different conditions and environments, such as economic and political environments. Nations have different priorities in their developmental processes, and the context-specific nature of policies requires that countries develop suitable policies for their environments.

In Europe, a nation like Norway has implemented the LCP to benefit its citizens and the entire nation. Norway has developed a highly skilled and internationally competitive oil and gas services sector due to deliberate local-content initiatives contained within its operational contracts (Heum, 2008). Similarly, South American oil and gas-producing nations such as Brazil and Mexico have implemented LCPs to their benefit by integrating oil and gas activities into the larger economy (Mushemeza et al., 2017).

African countries, including Nigeria and Angola, have put together policy frameworks to improve local content participation (Mushemeza et al., 2017). South Africa was using LCP to aid skill development in its oil and gas sector (IGF, 2018). Nigeria is another example of a country that has translated the local content policy into regulations to maximize benefits from the petroleum resource. For instance, through their policies and regulations, they demand that a minimum percentage of indigenous citizens be employed and benefit from human capital development (HCD) in the oil and gas industry (Monday, 2015).

Human capital (HC) is the knowledge and skills that people acquire through education and training, and this capital is the result of deliberate events that yield returns (Schultz, 1961). Likewise, HC refers to the knowledge, skills, capabilities, and competencies of individuals and groups that sustain an organization's wealth (Lynn, 2000). Moreover, other definitions of HC recognize health and nutrition as components of this concept (Shultz, 1981). For this study, HC

refers to the knowledge, skills, and competencies found in people that enable them to improve organizational development and earn a living.

Heathfield (2011) refers to human capital development (HCD) as a framework for helping employees develop their personal and organizational skills, knowledge, and abilities. Sullivan and Steven (2003) also refer to the process of supporting and investing in people through training, education, mentorship, organizational development, and human resource management. For this study, HCD refers to the process of improving the skills, competencies, and knowledge of people through education and training.

The skills shortage in the oil and gas sector is in almost every country in the sector's value chain, although it varies from one country to another (Tordo et al., 2013). For instance, technical professional areas in the sector, such as geosciences and engineering disciplines, seem to generally have gaps common to nations and subsectors. This challenge appears to be high in countries that lack an industrial base and are relatively new to the petroleum sector (Keane, 2019). Keane (2019) reported from a survey of more than 17,000 oil and gas industry professionals that the industry was facing a skills crisis. The survey revealed that the engineering roles had the greatest shortage of skills.

Different issues can result in a skills gap in a nation. These include the educational system as well as the level of petroleum activities. Nations with relatively smaller reserves may not be able to develop sustainable linkages in the sector. Also, the rate of petroleum activity affects how and what kinds of policy instruments are developed for the LC. Therefore, it is difficult to develop a standard policy document and institutional arrangements that fit all petroleum nations (Tordo et al., 2013).

Institutions are the formal and informal rules and norms that organize social, political, and economic relations (North, 1990). North referred to institutions as the rules of the game in society. Formal institutions include the written constitution, laws, policies, rights, and regulations enforced by official authorities, and informal institutions include social norms, customs, or traditions that shape thought and behaviour (Leftwich and Sen, 2010). For this study, the term ‘institution’ refers to the rules (laws, regulations, policies, and guidelines) that are used to govern HCD in Ghana’s upstream sector. Institutional arrangements are enduring regularities of human action in situations structured by rules, norms, and strategies as well as by the physical world (Crawford and Ostrom, 2005). They guide, constrain, and direct people’s choices and actions (Schlager and Cox, 2017).

Though Ghana’s LCP, as part of institutional arrangements, seems to have gained popularity with the discovery of oil and gas in larger quantities, the country’s local content initiative in the extractive industry began with the minerals and mining sector. However, there were relatively limited provisions with no clear policy guiding the formulation of the LC in the Ghanaian mining sector (CCSI, 2014). For example, the PNDC Law 153 of 1986 as well as the Minerals and Mining Act (2006), Act 703, demonstrate this view. The PNDC Law 153 required mining companies to acquire inputs from Ghana to the maximum extent possible, consistent with the economy, safely, and efficiently, without giving the necessary legal guidance to enforce this provision (Ghana Chamber of Mines, 2017). Another example can be said of Act 703, clause 50 (3), which makes mention of the eventual localization of many staff in the sector. This ambiguity and gap in the institutional arrangements brought about discretionary enforcement on the part of the Minerals Commission. In accordance with the determination of the nation to capitalize on new oil discoveries to improve upon LCPs to benefit the nation, relatively improved institutional arrangements were initiated (Amoako-Tuffuor et al., 2015). With lessons from the mining sector,

Ghana formulated the Local Content and Participation in Petroleum Activities Policy Framework (Local Content Policy) in the year 2010 to aid the local content agenda when oil was discovered in commercial quantities in the year 2007. This was later followed by the enactment of the Petroleum (Local Content and Participation) Regulations, 2013 (L.I. 2204), to help with the implementation of LCP. L.I. 2204, Regulation 17, relates to the employment and training of employees.

In accordance with the provisions of the L.I. 2204, upstream firms that have a contract with the Petroleum Commission of Ghana are supposed to submit a succession plan for positions occupied by employees who are not Ghanaians. This means an understudy of skilled non-Ghanaian employees by Ghanaian employees who later take over their positions. Likewise, there should also be a demonstration of realistic determination by firms to train 'locals' when Ghanaians are not given job opportunities because of a lack of expertise. Further, in consultation with the PC, there should be preparation and implementation of initiatives by contracted firms to develop HC. The PC is supposed to provide uniform guidelines for training and development, thus Regulation 43 of L.I. 2204. The Petroleum Commission is responsible for ensuring the implementation of the LCP. They are also assisted by the Local Content Committee in implementing the policy.

A major objective of the LCP is to use the oil and gas resources to drive the industrial development of the nation (MOE, 2010). Another important attribute is ensuring that Ghanaians are actively involved in the activities related to oil and gas resources. The policy goals of the LCP include sustainable exploitation of the resource, managing the oil and gas well, benefiting Ghanaians now and in the future, and being able to attract investors that will lead to value addition. Job creation and the indigenization of knowledge should not only be in the oil and gas sector. It should also be in sectors related to the oil and gas sector.

The vision of the government of Ghana was to use the LCP as an instrument for achieving local content and participation to about 90% of all petroleum-related activities (MOE, 2010). The key policy objectives of the LCP include: maximizing the benefits of oil and gas wealth generation on a comprehensive local content platform; developing local capability in all aspects of the oil and gas value chain; achieving at least 90% local content and local participation in all aspects of the oil and gas industry value chain within a decade; increasing the capabilities and international competitiveness of domestic businesses and industrial sectors; and creating oil and gas and related supportive industries that will sustain economic development.

Ghana has made progress by giving employment opportunities to some citizens in the petroleum sector, in line with the LC initiative. However, there is still inadequate expertise in the labour force to fully participate in the activities of the petroleum sector (ACEP, 2017; Petroleum Commission, 2016). Some targets in the Local Content Policy framework include: at least 50% of the management staff of oil and gas companies should be Ghanaians from the start of petroleum activities by a firm in Ghana; at least 30% of the core technical staff should be Ghanaians from the start of petroleum activities by the licensee; and the percentage shall increase to at least eighty percent (80%) within five (5) years after the beginning of petroleum activities and (80%) within ten (10) years (MOE, 2010). According to the Petroleum Commission (2016), for example, targets for the management staff category were progressing well, while those for the core technical staff had yet to be achieved. Moreover, an indication from the Petroleum Commission (2019) is that Ghana's upstream sector will need over 5000 workers to meet the demands of the new oil and gas developments in 2020 and beyond. Importantly, the level of LC participation by Ghanaian employees should improve with HCD.

The development of HC would help produce the necessary expertise and experience for a sustainable LCP and also promote participation in the sector. One of the targets of SDG 8 is to reduce the proportion of youth who are not in employment, education, or training. Education and training are meant to lead to the acquisition of skills, knowledge, and competencies, thus developing the human capital of people. Ghana should indeed respond to the limited personnel with inadequate skills and competencies in the oil and gas sector and produce enough personnel to sustain the LCP. The concern is how Ghana can develop the skills and competencies of its citizens for the upstream sector.

Ways of achieving participation through human capital development will also be beneficial, as there is evidence in the literature that unsatisfactory benefits and opportunities for citizens can result in the resource curse phenomenon (Chukuma, 2015; Mahler, 2010; Auty, 1993). On the other hand, evidence also exists of positive development outcomes from the extractive resources of nations, including oil and gas (Rosser, 2006; Rostow, 1990), which Ghana is aiming at. This research seeks to examine the LCPs for HCD in Ghana's upstream sector.

## **1.2. Problem Statement**

The formulation and implementation of the LCP are being used to aid employment and skill development in Ghana's oil and gas upstream sector, which will in turn help in meeting the targets of the LCP. The problem of a skills shortage persists among Ghanaians in the upstream sector, despite efforts made by the government through policies to help improve the situation. This study looks at the issue of HCD in Ghana's upstream sector, where there is a skills shortage among Ghanaian employees needed to occupy certain job roles.

Multiple studies on LCPs have been carried out in different parts of the world (Pereira et al., 2019; Pegram et al., 2018; Ablo, 2018; Semikyna, 2017; Grunstein and Wionczek, 2017; Mushumeza et al., 2017; Oluwayi, 2017; Ovadia, 2017; Ovadia, 2015; Okpe, 2014; Tordo et al., 2013). Some of these studies have covered different aspects of the LCP. The benefits and challenges of the LCP for the development of nations have been studied (Semykina, 2017; Okpe, 2014; IMF, 2007). For instance, Ovadia (2015) argued that local content represents an avenue for achieving positive developmental outcomes. Extant literature has also covered the nation's policy and regulatory framework (Deringer et al., 2018; Mushumeza et al., 2017; Tordo et al., 2013). The literature on the policy and regulatory framework usually comes in the form of documenting frameworks for these oil-producing nations and also doing comparative studies on these nations. A substantial volume of literature is present on specific LCPs adopted and implemented by specific countries. Lessons from benchmark cases such as Norway and Canada exist on the implementation of LCP (Mendonca and Oliviera, 2013; Huem, 2008). There are some studies on Ghana's LCP as well as skills development (Ablo, 2018; Acheampong et al., 2016; Ablo, 2015; Obeng-Odoom, 2015; Panford, 2014; Arthur and Arthur, 2014). The studies on Ghana also discuss issues such as LCP implementation challenges, LC and value addition, and the competency development of Ghanaians to participate in the oil and gas sector.

Despite the increasing number of studies on LC, there is a gap in the existing literature (Pegram et al., 2018; Mushemeza et al., 2017; Oluwayi, 2017). According to Pegram et al. (2018), there have been limited studies on developing countries about local content and job localization in the oil and gas sector, where the labour market is undersupplied. Job localization involves developing the skills and competencies of 'locals' through training to take up job roles being occupied by

expatriate employees. In the findings of Mushumeza et al. (2017), as well as Oluwayi (2017), there is limited analysis of local content outcomes on African countries that have implemented the LCP. Monday (2015) did a notable study relating LCP to HC, looking at how the provisions of Nigeria's LCP have impacted the human capital and business performance of indigenous oil and gas service providers in Nigeria but overlooked the upstream operating firms and how these firms have been facilitating HCD in the sector, the barriers to developing human capital in the upstream sector, as well as ways in which employees acquire HC in the upstream sector. Further, countries use LCPs to achieve specific economic and social objectives and choose policy tools that address specific shortcomings. For this reason, there is no standard package of LCPs and tools that work for every country in every circumstance (Tordo et al., 2013), making it necessary for countries to research and develop policies to suit their circumstances.

Local content policies can lead to human capital development (Monday, 2015), and human capital development can boost local economic development (Glaeser et al., 2014). Monday (2015), for instance, found out in his study that the implementation of the local content policy in Nigeria has aided the training and education of indigenes to build their competencies in their upstream sector. Glaeser et al. (2011) are of the view that education has the ability to reduce unemployment in a locality. Improved employment in a locality can promote development.

Obeng-Odoom (2015) did a study on human capital and economic development in the presence of oil resources in Ghana. He argued that a boom in oil and gas resources has resulted in increased education, increasing the demand for and supply of general education. His study, however, did not take into account how human capital is acquired in the upstream sector or how operating firms in the upstream sector facilitate the development of human capital among their employees. Literature

on skills development in the Ghanaian oil and gas sector focuses on potential employees, which is what educational institutions have been doing to train students for the sector (Benin, 2017; Panford, 2014; Darkwah, 2013). The literature seems to neglect employees' skill development in the upstream sector.

According to disclosures by Suleman and Zato (2021), the Petroleum Commission (2019), and the Africa Centre for Energy Policy (2017), there is a gap in the area of core technical staff in the oil and gas upstream sector in Ghana. Upstream professions with major skills gaps include welders, fabricators, pipefitters, production technicians, instrumentation and control technicians, subsea engineers, development geophysicists, and reservoir engineers (ILO, 2021). In general, the oil and gas sector require specialized skills, and one of the major problems facing Ghana's oil and gas sector is a shortage of skilled labour, especially engineers, drillers, and production operation workers (ILO, 2021).

Some efforts have been made by the Petroleum Commission to train Ghanaians for the upstream sector. The Petroleum Commission has initiated the Accelerated Oil and Gas Capacity Building (AOGC) programme with the aim of training Ghanaians to take advantage of the opportunities provided by the LCP (Ofosu-Peasah, 2017). However, this initiative is inadequate for training Ghanaians needed for the upstream sector.

It is important to do a study, especially where expertise is needed, which is critical for the localization of jobs and sustained participation by Ghanaian citizens in the oil and gas sector as new oil fields are being developed. In a study by ACEP (2017), for instance, it was revealed that most of the Ghanaian staff lack the requisite technical skills needed for the oil and gas industry. Although some Ghanaians possessed academic qualifications, they lacked the practical skills and

competencies to fill engineering and technical positions, for instance. Furthermore, the Petroleum Commission (2019) acknowledged the need to bridge the skills gap in the upstream sector.

As a major policy in the oil and gas sector, which is linked to the wider development of the Ghanaian economy, it is necessary for studies to be done to improve upon the LCP and its outcomes. Further, HCD by firms in the upstream is being used as a strategy to increase the number of Ghanaians employed in the sector. The scanty literature on HCD in relation to LCP also makes this study necessary.

Therefore, this study addresses the issue of HCD in the oil and gas upstream sector after identifying that employees' HCD is less discussed in the LCP literature and the presence of a skills gap among local employees.

### 1.3. Aim, objectives and research questions of the study

Following the evidence in the literature that there is limited skilled personnel and expertise in the Ghanaian oil and gas upstream sector and limited literature on human capital development in the discourse of LCP, the study aims at examining the local content policies on the development of human capital in Ghana's upstream sector. In agreement with the aim of the study, the **specific objectives** include;

- To examine the LC initiatives and programmes on HCD by firms in Ghana's oil and gas upstream sector.
- To examine how employees acquire HC in Ghana's oil and gas upstream firms and the challenges faced in the acquisition of the HC.
- To examine the institutional framework for HCD in Ghana's oil and gas upstream sector.

In addressing the objectives, the following **research questions** are considered:

- How do Ghana's upstream firms facilitate the HCD of Ghanaian employees in the upstream sector?
- How do employees develop their skills and competencies in Ghana's upstream firms, and what barriers are encountered in developing the HC?
- How do the institutional arrangements in Ghana's upstream sector affect the development of skills and competencies among Ghanaian employees?

#### **1.4. Research focus and delimitations**

There is some element of concern about the skills needed to attain and sustain some aspects of the local content policy in the petroleum sector, thus promoting localization and boosting the employment of indigenous Ghanaians in all sectors of the petroleum industry. For instance, there are concerns about Ghanaians' lack of skills and expertise and the challenges associated with improving HC in the upstream sector (Ablo, 2018). In a study by Ablo (2018), the institutional arrangements make it difficult for LCP to attain one of its goals of developing human capital. For instance, the Petroleum Commission found difficulties enforcing some regulations in the sector. Moreover, practitioners raise the critical need to close the skills gap in the upstream sector (Petroleum Commission, 2019). This will help maximize the benefits of the oil resource, enable more Ghanaians to participate in the sector, and help sustain the LCP. Aside from the potential for increased export earnings, oil and gas activities are expected to create an estimated 166,500 jobs in the years up to 2030, with new oil fields being discovered (International Finance Cooperation, 2018). This implies that Ghanaians would have to acquire the necessary skills for jobs in the oil and gas sector.

Undoubtedly, HCD is necessary for the success of the LCP, hence the urgent need to put measures in place to enhance its development. However, given the fact that the LCPs are being used as a strategy to compel firms to develop the HC of employees and meet some targets rather than firms' own considerations, there are likely to be some challenges. The importance of studies in the areas of LCP and HCD becomes obvious when there is limited literature on these areas (Pegram et al., 2018) and when Ghana makes it a priority in achieving the goals of the LCP.

First, the research focused on what the international upstream oil and gas firms have been doing in terms of developing HC in the sector. For this study, a firm is a business organization operating in the upstream sector, such as Kosmos Energy Ghana and Tullow Ghana plc. The LCP in the oil and gas upstream sector covers issues such as procurement, servicing, employment, training, and technological transfer (MOE, 2010). For this study, the focus is on policies and programmes such as education and training that lead to HCD. This will enhance our understanding of the processes involved in developing HC in the upstream sector and how best to improve efforts in equipping the Ghanaian workforce with the necessary skills and competencies to compete in the upstream sector and fully utilize the space and opportunity for employment given through the institutional arrangements. HCD may lead to issues such as the firm's productivity and the earnings of employees (Schultz, 1961). However, for this study, the focus will be on how initiatives such as training are being used to acquire knowledge and skills by employees in the upstream sector for a sustainable LCP. Again, the health aspects of the HC theory are excluded from the study.

Also, employees are at the core of developing human capital, as they are arguably the major beneficiaries of the process. The educational infrastructure, funding, and information, among others, are all important issues that could affect the acquisition of HC by employees. How these employees acquire knowledge and upgrade their skills will be a part of this study.

Both contracted firms and employees may encounter some hindrances in trying to improve the competencies of the employees. This may range from issues of financial capacity to institutional lapses. Barriers to developing human capital in the upstream sector will also be looked at. Moreover, the difficulties encountered by firms and employees in upgrading skills and competencies will be examined.

Institutional arrangements may also enable or disable the various aspects of the HCD. They guide, constrain, and direct people's choices and actions (Schlager and Cox, 2017). There are policies and rules guiding HCD. These processes and initiatives for developing human capital depend on the institutional arrangements in a nation. An examination of the institutional arrangements in line with the LC policy on HCD will not be left out of the study.

### **1.5. Significance of the study**

The aim of the study is to examine the development of human capital in line with the LCP in Ghana's oil and gas upstream sector. The oil and gas industry in Ghana is growing as new oil fields are being discovered aside from the Jubilee and TEN fields, showing the need to develop and implement good policies for effective management of the resources. The study will contribute to knowledge, policy, and practice.

There are concerns and interest among stakeholders in the oil and gas sector in knowing how the sector is supporting Ghana's social development. Undoubtedly, the development of human capital is crucial for participation in the oil and gas sector, where the skills and knowledge acquired will enable Ghanaians to take up job roles in the sector. The study will provide knowledge on how the LCP is used by firms in developing human capital. Thus, how upstream firms facilitate HCD and

how employees acquire knowledge and skills. Additionally, the conceptual framework for the study will provide theoretical contributions to the literature.

The findings of the research can also help in shaping the policies of the Petroleum Commission, the government of Ghana, and other relevant stakeholders on how the skills and competencies of Ghanaians can be developed for jobs and how to promote social development. HCD is an important part of social development, and good social policies are required to be developed and implemented in each sector of the economy to aid social development. The findings will be useful in shaping the policies for HCD.

Critical to the study is how to develop human capital, which could impact the skills of employees in their field of work. The research findings on training and other skills development activities, such as education, will help develop the skills of Ghanaian employees. The study will provide knowledge on how practical processes are being used by firms and employees to develop HC. Therefore, HCD is a worthy issue of study for a sustained LCP.

### **1.6. Organization of the study**

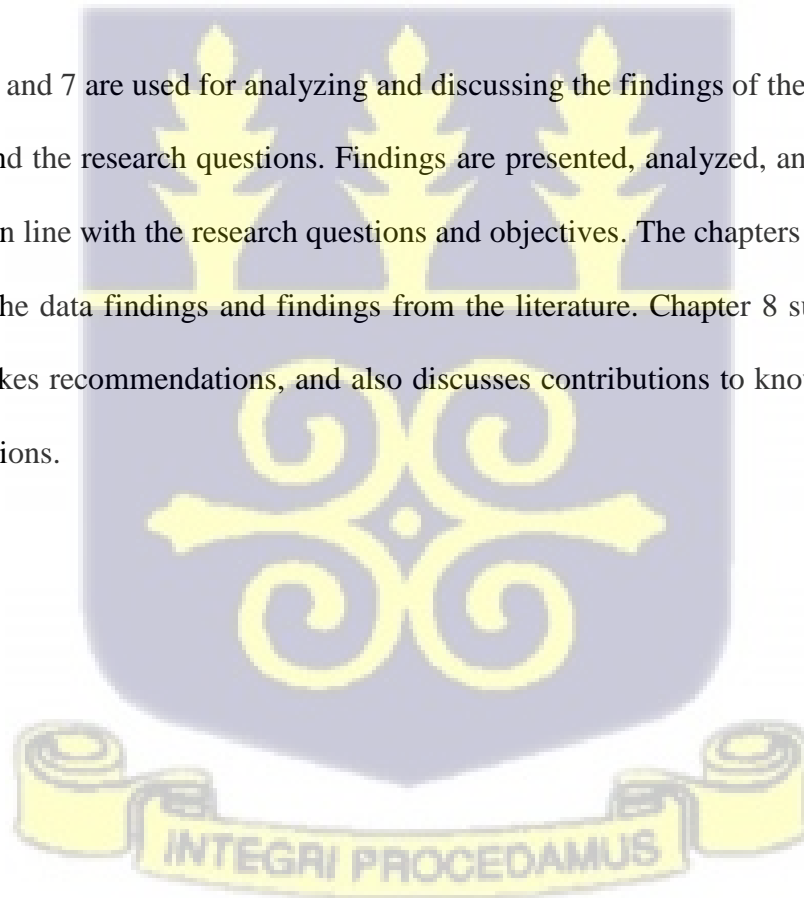
Chapter 1 gives the background information and introduction to the study, thus introducing LCPs and HCD in the oil and gas upstream sector. The research problem, aim, objectives, research questions, research focus, and discussion of some concepts were also looked at. Further, the significance of the study is discussed.

In chapter 2, relevant issues in the literature related to the topic are discussed. Also discussed are the theoretical perspectives considered for the study. Two main theories, including the institutional theory and the human capital theory, are discussed in relation to the study. Furthermore, a conceptual framework for the study is also discussed, along with a discussion of these concepts.

The chapter further discusses the literature on the global perspective of the LCP, how upstream firms facilitate HCD, how employees acquire HC, local content and institutional arrangements, and challenges in developing human capital in the oil and gas sector. An overview of Ghana's oil and gas sector and the legal framework are also looked at.

Chapter 3 of the study discusses the research methodology. In this section, the philosophical underpinnings of the study, the research approach and design, the search for literature and the data collection, the study and target population, sampling and sampling technique, case selection, the data collection, enhancing validity and reliability, ethical considerations, and data analysis are discussed.

Chapters 4, 5, 6, and 7 are used for analyzing and discussing the findings of the study in line with the objectives and the research questions. Findings are presented, analyzed, and discussed under various themes in line with the research questions and objectives. The chapters describe, analyze, and synthesize the data findings and findings from the literature. Chapter 8 summarizes, draws conclusions, makes recommendations, and also discusses contributions to knowledge and future research suggestions.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0. Introduction

This literature review begins with a discussion on some theoretical perspectives that are useful for this study. The institutional theory is discussed first, after which the human capital theory is looked at. Some concepts in line with the study, as well as a conceptual framework, are also discussed. After looking at the conceptual framework, a review of the literature on the main issues surrounding the LCP and HCD in the oil and gas sector is done. Further, an overview of the oil and gas sector in Ghana is looked at. After that, a review of the literature in relation to the objectives of the study is conducted under the following sub-headings: local content in the global perspective, how upstream firms facilitate human capital development, how employees acquire human capital, Institutional arrangements and human capital in the oil and gas industry and challenges in developing human capital in the oil and gas upstream sector. This is followed by concluding the chapter with issues emerging from the literature review.

#### 2.1. Institutional Theory

The institutional theory was developed to give insight into the assumptions, establishment, and functioning of institutions (Scott, 1995). There are two dominant perspectives on institutional theory: old institutionalism and neo-institutionalism. The old institutionalism is concerned more with the state and its various laws and practices. The new institutional theory (neo-institutionalism) considers the processes by which structures such as rules, norms, and routines become established as authoritative guidelines for social behavior. The institutional theory explains how these elements are created, adopted, and adapted, and how they fall into decline and disuse (Hodgson,

2006). Further, the theory can also be used to explain how individuals or institutions behave in a particular way. Institutions become necessary to be established when there is a desire for development in a society and a need to find solutions to problems in that society. Thus, institutions are critical to the developmental process (Rodrick and Subramanian, 2003).

Institutions have been defined by North (1990) as the rules of the game in society. They are rules and norms that guide our social interaction, and these institutions shape our incentives to do things. According to Scott (2001), institutions are multifaceted, durable social structures made up of symbolic elements, social activities, and material resources. Scott disclosed that institutions are regulative; being able to regularize behaviour, stresses the rules that prescribe rights as well as responsibilities. Hodgson (2006) also refers to institutions as a system of established and prevalent social rules that structure social interactions.

Some organizations are also viewed as institutions by some scholars. Hodgson (2006) is of the view that the unavoidable existence of rules within organizations makes an organization a type of institution. Organizations in general can refer to a group or association, formal or informal, in which there are defined and recognized roles, positions, and responsibilities structured in the same relationship to each other to achieve a specific aim (Upphof, 1992).

Some scholars also differentiate between institutions and organizations. Institutions are ‘the underlying rules of the game,’ and organizations are ‘groups of individuals’ bound by a common purpose (Harper et al., 2012; North, 1990). Organizations are shaped by institutions and, conversely, influence how institutions change. The institutional theory explains how organizational behaviours are responses to institutional pressures (Greenwood and Hinnings, 1996). For example, pressures from general social expectations and the actions of leading

organizations. Institutional theorists assume that regularized organizational behaviours are the product of ideas, values, and beliefs that originated in the institutional context (Zucker, 1983).

Various typologies of institutions exist. Helmke and Levitsky (2003) differentiate between formal and informal institutions. Formal institutions are rules that are openly codified. They are established and communicate through channels that are widely accepted as official. They refer to state institutions such as the judiciary and legislature and state-enforced rules such as constitutions and regulations. Informal institutions are unwritten social rules that are created, communicated, and enforced outside of the channels that are officially sanctioned. Informal rules can refer to civic or societal rules.

According to Keenan (2014), institutions can be private or public. Public sector institutions are those that serve the general public's interests and aim to provide accountability and responsiveness to political leaders, including their roles in distributing resources. Private sector institutions represent those that primarily affect the private sector of the economy. Private sector institutions are those that will affect the decisions of entrepreneurs' when deciding when to apply those resources. Public sector institutions could focus on the alternatives chosen by politicians and the roles that political institutions play in shaping the behaviour of politicians or distributing revenue to help politicians remain in power.

Political institutions constrain or encourage policies that can promote economic growth. In the opinion of Khan (2010), institutions work differently across countries because their political contexts are different and focus on how political settlement affects the functions of various institutions in different countries. Institutions help to enable or constrain human actions or activities and stem from norms that have been formalized and honoured by critical frames within

government and society (Harvey, 2010). Some underlying principles of these institutions are that they respect the public voice and ensure a check on power. waw

Policies are based on the law, which is authoritative (Anderson, 2003). An assumption of the institutional theory is that policy is authoritatively determined, adopted, implemented, and enforced by institutions. The policy becomes legitimate through the use of institutions. Institutions have distinct structures and functions that affect policy output. Institutions limit some forms of action and facilitate others (Schlager and Cox, 2017). Actors are seen as working within institutional constraints as well as with constraints on resources and other means of action, attempting to influence state policy.

Among the reasons for the inclusion of the institutional theory as part of the theoretical perspectives of this study is that the oil and gas upstream sector in Ghana is managed through institutional arrangements, which are at the core of the institutional theory. Again, the LCP has been institutionalized amid rules and regulations guiding how the policy should be implemented, including how human capital should be developed. The theoretical views emanating from the theory would be useful in analyzing the findings of the study. It is assumed that the institutional arrangements would enable or constrain the implementation of the LC policy with regard to HCD. Further, institutions exist to shape policy, monitor compliance, and constrain the actions of actors, the behavior of people, and other institutions. Rules are institutions that can be used to promote social interactions that result in valued outcomes (Ostrom, 2005). It is assumed that the L.I. 2204 will shape the HCD and enable compliance.

The neo-institutional theory assumes that within an organization there are mechanisms for the dissemination of information and monitoring compliance, combined with a focused and consistent set of expectations (Haveman, 1993; Fligstein, 1991). The oil and gas firms and regulatory

agencies are organizations guided by institutional arrangements and responsible for training employees and monitoring compliance, respectively. They are also involved in the dissemination of information through their reports on the oil sector. It is assumed in this study that the application of rules and regulations on the LC concerning HCD by upstream organizations will produce the targeted goals for HCD. Again, the theory will aid in the analysis of how the institutional arrangements enable or disable the organizations to perform their duties in line with the training and education of Ghanaians.

Organizations mature into institutions, forming constraints on other institutions and actors (Hodgson, 2006). Neo-institutionalism stresses that the institutional context is made up of organizations and that pressures and prescriptions within this context apply to relevant classes of organizations (Greenwood and Hinings, 1996). Neo-institutional theory, from a broader perspective, views institutions as a group of organizations interacting and forming constraints and incentives for each other. Organizations such as the Petroleum Commission and oil and gas companies in Ghana are guided by institutional arrangements to shape the LCP. Firms, employees, and government agencies like the Petroleum Commission are actors that are interdependent to make the LCP and HCD a reality. The institutional theory will be useful in understanding the interactions among the organizations that coordinate to train employees in the upstream sector.

Firms provide an 'action arena' where an 'action situation' of HC development is needed, with various actors like employees and management interacting under rules and regulations. Government agencies are assumed to operate in line with Keenan's perspective that public sector institutions are those that serve the interests of the general public and aim at providing guidance to implement public policies. Institutions can impose conditions on actors or stakeholders, influence groups or actors, and have major influence over the outcome of interests in line with

HCD. These actors are seen as working with institutional constraints and resources and trying to influence state policy. Institutions are decisive for the overall impact of the resource boom because they determine the extent to which incentives can really influence policy outcomes (Cabrales and Hauk, 2007). The use of the theory will help examine the influence of organizations in developing HC under rules and regulations.

Institutional theory has some criticism despite its positive impact on policy and practice. According to Mohammed (2017), clarity is not given to the scope and range of institutional structures that are relevant to the organizations. Also, the institutional theory fails to address when and how a particular course of action becomes socially defined. According to Suddaby (2010), institutional theory has not been able to explain how organizations attribute meaning to productive activities. Further, the institutional theory has failed to explain how rational actors in economically oriented organizations justify their actions.

## **2.2. Human Capital Theory**

In addition to institutional theory, human capital theory insights were used in the study. The HC theory generally holds that when a person is educated, both the individual and society gain, and these gains are obtained economically (Becker, 1992; Schultz, 1961). Further, the theory suggests that HC is the knowledge and skills embodied in people that are necessary for a nation's economic development. OECD (2001) defines human capital as the knowledge, skills, and competencies embodied in individuals that facilitate the creation of personal, social, and economic well-being.

The formalization of the HC theory is credited to Becker (1962). Further, other proponents of the theory, such as Mincer (1974), also helped develop the theory. Works by earlier proponents, such as Schultz (1961), are also recognized for their contributions to the development of human capital

theory. Despite the attribution of HC formalization to Becker, scholars such as Adam Smith and Fisher (1897) are recognized for the initial use of the concept. Other scholars went on to investigate the assumptions of HCT. For instance, it is an assumption of the human capital theory that individuals can pursue their human capital development, which can be compensated or remunerated through the level of production output (Becker, 1992).

Becker (1964) differentiated between two types of human capital. These include specific and general human capital. General human capital refers to the type of human capital that can be beneficial to many firms, while specific human capital refers to the kind of capital that is beneficial to a specific firm. Firms are expected to be hesitant to develop general human capital while prioritizing the development of specific human capital, even though investing in employees who can leave the firm may be risky (Becker, 1964). In developing the human capital of employees, the employees are expected to pay for the development of their human capital. Employees may fund HC development themselves or be funded by organizations. They are expected to pay back the firm in an agreed-upon scheme between the parties.

In the olden days, before formal education, it is said that knowledge was gained through diffusion (Goldin, 2014). The process of diffusion was more intense in densely populated communities and less intense in communities that were scattered with a smaller number of people. In the modern era, for nations to develop their human capital, there is a need for institutions to guide the process (Goldin, 2014). Institutional arrangements should be good enough to promote HCD, and poor institutional arrangements can be counterproductive. Thus, not every institutional arrangement may have positive developmental effects on HC.

Health is also recognized as a component of HC (Goldin, 2014). People's productive abilities increase when they have healthy human capital (Almond, 2006). Healthy people could work more intensely and for a longer time, but training and education are seen as the most important investments in HC (Oxley et al., 2008).

Creations in the field of technology can enhance HC development as they facilitate the uptake of new technology. Belanger (2002) argued that there is a need to upgrade skills and competencies to be able to use technology well. The requisite skills needed for technology should be developed through training and education.

Belanger (2002) reinforces the assumption that changes in the production systems shape the development of HC, while Romer (1990) also views HC as a source of economic productivity. Changes in the production system imply new ways of doing things, and therefore new skills and capacities in coping with the changes and a skilled labour force are indispensable for the sustainable development of a nation. Wallenborn (2010) theorizes that the requirements of HC are affected by factors including trade innovations, technological changes, and cost-benefit considerations. Oxley et al. (2008) highlighted three (3) ways of measuring HC. This includes a cost-based approach, an income-based approach, and an education-based approach.

Training can be formal or informal. Formal training is made up of planned, visible learning activities, while informal training occurs where learning may be unplanned but occur anyway or as and when needed (Mathis and Jackson, 2010). An example of informal training is interacting with employees within your organization, such that employees learn much from asking questions and getting feedback from colleagues in addition to formal training programmes. Formal training includes processes such as enrolling in school. Likewise, Hershberg (1996) classified training into

three groups. These include higher education training, on-the-job training, and vocational training. Higher education involves skills and knowledge acquisition at the university and college levels, while vocational training involves postsecondary training that provides people with the technical skills required to take up jobs. On-the-job training is a method of training where employers facilitate the training of employees as they work in their organizations.

Key assumptions of the HCD include the following: investment in education and training increases learning; increased learning results in increased productivity in the workplace; increased productivity results in higher wages for individuals' earnings and businesses (Becker, 1964; Shultz, 1961). An assumption of the HC theory, therefore, relates to the point that the experiences that people acquire result in the acquisition of skills and knowledge. Also, training and education increase productivity at workplaces, improve skills development, and increase the earnings of employees (Becker, 1964; Shultz, 1961). Another assumption is that the development of HC is a deliberate effort to develop skills that will come at a cost, and training is seen as an investment with an initial cost and expected future returns. Firms would have to agree with employees on how best to develop HC. Further, it is an assumption of the HC theory that human capital results in the ability of firms to increase productivity and survive.

Among the reasons for considering the perspective of the HC theory for this study is that the development of the knowledge and skills of employees is in line with the theoretical foundation of the HC theory. Further, the LCP provides for training and education-related activities for employees in the upstream sector, and central to the development of HC is the education and training of individuals. Moreover, the development of HC relates to firms and employees, which are also objects of study in the context of this research. An objective of the study relates to the initiatives of firms in developing human capital. It is assumed that the training provided by the

upstream firms can result in employees' skill development. Again, the theory gives insight into the seeming misunderstanding as to who should bear the cost of the development of HC, thus whether individual employees or firms should bear the cost. An objective of the study relates to how individuals acquire skills in the upstream sector. Human capital theory insights would aid in analyzing this objective.

Further, an objective of this study relates to challenges in developing HC, and the researcher can draw insights from the constructs of the theory. It is assumed in this study that challenges will include institutional gaps and limited funds for training. The theory would help understand HC acquisition and the challenges faced. The HC theory provides a basis for understanding how firms work concerning the training and education of personnel (Wolter, Stefan and Ryan, 2011). Firms, as well as employees in the firm, depend on human capital and its development for the success and excellence of both the firm and the individual employee, aside from other physical capital. The theory can also be used to explain the benefits and processes of skill and competency development. The HC theory will link the researcher to the body of knowledge that can help analyze the findings of the study.

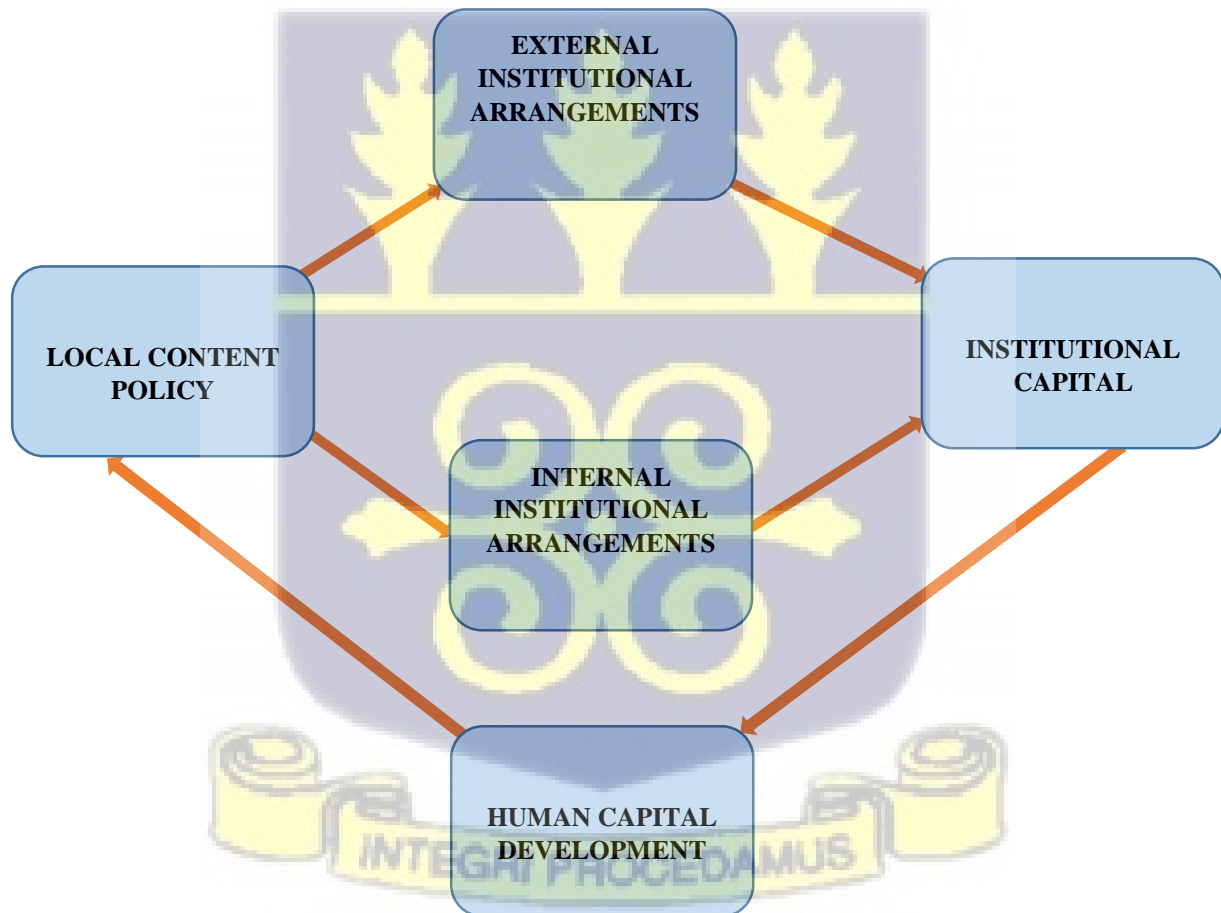
Some scholars have also questioned the HC theory. For instance, Sonnentag (1995) is of the view that the fact that an employee has lengthy experience would not necessarily mean the acquisition of human capital. Arguments are also made against the use of education as a yardstick for human capital development, citing that it is not always the case that investment in education will lead to the development of HC (Wolter et al., 2011). Bottone and Sena (2011) questioned the theory that HC influences organizational performance. They are of the view that it is rather the quality of the workforce that is also influenced by the environment where the worker resides, thus the employees' institutional environment. Oxley et al. (2008) also raised concerns about the validity

of HC as an enhancer of growth, arguing that HC does not always result in positive growth. Another challenge with the HC theory is measurement. Defining personnel skill levels appears to be a herculean task, as does establishing consistent measuring criteria across nations (Oxley et al., 2008).

### 2.3. Conceptual framework

The figure below is the conceptual framework for this study. The conceptual framework was modified from that of Huang and Cao (2016).

Figure 2: A conceptual framework for HCD of upstream sector local employees



Huan and Cao (2016) were using their framework to explain the relationship between institutional capital and the competitive advantage of an organization. In their work, particular importance was

placed on the need for institutions, which resulted in the creation of institutional capital to aid the competitive advantage of a business entity. Accordingly, expressing their theory is as follows: institutional arrangements will result in institutional capital, which will also lead to capabilities and strategic behaviour. Capabilities and strategic behaviour will lead to a strategic business advantage.

In the discussion on the conceptual framework for this study, first, the concepts that were used in the construction of the framework are looked at. These included LCP, institutional arrangements, institutional capital, human capital development, and LC sustainability.

#### *Local Content Policy-*

There has been a considerable rise in the use of the LCP in recent years as nations try to achieve a diverse set of policy objectives that relate to employment, industrial, and technological development goals (OECD, 2017). This policy is used across different sectors and industries within a nation. An example is the extractive sector. LCP is a policy instrument instituted by national governments to ensure that a certain share of factors of production (such as labour, supplies, technology, and knowledge) required at each stage of the petroleum value chain are sourced from the domestic economy (Ramdoo, 2015). OECD (2017) refers to LCPs as policies forced by nations that require firms to use locally manufactured goods or locally supplied services so as to operate in an economy.

The concept of 'local content' is used to mean diverse things. For instance, in South Africa, the concept reflects the policies that are meant to accrue benefits to communities where firms operate or where indigenous people live around mining communities, while in Ghana it reflects a broader scope of benefits that can be accrued by the entire citizenry. As a result, the policy, however it is

conceptualized, is meant to provide benefits to the citizens of the nation. Furthermore, two main approaches are used to drive local content. This includes the requirement-based approach, where policies expressly require investors to take certain measures or abide by certain requirements, and the incentive-driven approach, where the government acts as a facilitator, providing incentives to firms to increase their use of local factors of production, their transfer of technology, or the capacity development or training of local staff (Stone et al., 2015).

The idea behind the local content policy is the use of a framework to guide and enhance the ability of host nations to gain optimum benefits from some form of natural resource in the context of this study or other sectors of a nation's economy. As much as the policy brings benefits to host nations, such as creating business opportunities, it also comes with some challenges during the implementation of the policy (Tordo et al., 2013).

The LCP shapes both internal and external engagements and also results in the establishment of laws. While within host nations, new rules are established as regulatory institutions, in the international arena too, they affect laws concerning international trade (OECD, 2017). Besides, the policy affects the industrial linkages in the host economies. However, in some nations, though local firms are given the opportunity to procure equipment and other needed materials and logistics, this procurement is done in foreign countries because industries in host nations lack the capacity to produce these logistics. LCPs also affect skills and competency development as well as employability in host nations (Suleman and Zaato, 2021; Monday, 2015). For LCP to be well implemented, it will require the use of policy instruments, such as regulatory instruments.

*Institutional arrangements-*

As discussed earlier when the institutional theory was looked at, institutions have been defined, conceptualized, or used in various ways. Institutions are the formal and informal rules and norms that organize social, political, and economic relations (North, 1990).

The concept of institutional arrangements has been looked at in different ways in the literature. Institutional arrangements are enduring regularities of human action in situations structured by rules, norms, and strategies as well as by the physical world (Crawford and Ostrom, 2005). They guide, constrain, and direct people's choices and actions (Schlager and Cox, 2017). Further rules, if followed, can promote coordination and enable groups and individuals to work together to achieve desired results (Wieble and Sabatier, 2017). Furthermore, institutional arrangements are the policies, systems, and processes that organizations use to legislate, plan, and manage their activities efficiently and effectively coordinate with others in order to fulfill their mandate (UNDP, 2015).

The idea behind institutional arrangements is the establishment of formal rules, which can be referred to as external rules in the context of this study, as well as the existence of both formal and informal rules in the firms. In the context of this study, institutional arrangement refers to the set of rules guiding the development of HC in the upstream sector. The external institutional arrangements, such as the legislative instrument, gain legitimacy from the state, and the authority of the internal institutional arrangements, such as organizational norms, comes from organizations. However, external institutional arrangements can affect the kinds of internal institutional arrangements that are established in organizations.

Institutional arrangements can work well in good material and physical environments. Though it enjoys some stability over time, there can be an institutional change when existing institutions are

not effective enough in dealing with solutions to a problem (Helme and Levitsky, 2003). Likewise, the interplay of different institutions affects the actions and choices of individuals and groups. In addition, institutional arrangements play a significant role in determining the usefulness of a given set of policies (North, 1990). Similarly, institutional arrangements are key to development. It determines whether an institution promotes socially productive ends that benefit all members of society or a small segment of society at the expense of others (Firmin-Sellers, 1995).

### *Institutional capital-*

The concept of institutional capital was given attention by Oliver (1997), who looked at the interplay between institutions and resources as a way of enhancing the competitive advantage of firms. Oliver (1997) mentions the need for an institutional environment that enables an organization to gain a competitive advantage and also develop. Hoff & Sen (2005) conceptualized institutional capital as a mechanism shaped by shared rules, norms, expectations, standards, and values associated with attitudes and beliefs. Further, it is shaped by a collection of written or unwritten behavioural rules and social consensus built by the organization or supported by it. Some scholars like Lu et al. (2010) regard institutional capital as abilities and capabilities that are shaped by internal and external institutional environments. They refer to institutional capital as resources embedded in the institutional environment.

The idea behind institutional capital is the legitimacy, authority, and capabilities that organizations gain with the establishment of institutions. Institutional capital can manifest in the form of abilities and capabilities, cognitive capital, coordination mechanisms, technological know-how, support roles, values, developmental decisions, economic value, and heterogeneous resources (Huan and Cao, 2016). Huan and Cao (2016), in the development of their logic framework, disclosed the

theoretical gap in institutional capital and localization in enterprises. In the view of Lin (2005), institutional capital reflects socio-cultural knowledge and skills about relevant rules within the organization, while in the view of Hoff and Sen (2005), institutional capital uses the legitimacy of the organization as an important element for the effective functioning of the organization. Further, Lu et al. (2010) also consider the concept as resources embedded in an organization as a result of institutional arrangements, and these affect the progress of the organization.

#### *Human capital development-*

Human capital has been conceptualized in different ways, as looked at earlier in the discussion on institutional theory. HC refers to the knowledge, skills, and competencies found in people that enable them to improve organizational development and earn a living.

Heathfield (2011) refers to HCD as a framework for helping employees develop their personal and organizational skills, knowledge, and abilities. HCD also refers to the process of supporting and investing in people through training, education, mentorship, organizational development, and human resource management (Sullivan and Steven, 2003).

The idea of HCD emerges from the point that it can be acquired through a process, the major processes being education and training. It is also a continuous developmental process that is experienced over the course of an individual's life. Though other factors, such as nutrition, can also affect HCD, the main component considered for this study is training and education. The ability of nations to enhance human capital development depends on the presence of enabling institutions. One set of these enabling institutions is the legal institutions, thus the rule of law (Golden, 2014), thus helping to provide the enabling environment and due process for training and development to thrive.

#### *LC Sustainability-*

The concept of local content, as defined earlier in this study, refers to the quantum or percentage of locally produced materials, personnel, financing, goods, and services rendered to the oil industry (Gov. of Ghana, 2013). Sustainability, on the other hand, is a broad concept that became popular in the modern era in the 1980s (United Nations General Assembly, 1987). It was mostly applied to environmental and natural resource issues. The concept is, however, being applied in a variety of disciplines, sectors, and topical issues (Watson, 2018). Examples include sustainable education, sustainable supply, sustainable local content, and sustainable transportation, among others.

Sustainability has been conceptualized or defined in different ways. The UN (1987), through the Brundtland Commission, referred to sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs. Gruen et al. (2008) also defined sustainability as the capability of being maintained at a certain rate or level. There are three main pillars of sustainability (Purvis et al., 2019). These include the environmental, social, and economic perspectives (Purvis et al., 2019). These pillars interrelate to achieve the goals of sustainability in different fields and disciplines.

The idea of sustainability generally revolves around the ability of a system, process, or resource to be maintained at an expected standard to keep the system or process running continuously to meet both present and future needs. Sustainability can be influenced or affected in different ways. Institutions can affect sustainability (Rietved and Stough, 2006). For instance, the rules and regulations of international trade agreements can affect sustainable transport (Rietved and Stough, 2006). Institutions can also affect the development and sustainability of a policy, programme, or project. Further, the development of human capital is critical for sustainability (Slaus and Jacobs, 2011). Sustainability can also impact phenomena or systems. It helps in maintaining the quality and quantity of resources (Watson, 2008). It also helps with the continuation of a process or

system. For this study, LC sustainability is the ability of the upstream sector to train and educate enough Ghanaians to take up present and future job opportunities in the upstream sector.

The above conceptual framework developed for this study begins with the development of LCP, which then results in the creation of institutions to govern and manage the upstream sector. Local content policies are developed by the state to support programmes in the oil and gas sector and, in the context of this study, HCD. These policies are then operationalized to give a percentage of oil and gas-related activities to the citizens of the nation (Tordo et al., 2013). Local content policies, after their development by government agencies with input from other organizations such as CSOs, will lead to the institutionalization of the policy (Anderson, 2003). Thus, the foundation of policies is institutions. Further, policies are implemented by government institutions using legislation (Sanchawa, 2015). This process of policy development by government agencies results in the institutionalization of developed rules and regulations and, thus, gives effect to the developed policies. In the context of this study, the government of Ghana has formulated a local content policy that has resulted in the creation of institutions.

Institutions can be internal or external. External institutional arrangements can appear in the form of the government's rules and regulations governing the oil and gas sector, as well as government agencies responsible for managing the oil and gas resources. An example of such an institution is the L.I. 2204 from the Ghanaian perspective. The internal institutional arrangements are made up of oil and gas firms' rules, norms, and standards of operation. Both internal and external institutional arrangements will build up institutional capital. Some scholars like Lu et al. (2010) regard institutional capital as abilities and capabilities that are shaped by the internal and external institutional environment. They refer to institutional capital as resources embedded in the institutional environment.

Institutional capital can manifest in the form of abilities and capabilities, cognitive capital, coordination mechanisms, technological know-how, support roles, values, developmental decisions, economic value, and heterogeneous resources (Huan and Cao, 2016). Likewise, institutional arrangements, which provide institutional capital, can lead to training, education, seminars, and workshops, among others, leading to the upgrade of skills, abilities, and competencies when this legislation is implemented and enforced (Goldin, 2014). The institutional capital can thus result in the HCD through various processes of training and education, support roles, resource allocation, and decision-making mechanisms within the upstream firms. Employee training can be faced with challenges such as funding and institutional lapses.

HCD can then result in facilitating and sustaining the LCP. When local citizens' skills, competencies, and abilities are developed, governments whose priority in LC in this context is to ensure that a certain percentage of oil and gas-related jobs are given to local citizens will be on track to sustain the LCPs because skilled employees will be available. These processes can result in the localization of jobs within the firm and the nation at large.

Again, formulating LCPs and establishing external and internal institutional arrangements for implementing the policy to develop HC are met with various challenges (Pereira et al., 2019; Mendoca and Oliviera, 2013). The challenges may include institutional gaps, limited funds, and organizational capacity.

Accordingly, the assumptions in line with the conceptual framework for the study are as follows: LCP for the upstream sector results in the establishment of external and internal institutional arrangements; both internal and external institutional arrangements will build up into institutional capital in the upstream firms; institutional capital will then lead to the development of human

capital; developing human capital will then lead to a sustainable LCP in the oil and gas upstream sector in line with employment and training; the transition from the processes of the establishment of the LC policy through to the sustainability of it is met with challenges.

#### **2.4. Overview of Ghana's oil and gas sector**

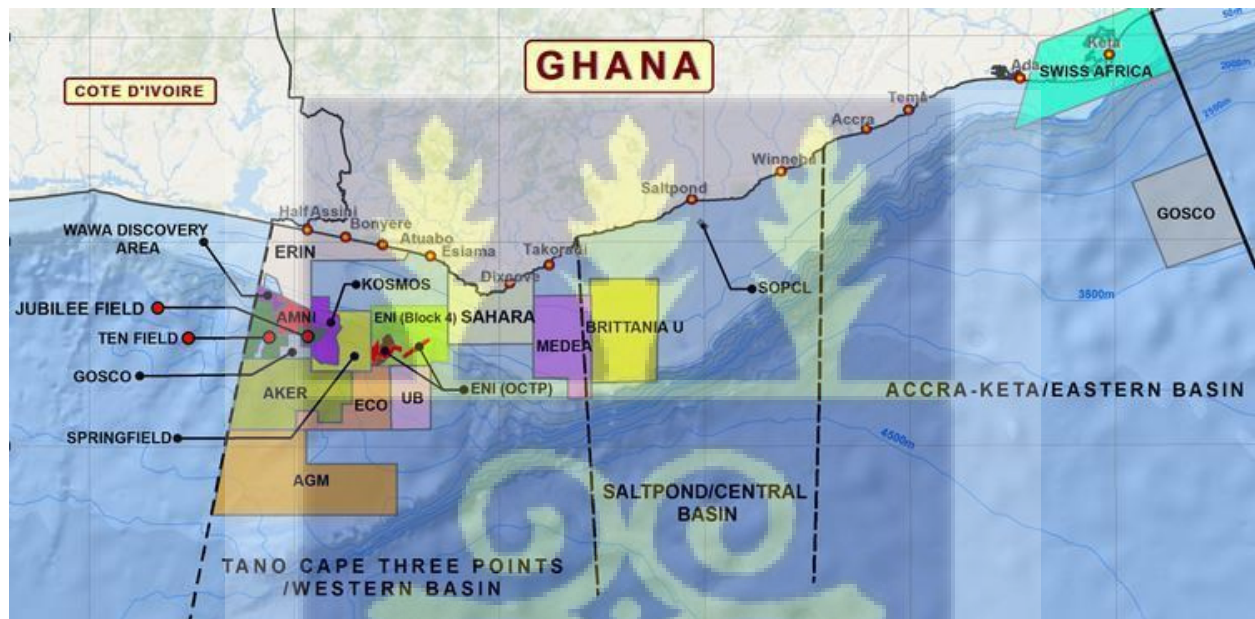
Some oil-related activities in Ghana, especially exploration, began in the 19<sup>th</sup> century (GOSCO, 2015). There has been exploration activity since 1896 and beyond. The first oil well was drilled in the Tano Basin in 1896 by the West Africa Oil and Fuel Company. From 1909 to 1925, the Societe Francaise de Petrole was involved in exploration, as were the African and Eastern Trade Corporation from 1923 to 1925, the Gulf Oil Company from 1956 to 1957, and the Russian/Romanian Company from 1960 to 1967.

The oil and gas sector operations in Ghana are grouped into upstream and downstream activities, which are sometimes linked with midstream activities. The upstream sector is regulated by the Petroleum Commission, while the downstream sector is regulated by the National Petroleum Authority, with both agencies being supervised by the Ministry of Petroleum in Ghana. The Ghana National Petroleum Corporation (GNPC) is a partner with a mission to explore, develop, and produce oil and gas.

Some key petroleum-producing fields are being utilized to produce oil and gas in Ghana. These include the Jubilee field and the Tweneboa-Enyenra-Ntomme (TEN) field (PIAC, 2022). Figure 2, below, shows petroleum-producing fields in Ghana. In 2003, the Kosmos Group was established and started exploration activities in 2004 with its partners. The jubilee field was made up of different partners, namely Tullow Ghana Limited, Kosmos Group, Ghana National Petroleum Corporation (GNPC), Ghana Group, Anadarko, and Petro SA. Ghana discovered commercial

quantities of oil in 2007 at the Jubilee oil field, which is located at about 60 km offshore between the deep-water Tano and west in Cape Three Points blocks in the Western Region (Okpanchi, 2012). The Jubilee field is believed to contain about 800 million barrels of oil. New developments in the oil sector are also on course. One such example is the Tweneboah, Enyira, and Ntomme oil fields (TEN) project. Ghana had over 1 million barrels of oil as of 2015 and had received revenues of more than 3 billion dollars between the periods of 2010 and 2017 (Quartey and Abbey, 2020).

Figure 2; Map of petroleum producing fields in Ghana.



Source; Petroleum Commission (2020).

The upstream oil and gas sector in Ghana is guided by various institutional arrangements. These include;

- Petroleum Exploration and Production Law 1983 (PNDC Law 84)

This law is meant to regulate upstream petroleum exploration and production. According to this law, the ownership of the oil and gas resources was trusted in the hands of the Provisional National Defense Council, which was a military government at the time the law was made. Article 257 of the 1992 constitution of the Republic of Ghana provides for the ownership of the oil and gas resources to be entrusted to the hands of the President of the Republic of Ghana. The president is supposed to manage the resources on behalf of the people of Ghana (ACEP, 2015). The PNDC Law 84 allowed contracts and petroleum companies to operate in accordance with the terms of a petroleum agreement.

- Petroleum Income Tax Law 1987 (PNDC Law 188)

The petroleum income tax law provides the framework for the assessment and collection of taxes from petroleum companies. Some taxes related to this regime are corporate taxes, withholding taxes, and personal income taxes. To encourage investment in Ghana's petroleum industry, petroleum companies are exempted from import and export duties and value-added tax (VAT).

- Petroleum Commission Acts, 2011 (Act 821)

The Petroleum Commission Act 2011 (Act 821) is supposed to serve as oversight, regulate the use of petroleum resources, and coordinate policies relating to petroleum. The commission is to regulate upstream petroleum activities. The functions of the Petroleum Commission include ensuring compliance with health, safety, and environmental standards (ACEP, 2015). They regulate petroleum operations, receive applications, and issue permits for specific petroleum activities. They are also responsible for assessing and improving appraisal plans. This is not under the direct control of the minister of petroleum, which makes it independent.

- Petroleum (Local Content and Local Participation) Regulations, 2013 (LI 2204).

This regulation guides the inclusion of indigenous Ghanaians in business-related activities and jobs in the oil sector. The regulation is to help achieve a degree of control by Ghanaians over development initiatives for local content as well as provide a robust and transparent monitoring and reporting system to ensure the delivery of local content policy objectives. This regulation aims to increase job opportunities for Ghanaians (MOE, 2010). Local experts are encouraged to be involved in petroleum activities. This could be achieved through capacity-building initiatives, thus enabling the development of the petroleum sector value chain through education, skills transfer, and expertise development programmes. The local content is to achieve a minimum local employment level and in-country spending for the provision of goods and services in the petroleum sector value chain, as specified in the first schedule. Again, the regulation is to help increase the competitiveness of domestic businesses and create related supportive industries that will sustain economic development (ACEP, 2015).

- The Petroleum Revenue Management Act, 2011 (Act 815)

The Petroleum Revenue Management Act 815 provides a framework for the collection, utilization, and management of resources in a responsible, transparent, and sustainable manner for the benefit of the citizens of Ghana per Article 36 of the Constitution and related matters. The Act is meant to regulate the collection, allocation, and management by the government of the petroleum revenue derived from upstream and midstream petroleum operations (PIAC, 2022). Where there is any conflict between the provisions of Act 815 and other enactments on terms and conditions, stipulations, and authorization for the collection, allocation, and management of petroleum revenue, the provisions of the act shall prevail. An amendment to Act 815 (2015) has been made

to improve the management of petroleum revenue. Some key issues covered by Act 815 are allocations and disbursements, which spell out the object of the Ghana stabilization fund and the annual budgetary fund amount. Another key area is the management and investment of the Ghana petroleum funds, which spells out the obligations of the Minister of Petroleum, the role of the Bank of Ghana, the role of the Ghana Revenue Authority, and the Investment Advisory Committee. Section 51 of the provision relates to the Investment Advisory Committee. Section 51 of the provision relates to PIAC. Other issues that are taken care of are accountability mechanisms, transparency, and public oversight. PRMA 893 was done in 2015 to improve upon PRMA 815 for better management of the oil resource. The amended Act 893 is made up of new provisions with regard to PIAC.

Both governmental and non-governmental organizations are involved in one way or another in managing the oil and gas sector. For instance, some CSOs contribute to the management of oil and gas resources (Debrah and Graham, 2015). The extractive industry transparency initiative (EITI) provides some level of participation in enhancing transparency, where voluntary organizations and private institutions are all involved in the process (GHEITI, 2022). The EITI supports improved governance in countries rich in natural resources. When governance is good, resources can generate larger revenues to foster economic growth and reduce poverty. Civil society is actively involved in the processes of designing, monitoring, and evaluating and contributes to public debate (GHEITI, 2022). Through the publication of audit reports, the Ghana Extractive Industry Transparency Initiative (GHEITI) has contributed to reforms in managing resources like oil. Further, the Civil Society Platform for Oil and Gas (CSPOG) and the Public Interest and Accountability Committee (PIAC) offer some level of oversight and policy recommendations to help in the management of oil and gas resources.

- The Petroleum Exploration and Production-Data Management Regulation, 2017 (LI 2257)

The regulations provide for the reporting and management of the petroleum data in Ghana. This includes the receipt, interpretation, and analysis of petroleum data; the provision of a safe environment for the storage of petroleum data submitted; the efficient management of the data; and the documentation and reporting of information related to the acquisition and submission of petroleum data. The purpose of these regulations is to specify the format, content, and standards required for the preparation and submission of geological, geophysical, and production data related to petroleum activities (Government of Ghana, 2017). Moreover, the regulations support the efficient exploration of petroleum resources in Ghana.

### **2.5. Overview of the LCP in Ghana's oil and gas sector**

The development of oil and gas is considered a process that will accelerate growth and reduce poverty while enabling prosperity for the people of Ghana (MOE, 2010). The Government of Ghana, after the discovery of oil and gas, came to the realization that in order for the nation and the citizenry to derive benefits from the resource, challenges related to funding, the capacity of human resources, and technology that were likely to hinder the goals should be resolved.

To maximize benefits from the oil and gas resources, the LCP was formulated by the government of Ghana. The policy goals of the LCP include making knowledge indigenous and producing expertise and technological know-how in the oil and gas sector. It is expected that local content and, for that matter, localization will reach a 90% local content and participation target 10 years after the implementation of the policy (MOE, 2010). To realize this vision of localization, the

government of Ghana would have to strive to provide a good environment for Ghanaians to participate in oil and gas activities.

In general, the LC policy goals revolve around the following:

- Maximizing the benefits from the oil and gas resources through the use of local personnel, locally produced goods and services, employment opportunities for Ghanaians, financing in the industry value chain, and overall retention of optimal benefits within the nation of Ghana
- Developing the capabilities of the local people and organizations throughout the oil and gas value chain
- Attaining a minimum of 90% localization within 10 years of the coming into existence of the local content policy
- Improving the capabilities of local businesses and industrial sectors and making them internationally competitive
- Enhancing economic development with the creation of oil and gas-supportive industries for sustainability purposes

The objectives of the policy will be attained through the following actions:

- Compulsory local content in oil and gas development
- Giving first consideration to Ghanaians with regard to business and activities in the oil and gas sector
- The purchase of goods and services for operations within the upstream sector should, as far as possible, be done by Ghanaian entrepreneurs

- Employers must give preference to qualified Ghanaians and also have training plans for these Ghanaians to upgrade their skills.
- Technology and technological skills transfer from employers and operators to Ghanaian organizations, businesses, and personnel
- Encourage the participation of women in the upstream sector
- The implementation of the local content policy should be guided by a legislative instrument (MOE, 2010).

Various categories of operators and activities within the upstream sector should consider local content participation. This will include the activities of contractors, subcontractors, and companies within the upstream sector (MOE, 2010). The LCP also makes provisions for goods and services by national entrepreneurs, where opportunities should be given to indigenous citizens of Ghana to take part in the business of the oil and gas sector. With the provision for employment and training of Ghanaians in the sector, a certain percentage of employees should be occupied by Ghanaians in various staff categories, including the management staff, core technical staff, and ‘other staff’ in the oil and gas upstream firms.

## **2.6. Global perspective of local content in the oil and gas sector**

Globally, LCPs have been pursued in both developing and developed countries for the interests of oil and gas-producing nations. Various issues have been discussed in the discourse of local content in the oil and gas sector in different geographical contexts.

The design of LCP varies from one nation to another (IGF, 2018; Oluwayi, 2017; Mushemeza and Okiri, 2017; Nwoakora, 2011). Mushemeza et al. (2017) argued that when priority is given to the development of industries in designing and implementing LCPs, it is likely to give a better

outcome in terms of job creation and value addition. They did a comparative study on oil and gas-producing countries in Africa and South America and came up with these findings. The study also revealed that LCPs in African countries mostly focus on the adoption and implementation of the LCPs, while there is a shift in South America in the direction of how they maximize benefits from petroleum resources. In South America, the nations are mostly without a specific framework for LCPs in the petroleum sector, and private oil and gas firms are allowed to determine the extent of local content in contracts (Mushemeza et al., 2017). For instance, the majority of the petroleum-producing nations in South America have no provisions for training requirements in their institutional framework. The study by Mushemeza et al. (2017) demonstrated that each country has its own strategies for maximizing benefits from its oil and gas sector. Some developed nations depend on already existing national laws, while others have to develop a new policy that is institutionalized to bring about economic development. Targeting industrial development through LCP is a good way of promoting social and economic development.

Using a comparative study approach, Oluwayi (2017) did a study on the nature and approaches to LCPs in the Middle-East and North African countries. It was realized that there are variations within regions and among nations in their approaches to LCPs. For instance, the definition of LC varies across various regions. Nationals from Middle Eastern countries receive adequate skill development training. A challenge with the formulation of the LCP is the definition of the LC policy, which is likely to vary within different jurisdictions.

Different countries have different approaches to using local content as a tool for achieving local content goals (Oluwayi, 2017). While countries like Jordan and Qatar provide contractual requirements for their local content, the government does not provide monitoring mechanisms for their LCPs (Oluwayi, 2017). This assertion by Oluwayi (2017) tends to agree with Mushemeza

(2017), which suggests countries have their own priorities and approaches when it comes to the vision and goals of the LCPs. Mushemeza and Okiri (2016) argued for several factors that influence the outcome of LCPs in African countries such as Chad, Angola, and Nigeria. This included well-designed LCP frameworks, the presence of institutions like the World Bank, as well as agencies for implementing and monitoring LCP. Countries that implement LCPs expect positive outcomes.

Local content policies have accrued benefits for some nations since they implemented them (Adedeji et al., 2016; Tordo et al., 2013; Heum, 2008). For example, oil and gas companies are encouraged to enter into research and development projects with Norwegian universities and research institutions (Heum, 2008), which helps train local citizens to participate in the oil and gas sector. Students in these universities, as well as researchers in institutions, have the opportunity to upgrade their skills and knowledge in the oil and gas sector. This encouragement to enter into research suggests the non-compulsory nature of these LC agreements. Training could lead to skills development, confirming the possible benefits that the Norwegians gained. Tordo et al. (2013) further disclosed that nations that have implemented LCP have benefited from the transfer of technology both in the forward and backward linkages of the petroleum value chain. Technology and how to operate such scientific advancements require funds and skills, which are mostly lacking comparatively in nations that have made new oil discoveries and are now developing their sectors and industries. Policies enshrined in the legal documents of such countries enable firms to transfer technology and technological know-how to host countries (Tordo et al. 2013). This implies that nationals of developing countries can take up certain technical positions and increase the number of employees in specified positions in an effort to fulfill their LC ambitions.

In a study by Adedeji et al. (2016), they connected the debate on local content policy to economic development and looked at the extent to which local content policy affects economic development. He identified a gap in a limited study on the extent of the impact of LC on economic growth in developing countries. A quantitative approach through structural equation modeling was used in collecting and analyzing the data. It came up that LC has a significant impact on value addition in Nigeria. His study suggests that Nigeria, like other countries, has had significant benefits from LC in developing its economies.

For the design of the LC policy to attain its goal, some considerations are suggested. This includes the use of metrics to help implement and monitor the LCP. Metrics can aid in the measurement of results and might include the ability to measure the number of employees and the value of goods and services sourced from the LC market through IOCs, as well as the development of local agencies involved in research and development. For instance, Ghana uses metrics such as the number of jobs created through the policy to help in monitoring and evaluating the policy.

The LCP affects the economic development of nations that have adopted and implemented the policy (Pereira et al., 2019; Pegram et al., 2018; Semikyna, 2017; Ramdoo, 2015). The LCP can boost the economic development of oil-producing nations that make use of the diverse benefits of its implementation (Semikyna, 2017). There is the inclusion of local labour and local products in the oil and gas-related activities in the host nations with their forward and backward industrial linkages, for example. As firms are set up, opportunities for jobs rise for citizens to capitalize on the activities of new firms in terms of production, transportation, and sales. One advantage of the LCP for economic development is that it encourages experts from host countries to return from abroad to fill positions available through the LCP to its citizens (Pereira et al., 2019). Notwithstanding the numerous benefits associated with the LCP, some costs can be associated

with the LCP. It can result in a loss of revenue and investment opportunities for host nations (Pereira et al., 2019). The arguments then suggest that, depending on the nature of the policies implemented, LCP has both costs and benefits.

Bilateral investment treaties contain at least four types of provisions to limit the scope of LCP design and its usage (Ramdoo, 2015). For example, the non-discrimination provisions mean countries can no longer provide incentives or subsidies or impose any preferences that would apply only to local investors. State-owned enterprises are covered by these provisions as well as pre-establishment rights, thereby limiting the capacity of countries to develop indigenization policies. More importantly, they limit countries' space to impose ownership requirements on foreign investors. Another example is to restrict performance requirements, in particular the establishment of joint ventures and minimum domestic participation; employment conditions, including foreign labour; the location of headquarters in a specific location; the procurement of goods and services; export conditions and transfer of technology, production processes, proprietary knowledge, and research and development (Ramdoo, 2015).

Teka (2011) did a study on the linkages between the Angolan oil and gas sector and the manufacturing and industrial sectors. The study used an industry-wide survey of oil operators and interviews with stakeholders in the oil and gas industry, including public institutions, regulatory authorities, and training institutions, but no mention was made of a specific group of respondents within the firms and organizations that were used for the study. It came up in the study that, due to the non-existence of a proper local content strategy as well as weak local skills and an industrial base, there is a constraint on the expansion and making deeper linkages. This suggests the need for good local content initiatives to boost the development of the national economy by linking the resource sector to other industrial sectors, such as the manufacturing sector. The limitation of the

value addition to labour and some basic setups does not promote the maximization of the benefits of the oil and gas sector to Angola's development.

In general, common gaps across countries and subsectors seem to exist at highly technical and senior levels in professional disciplines such as geosciences and various forms of engineering, as well as in midlevel technical and managerial positions (Tordo et al., 2013). Especially in the early stages of its development, a petroleum sector's capacity to meet professional industry requirements is likely to be low, particularly in countries that lack an industrial base. This assertion of a lack of skills can lead to the inability of nations to fulfill their LC policies in terms of meeting targets for the number of employees in the oil and gas sector. Skill shortages throughout the industry's value chain are persistent in almost all oil and gas-producing countries, although their level and spread across nations and subsectors differ (Tordo et al., 2013). Countries that have been in oil and gas production for a comparatively longer time have a better chance of developing HC because of the value of experience in the industry.

Monday (2015) highlighted in his study that building technological capacity in indigenous oil and gas firms in line with the LCP has helped improve the competencies and skills of employees. Though personnel with improved skills and competencies can eventually leave the firm with their capital, it is most likely that the personnel, and for that matter, the human capital, will remain in the oil and gas industry. His study acknowledges the ability of the LCP to develop HC that can be maintained in the oil and gas industry for a sustainable LC policy. In this study, data was gathered using questionnaires on indigenous oil and gas companies in the Niger Delta of Nigeria, which are mainly small and medium-sized enterprises (SMEs).

LC has a significant impact on human capital development and boosts business performance (Monday, 2015). Monday (2015) acknowledged that LC policies were aiding workers in the oil

and gas sector to develop their academic qualifications and management skills. In a policy paper by the French Institute of International Relations (2015), the assertion was that firms like Exxon Mobil and ENI have put strategies in place to promote LCP in Nigeria. For instance, the creation of the National Content Plan integrates the LC initiatives into the overall policies and programmes of the firm.

In the Ghanaian context, literature on the local content policy has covered different issues as well. Literature has looked at the local content design being used in the nation (Ayanore, 2018; Acheampong et al., 2016; ACEP, 2014). Acheampong et al. (2016), using a comparative studies approach to various policy documents and policy instruments of Ghana, Nigeria, and Sweden, are of the view that Ghana's LCP and instruments did not take into consideration the capacity of the local firms before developing the policy.

Likewise, ACEP (2014), using a comparative study approach, mentioned that both Angola and the Ghanaian LCPs consider local personnel and material resources, but the Ghanaian LC design provides for measuring these factors in monetary terms. Ayanore (2018) took the debate on the establishment of the LCP to the 'political arena' arguing that the LCP is driven by political settlement tendencies, including partisan policy making and clientelism as well as interest from politicians.

The implementation of the LCP has been studied in Ghana (Suleman & Zaato, 2021; Obiri, Bjeimi & Boateng, 2019; Ablo, 2018; Ackah & Mohammed, 2018; ACEP, 2014). Suleman & Zaato (2021), using a mixed method approach, found out that in order for the local content policy to be successful and sustainable, there has to be a balanced interplay between the needs of stakeholders, including the policy makers, IOCs, local communities, and regulators. Besides, the findings of

Ackah and Mohammed (2018), using desk review and document analysis, suggested that central to several factors affecting the effective implementation of the LCP are the low capacity of Ghanaian companies, discrimination against companies by IOCs, and the weak regulatory capacity of the PC. Likewise, ACEP (2014) pointed out that due to the low capacity of local Ghanaian firms, they are not able to participate 'well' in the local content policy. Ablo (2018) suggested that challenges in employing Ghanaians in the sector include delays in skills transfer. Obiri et al. (2019) argued that, for LCP to thrive, the oil and gas companies should be encouraged to contribute to the infrastructure development fund while the government of Ghana also offers tax relief.

In relation to skills development, the literature on local content policy on Ghana seems limited. Besides, the limited literature focuses on how the educational infrastructure and system support potential employees, and thus students, in developing their skills and knowledge (Benin, 2017; Obeng-Odoom, 2015; Panford, 2014; Darkwah, 2013), rather than on how employees in upstream firms develop their skills and competencies in the upstream sector.

Benin (2017), in his quantitative study of the prevailing human resources local content in Ghana's oil and gas sector, is of the view that employees in the upstream sector largely satisfy the requirements of the L.I. 2204, suggesting that training acquired by Ghanaians who are potential employees positively impacts the human resources in the oil and gas sector. Darkwah (2013) argued that youth training in targeted skills by oil and gas training institutions such as Alpha-Beta did not offer assured employment opportunities. However, the youth remained hopeful that something good would come out of the training. This study was done through a mixed-method approach.

Panford (2014) argued that there is a disconnect between training in Ghana's institutions and the needs of the oil and gas industry. He pointed out that, like the majority of training organizations, their curricula are not based on any national strategy and do not constitute concerted activities with clear, nationally coordinated objectives. The researcher did a study on the preparedness of Ghanaians to gain employment in the oil and gas sector using survey data.

### **2.7. How firms facilitate human capital development in the upstream sector**

Oil and gas firms give employees within the sector opportunities to participate in training programmes (Bozick et al., 2017; ILO, 2012; Peek et al., 2008). Whereas ILO (2012) conveyed that oil and gas firms were making it possible for employees to have vocational training, Bozick et al. (2017) disclosed in their study that oil and gas firms were providing a conducive environment for on-the-job training. This was done after analyzing survey and interview data on three American states. Furthermore, they maintained that the focus of training in upstream firms is primarily on-the-job training. This means that limited space is given to other forms of training, such as formal training through formal educational institutions. This dynamic implies more experiential learning in addition to some theoretical knowledge.

The ILO (2012) also pointed out that oil and gas firms have collaborated with government institutions to set up training centres to help in the development of human capital in the upstream sector. This is also in accordance with the disclosure by Peek et al. (2008) that there were collaborative efforts between oil companies and universities to facilitate training centres for the development of HC. Furthermore, there is also an off-shore campus model where a university, in-country, collaborates with a national oil company or government to establish a local campus specializing in oil and gas, largely in technical education (Peek et al., 2008).

ILO (2012), for example, pointed out that Angola, for instance, has benefited from such an initiative that has resulted in the creation of a training centre where citizens are benefiting from the infrastructure to boost their competencies' development. Again, these training facilities not only serve the interests of upstream employees but also help train potential staff and students.

### **2.7. How employees acquire HC in the oil and gas upstream sector**

Employees in the upstream sector are able to acquire HC in the upstream sector in diverse ways (Argawal and Argawal, 2015; Monday, 2015; Figgs, 2005). One major means through which employees acquire HC in the upstream sector is the use of the on-the-job learning experience (Figgs, 2005). Moreover, coaching and mentoring as methods of training play an important part in the knowledge acquisition process in the upstream sector. Argawal and Argawal (2015) indicated in their studies that the involvement of indigenous-corporate relationships such as cross-cultural bridge promotion has the potential to bring new ideas, so collaboration with people from different cultural backgrounds can lead to new knowledge. Monday (2015) revealed in his study that employees of Nigeria's upstream service providers were acquiring knowledge through formal education.

### **2.8. Challenges in developing human capital in the upstream sector in line with LCP**

In trying to develop HC in the oil and gas sector, a number of challenges are encountered (Pereira et al., 2019; Grunstein and Diaz-Wionczek, 2017; Bozick et al., 2017; Leite and Buainain, 2013; Panford, 2014; Ranjbarfard et al., 2014).

In a study by Mendonca and Oliviera (2013) on Brazil, they argued that there are lapses in the Brazilian LCP framework, describing the regulatory process as weak. The paper suggested a lack of coordination and weak roles among government organizations responsible for petroleum

oversight. Lack of coordination in the policy implementation can lead to a disjointed process, as pointed out by Leite and Buainain (2013), and therefore lead to delayed or unsuccessful implementation to achieve certain targets, including training and the localization process. Coordination is useful at both the interpersonal and intergovernmental levels to share ideas, avoid duplication of responsibility, and keep the process on track. Despite the importance of coordination, challenges may emerge from the process of coordination.

In a policy study on Tanzania, it was revealed that the main challenge to successful local content policies is the institutional set-up (Ovadia, 2017). The structures of organizations and regulations governing the activities of stakeholder organizations undermine the effective implementation of the LCP. There were inconsistencies and misunderstandings, for example, among various organizations whose roles overlapped, and there were no clear lines of regulatory duties to perform. This indicates the country's difficulties in meeting targeted LC goals. The findings of Ovadia (2017) echoed those of Grunstein and Diaz-Wionczek (2017), thus asserting the need for coordination among organizations. According to Grunstein and Diaz-Wionczek (2017), coordination challenges exist in implementing LC strategies. In a study done on Mexico, for example, it became known that a host of institutions, including governmental and non-governmental institutions, make it difficult to coordinate their LC initiatives. Though the Ugandan LC provides for training and skills development, there is no proper system or institution for scrutiny of the type of training the Ugandans may need for the oil and gas sector (Gwayalka, 2014). The majority of the training regimes are based on what the individual institutions decide to do. Further, if local oil and gas firms are to enter into a joint venture with IOCs, there is a requirement in the Ugandan Petroleum Law for firms to have similar capacities. This capacity is in the form of

capital, technology, knowledge, and skills (Gwayalka, 2014). The Ugandan government seeks to achieve some level of inclusion in the petroleum sector through the policy.

The challenges of developing human capital in Mexico are linked to the broader issues of educational development (Grunstein and Diaz-Wionczek, 2017). The suggestion is that the educational process should be strengthened not only at the tertiary level but throughout the primary level structures. A very good foundation for education would aid in the development of expertise in various fields of study. A high-quality education in fields of study such as technology, engineering, and other relevant courses would help build a strong human resource base with the requisite expertise. However, these good educational arrangements come with some costs that may limit the realization of such an educational vision. Grunstein and Diaz-Wionczek (2017) assert collaboration between governmental and non-governmental agencies, both domestic and overseas, for human capital development. The introduction of courses related to the upstream sector should be encouraged at the secondary school level, and educational infrastructure should be developed to train employees, though it will come at a cost.

Efforts to implement the LC policy can be impeded by capacity issues related to employers as well as the low skill level of personnel (Ostenson, 2017). He also pointed out in his practice paper that several firms are putting up development programmes to help close the skills gap. Financial capacity remains key to funding training and other educational programmes. Efforts made by nations in the implementation of LCP are sometimes constrained by factors such as a lack of skills and low capacity on the part of producers and contractors to meet the requirements of firms as well as bilateral trade agreements (Ostenson, 2017). Ackah and Mohammed (2018) also acknowledged issues with the limited capacity of firms in Ghana. Thus, the inability to provide certain services and operations and maximize benefits from the opportunity provided through the LCP. Challenges

with capacity are not limited to firms but also regulatory authorities such as the PC. The limited capacity of the PC, for instance, could lead to ineffective monitoring and enforcement in line with the LCP implementation.

Though the Pakistani authorities have produced regulations to give opportunities to the local citizenry in terms of local content, among the challenges they were facing was the deficit in personnel to take up positions in the petroleum sector (Ospanova, 2010). Petroleum-producing nations, especially those with relatively few years in the petroleum industry, lack the skilled local workers needed to take up job opportunities. This was identified in a review of the Pakistani LCP. Another provision in the Pakistani legal framework is the inclusion of the salary ratio of the local employees in the overall salary base of suppliers and contractors, which has been seen as very problematic by some firms, citing reasons of privacy, competitive advantage, and other commercial factors. To limit the occurrence of this situation, for instance, in the Pakistan situation, policy measures could be resorted to. However, this can lead to disagreements between regulatory authorities and petroleum firms because it makes these firms reveal some information that could have been a competitive advantage or strategy for them.

Bozick et al. (2017) further mentioned that challenges in developing human capital in the oil and gas upstream sector include the uncollaborative nature of the firms and tertiary institutions. Furthermore, they revealed that it is the actors' unwillingness and time constraints that contribute to the lack of collaboration. Rangbarfard et al. (2014) grouped barriers to knowledge acquisition into people-related barriers, technology-related barriers, organization-related barriers, environment-related barriers, and knowledge-related barriers. This was revealed during their study on Iran using survey data. Otoo et al. (2009) also pointed out that because a lot of capital is needed

for activities related to the upstream sector, only a few employees were able to gain employment, and this dynamic can have implications for the number of employees that can be trained.

Oil companies in petroleum nations may lack important factors such as qualified local personnel to be used for local content policy, therefore resorting to foreign nationals to be used for company activities (Pereira et al., 2019). International oil companies that are initially likely to depend on foreign expertise may find it difficult to depart from that trend. The involvement of new employees becomes problematic for IOCs. The study also enumerated some negative aspects of the LCP. This included an increase in the cost of oil and gas activities and delays in these activities. Investors are sometimes reluctant to invest due to the nuances that come with the local content policy. These suggest possible low revenue due to low investment.

There is a disconnect between what is being taught at educational institutions and what industry and the economy need from the Ghanaian perspective (Panford, 2014). This was revealed in an exploratory study of petroleum skills in Ghana. The implication is that students will complete school but will not be qualified to take up certain jobs in oil and gas firms, even though they have academic certificates. The decision of educational institutions not to offer courses that meet the demands of industry resonates with the insights from Panford (2014). However, Benin (2017), in his quantitative study of the prevailing human resources in Ghana's oil and gas sector, is of the view that employees in the upstream sector largely satisfy the requirements of the L.I. 2204, suggesting that training acquired by Ghanaians who are potential employees positively impacts the human resources in the oil and gas sector.

Benin (2017) argued that the lack of succession planning by firms is a constraint on an increase in the local content of human resources and also suggested that the Petroleum Commission and firms

should organize educational seminars to equip indigenous Ghanaians with specialized skills for working in Ghana's upstream oil and gas sector. Meanwhile, there is a low capacity to train a good number of Ghanaians steeped in the physical sciences, technology, and engineering (Panford, 2014).

### **2.9. Institutional arrangements and HCD in the oil and gas sector**

Various institutional arrangements affect how human capital is developed in the oil and gas sector (Pereira et al., 2019; Lebdioui, 2019; Asiago, 2017; Marcel, 2016; Ovadia, 2015; Gwayalka, 2014; Mendoca, and Oliviera; Atsegbua, 2012; Nwaokoro, 2011). Nwaokoro (2011) argued that the composition of the members on the monitoring boards for LCP in Nigeria was creating weaknesses in the institutional setup and monitoring process for LC, including training and localization. He discovered a gap in the institutional arrangements, for example, for the LCP, because there were no standard measures provided in the laws regarding the qualification and caliber of people, i.e., the method of appointment and tenure of those who should form part of the implementing body. It is expected that when the rules and regulations on LCP allow people with some level of expertise or educational background to be in charge of implementing LC policy, it is likely to result in positive outcomes for HCD and the entire LCP.

Asiago (2017), in his review paper on local content regulatory instruments, identified that the LC initiative has become unpopular among some foreign investors due to challenges with the rules guiding their operations. Other hindrances to the operations of such companies are the inability of host countries, especially developing countries, to meet the human capital and human resource demands specified in their rules and regulations. Some nations set targets that seem to be beyond their capacity, so unrealistic targets can create conflict between nations and operating firms (Asiago, 2017). Different challenges also exist with different institutional arrangements. For

example, the application of substantive law in a retrospective manner affects laws and agreements on LC initiatives. It brings about changes in the application of the law on LC and, for this matter, HC, leading to inconsistencies.

LCPs can apply to any industry but pose special challenges for the petroleum sector. The petroleum industry relies heavily on well-trained personnel, and the requirements to source for and train local employees sometimes constrain the activities of firms if qualified citizens are not available to be employed and trained (Pereira et al., 2019). Further, oil and gas-producing nations use laws and regulations to govern the sector. In Angola, for instance, fines can be imposed on non-compliant firms, and companies with unpaid fines are ineligible for new contracts (Pereira et al., 2019). The use of sanctions in the regulative instruments may also be problematic. If sanctions are too low, they may be accepted as normal, and firms can resort to not complying with the rules and paying for the sanctions. High sanctions can also lead to investors seeking business in alternative countries.

According to Marcel (2016), an estimate of between 80 and 92% of the world's petroleum, in terms of legal agreement, has local content binding it. Sometimes, LCPs are unable to meet what some nations expect after they have implemented the policy. As much as some of the government leaders of nations start a conversation about local content policy, citizens and society at large also put pressure on nations to initiate local content policy. CSOs and experts in the field of oil and gas can put pressure on ruling governments to make certain commitments in localization to satisfy society (Debrah and Graham, 2015). However, these policy targets for the training and education of employees may be difficult to achieve. In some countries, the regulations provide overall targets.

Angola, through its laws, has made oil and gas companies use indigenous firms for their transactions (Ovadia, 2015). Her literature seems to point out that there is a gradual shift in the narrative from LC to in-country value. This suggests that LC laws be relaxed and that countries develop their economies in accordance with the petroleum value chain, thus prioritizing national benefits from the value chain over the LCP. However, formulating and implementing LC policies with economic inclusion would be difficult because inclusion requires everyone in society to take part in economic life. Meanwhile, without the necessary skills and capacity of individuals, it will be difficult to take part in society and, in the context of this study, be employed in the upstream sector. The policies can be formulated, but the implementation can be a challenge.

The success of the LC policy of a nation also depends on detailed LC institutions. The policy needs to be guided by good institutions to oversee implementation and monitoring, including training employees in the sector. The governments of host nations are challenged with decision-making. For example, the kind of firms to set up and maximize the benefits from the oil and gas resources and LC. The acknowledgement of the importance of institutions is stated by Heum (2008). Institutional arrangements can affect the success or failure of the LCP, including training and education. For instance, in reviewing the case of Norway's implementation of LCP, Heum (2008) arrived at the point that Norway had strong institutions and an industrialized economy before oil and gas were discovered. These factors enabled Norway to focus on the participation of its national industry within the oil and gas sector, both locally and internationally. This suggests that good institutional arrangements are needed for successful local content implementation. Atsegbua (2012) argued that regulation has resulted in the domestication of the oil and gas sector within the Nigerian economy. However, LC can also have a disadvantageous impact on the economies of nations.

Okpe (2014) identified a conflict between the LCP of Nigeria and international trade agreements. The discussion paper suggested that the ITA on foreign investment is implicated by the Nigeria LCP. In Malaysia, for instance, international commitments form part of the constraints in the implementation of the local content policy (Lebdioui, 2019). Malaysia is a member of the World Trade Organization (WTO) and must consequently abide by the rules and regulations as an associate member.

### **2.10. Chapter conclusion (Emerging issues from the literature review)**

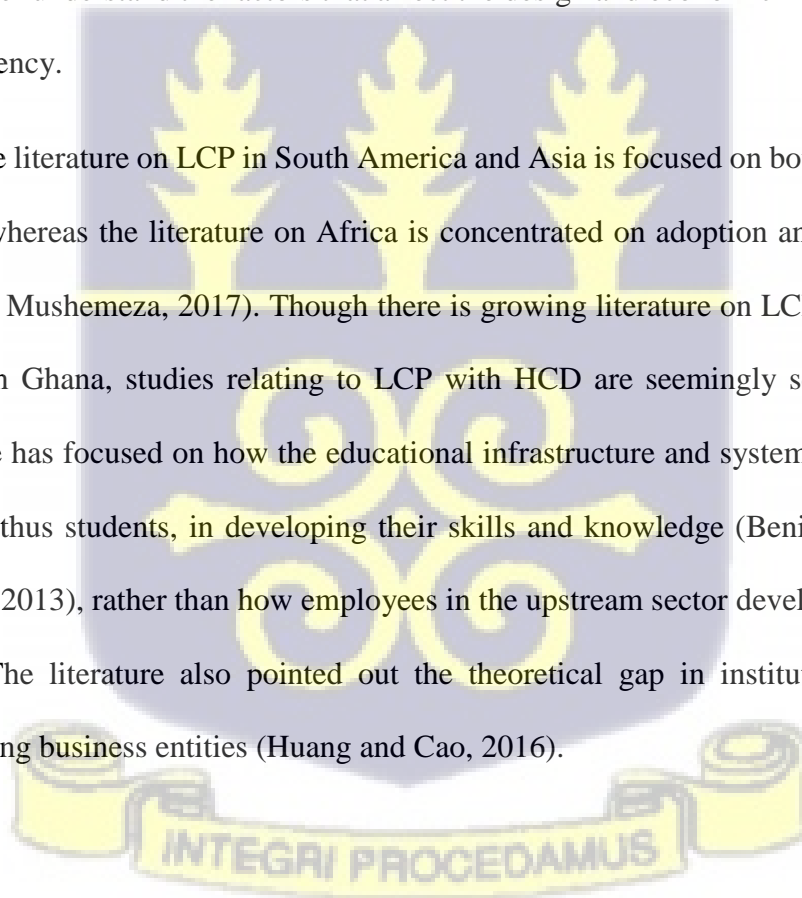
After reviewing relevant literature on LC and HCD in the oil and gas sector, a number of issues came up. It became known that the definition and design of LC vary from country to country. Again, it became apparent that while developing countries would normally design LCP to enhance benefits accrued to the nation, developed countries like Norway rely on their national laws to promote value addition and accrue benefits to the nation. In signing petroleum agreements, nations such as Brazil encourage petroleum firms to adhere to some LC initiatives, whereas developing countries would normally sign binding agreements for LCPs.

The literature indicated that skills shortage was affecting employability as well as the development of industrial linkages with the petroleum sector. Some of the studies also supported the fact that the kinds of institutional arrangements that are put in place enable or disable the effectiveness of policy measures. Generally, the training of employees includes on-the-job and formal education, while challenges in developing human capital include the capacity of firms, coordination, and institutional challenges. Firms have to facilitate HCD through the provision of an enabling environment. The literature also demonstrated the importance of technology in developing the HC of individuals. Besides, the literature points out the fact that some nations may develop good

policies and implement them, but they lack enforcement mechanisms to ensure successful implementation. Meanwhile, there are some positive attributions to the LC, for example, the creation of employment, and there are some challenges with LCPs as well. For instance, the policies may conflict with some bilateral trade agreements (BTAs).

The existing research was dominated by qualitative studies and mixed methods as compared to quantitative studies, with few attempts to measure the economic impact of LCPs and their sustainability over time. Documenting countries' outcomes is an important step in the development of a reference framework for their design (Tordo et al., 2013). To this end, further research is necessary to better understand the factors that affect the design and economic impact of LCPs and drive their efficiency.

Contextually, the literature on LCP in South America and Asia is focused on both implementation and outcomes, whereas the literature on Africa is concentrated on adoption and implementation (Oluwayi, 2017; Mushemeza, 2017). Though there is growing literature on LCP in other parts of the world and in Ghana, studies relating to LCP with HCD are seemingly scant. Besides, the limited literature has focused on how the educational infrastructure and system support potential employees, and thus students, in developing their skills and knowledge (Benin, 2017; Panford, 2014; Darkwah, 2013), rather than how employees in the upstream sector develop their skills and competencies. The literature also pointed out the theoretical gap in institutional capital and localization among business entities (Huang and Cao, 2016).



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1. Introduction

The research methodology section describes the philosophical foundations, research approach, and design of the study. Next, the section looks at the study population, case selection, sampling, and sampling technique, as well as the data collection. It also looks at some measures for enhancing the quality of design, ethical considerations, data analysis method, and challenges encountered in data collection.

#### 3.2. Philosophical foundation

As a step in the pursuit of this study, the philosophical underpinnings were looked at to provide a guide for the study. Various philosophical worldviews exist, and examples include positivism, constructivism, pragmatism, and transformative worldviews (Creswell, 2014). These worldviews consider issues related to ontology, epistemology, and methodology in the quest to seek knowledge in the world around us. While ontology refers to the nature of reality, epistemology is about how the researcher comes to know reality, i.e., the relationship between the knower and the known (Creswell, 2014).

Positivists assume that to discover reality, you have to strive for objectivity, thus creating an objective reality. Further, the positivist view on knowledge acquisition is based on evidential data, and it is almost impossible to discover the absolute in the search for knowledge (Bryman, 2012). According to this worldview, knowledge should be free from the human element. Among the key features of this worldview are the application of the scientific process in an inquiry, the search for

causes of problems, and the testing of the hypothesis. The positivist worldview is normally attributed to quantitative research.

Critiques raise questions about the dominant concepts of scientific authority and scientific objectivity associated with positivism. The objectivity said to be characteristic of the production of scientific knowledge is specifically identified as a male way of relating to the world (Fee, 1984). Some groups in society have a view of science in which there is popular doubt about scientific institutions and processes. Examples include the anti-nuclear and environmental movements, the radical science movements, and fundamentalist religious movements. People also see scientific authority more as a form of power than a source of scientific truth. Some critiques of science have to do with the identification of scientific and masculine ways of thinking. The process is seen controlling, exploitive, and destructive of the earth (Fee, 1984).

With pragmatism as a worldview, researchers examine the problem and use all legitimate approaches and methods that suit the context to address the research problem (Morgan, 2014). In this worldview, there is no alignment to one way of searching for knowledge. Pragmatists make use of the research methods that are suitable for their inquiry (Simpson, 2014). Pragmatists normally involve researchers who are into the mixed-method approach, which uses both quantitative and qualitative approaches in doing the research. Furthermore, the use of both qualitative and quantitative methods is viewed as research methods that complement each other in order to produce research findings.

Another form of philosophical worldview is the transformative worldview. This philosophy asserts that research should be done such that it should bring positive change in the lives of people (Mertons, 2010). In the transformative worldview, the assumption is that research should bring about social change and address injustice in society (Merton, 2010). By so doing, politics should

not be left out of the research process where political change is necessary to bring about the general good of society. Further, the interests of marginalized groups in society, such as the disabled and racial minorities, should always be considered when doing research. After doing research on a particular group of people, the lives of these participants should be transformed. An example of the research methods employed by researchers in this category is action research.

On the other hand, constructivism also assumes that in the process of interpreting the meanings attributed to a phenomenon, process, or the world around us, meanings are constructed by humans (Creswell, 2014). This philosophy is normally attributed to qualitative research. It looks at the social context in which a phenomenon emerges and becomes the standard or norm in society. The worldview also assumes that realities are socially constructed by people and interact with an ongoing process where the knowledge produced is in line with this phenomenon. Also, the knowledge produced is based on the interpretations assigned by people involved in the day-to-day social process (Cresswell, 2014).

The constructivist worldview is used as a guide to satisfy the aim and achieve the objectives in this study. The overall aim of the study is to examine the local content policies on the development of human capital in the upstream sector. This requires an understanding of the processes and events put in place by selected firms. Seeking the views and experiences of selected participants and using social constructivism as a philosophical guide will be suitable for the study.

An important issue with social constructivism is studying the ways in which people in society, communities, and various groups take part in the formation of their social reality. This worldview guided this qualitative research to interact with relevant participants involved in the activities of the upstream sector, where interpretations were given to the views and experiences of the research participants (Cresswell, 2014). The constructivist worldview assumes that reality is constructed,

subjective, and multiple. Also, the epistemology of the constructivist worldview assumes that the research process should be value-laden, that the knower and what is to be known must interact, and that the findings of the research are constructed during the research process. The methodological approach of the constructivist worldview involves qualitative methods such as interviews.

Participants, who are mostly employees in the oil and gas upstream firms, are involved in how human capital is developed within the firms' context. The objectives of the study include examining the LC initiatives and programmes on HCD in Ghana's oil and gas upstream sector, examining how employees develop their HC in Ghana's upstream sector and the challenges faced, and examining the institutional framework on HCD in Ghana's oil and gas upstream sector. Meanings, understandings, and interpretations in accordance with questions based on these objectives were based on qualitative data gathered from interacting with participants and document sources based on the phenomenon of the study. The nature and achievability of the research objectives fit the assumptions of the social constructivist worldview, hence the choice of this worldview to guide the study.

### **3.3. Research approach**

Different approaches and strategies can be used in conducting research. This can be a mixed-method approach or a qualitative or quantitative approach (Boateng, 2014). With the mixed-method approach, the researcher merges qualitative and quantitative data in order to provide a comprehensive analysis of the research (Cresswell 2014). This will enable the collection and analysis of both qualitative and quantitative data on the topic of study. Mixed-method research is the type of research that combines the use of quantitative and qualitative approaches to research,

in which a researcher or team of researchers combine elements of qualitative and quantitative research (Bryman, 2012). It focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding and solution to research problems than either approach alone.

A quantitative approach, on the other hand, seeks to test a theory by specifying a narrow hypothesis and collecting data to support or refute the hypothesis. It can also be used to predict causality and relationships, quantify variations, and describe the characteristics of a population (Boateng, 2014). Bryman (1988) stated five methods of quantitative research. This included social surveys, experiments, official statistics, structured observation, and content analysis.

The qualitative approach involves exploring and understanding the meaning individuals or groups give to social phenomena or human problems (Cresswell, 2014). This approach is useful for describing the nature of a problem, issue, situation, or phenomenon (Boateng, 2014). Boateng (2014) highlighted types of qualitative research, including ethnography, case study, phenomenology, and grounded theory. Phenomenology is used to study individuals' experiences of a phenomenon. Phenomenological research focuses on describing what all participants have in common as they experience a phenomenon (Boateng, 2014). Ethnography is used to study the culture of a group of people. An ethnographic study describes a group of people's cultural characteristics and cultural scene (Boateng, 2014). A grounded theory is used to inductively generate a theory while describing and explaining a phenomenon. The method requires that the researchers compare the collected units of data against one another to arrive at propositions (Boateng, 2014).

A qualitative approach was adopted for this study. Among the reasons for the choice of the qualitative approach is its ability to help attain the objectives of the study. The kind of information needed to achieve the objectives relates to qualitative sources. The objectives of the study require the use of people's views, experiences, and opinions to understand the phenomenon of the study through interpretations of views and constructions. The qualitative approach is used in this study to enhance the understanding of the views and experiences of the participants in the study through their own words. Furthermore, the qualitative approach is in line with the philosophical foundation adopted for this study, which is the constructivist worldview.

### **3.4. Research design**

According to Pandey and Pandey (2015), the research design is a framework or plan that is used as a guide in collecting and analyzing the data. The research design is important and will have an influence on the credibility of the results. The design helps provide direction for the research process.

Various kinds of research designs exist that can be used for conducting various studies. Examples of these research designs include experimental design, quasi-experimental design, longitudinal design, cross-sectional design, and case study design (Bryman, 2012).

Experimental designs are mostly used by researchers in the natural science arena. However, it is also used by researchers in the social sciences. For example, it is used by researchers in social psychology and the social policy space. Some phenomena or events studied in the social sciences using this experimental design are the impacts of policies or policy reforms (Bryman, 2012). The conduct of experimental research involves the manipulation of independent variables to ascertain

whether there is a possibility of influencing dependent variables or not. However, there are exceptions in the social sciences, where not all independent variables can be manipulated.

The cross-sectional design is sometimes referred to as the survey design (Bryman, 2012). However, a cross-sectional design is considered a broader or more generic research design, whereas a survey is more associated with data collection using questionnaires and structured interviews. In a cross-sectional design, the researcher is concerned with variations within the phenomenon of study, where data is collected among a larger population (Bryman, 2012). Data on interesting variables is normally collected around the same time. The cross-sectional design allows for the quantification of variables. Though the association of variables can be ascertained, it is not certain to establish causality, and it is difficult for variables to be manipulated.

Longitudinal designs can be considered an extension of a cross-sectional design. The longitudinal study takes a relatively long time to complete (Bryman, 2012). Longitudinal designs may allow for some time to study variations within a phenomenon as compared to cross-sectional designs, and because of that, the findings can produce some issues related to causality. In the process of longitudinal research, a survey is conducted on a sample, which is followed up with another survey. A comparative research design can be used to study two cases that contrast each other using somewhat identical methods (Bryman, 2012). What the comparative design is about is that it enables the comparison of two cases within the context of the phenomenon under study.

Case study research is an intensive inquiry into a setting, event, or phenomenon (Bryman, 2012), wherein the research of a case can be made of a person, family, organization, or event, among others. Furthermore, it offers a researcher the ability to conduct in-depth or intensive research into the case or cases being studied. Again, case study research seeks to explain a contemporary situation, for example, how a process works within an organization, the performance of an

organization, and smaller group behavior (Yin, 2018). Moreover, it helps in finding answers to ‘how’ and ‘why’ questions (Yin, 2018). The form of a question provides an indication of which research design would be suitable. It is also among the preferred methods of research where there is difficulty manipulating the applicable behaviour.

A case study design is adopted for this study. The aim of this research is to examine the LCPs on human capital development in Ghana’s oil and gas upstream sector. The case study design was used for the collection and analysis of data for the study. Case study design represents a type of research design for making inquiries into contemporary phenomena. Case studies can be designed using a single-case or multi-case approach. Whereas a single-case approach is suitable for cases such as the extreme case, revelatory case, common case, and critical case, a multi-case approach can be used for research on diverse cases or similar cases to enable replication (Yin, 2018). For instance, Yin (2018) stated that a revelatory case study is worth conducting if its descriptive information will be revelatory. Yin (2018), however, admitted that other situations may call for the use of case studies that are not included in the rationales he listed.

The multi-case approach entails designing a study that is made up of two or more cases, based on which data will be collected and analyzed. Multi-case design studies are likely to provide researchers with more evidence than a single-case study. While a multi-case study can produce both statistical generalizations (generalizations to a population or universe) and theoretical generalizations (analytic generalization), a single-case study can also produce theoretical generalizations (analytic generalization) but has limitations in generalizing to a population (Yin, 2018). However, the single-case study still remains a valid method of inquiry into a phenomenon (Yin, 2018).

For this study, the researcher settled on a single-case study design, selecting an upstream firm that is revealing to address the research questions. An in-depth examination of an upstream firm such as Tullow Ghana plc was considered in the context of this study because it is an experienced firm and a leading producer of oil in Ghana in the modern era. Furthermore, the firm has implemented the LCP and trained employees, and likely to provide insightful evidence on HCD in Ghana's upstream sector.

In a nutshell, case study research can be used when a 'how or why' question is being asked to conduct an in-depth study to address a research problem about a contemporary phenomenon or event within a specific context where a researcher has little or no control over variables. In this study, the questions are mainly about the 'how' questions for addressing the research problem. It enabled an exploratory and descriptive in-depth study of the phenomenon under consideration. Moreover, it offered a suitable process for achieving the objectives of the study.

Objective 1 is to examine the firm's local content initiatives and programmes on HCD. A qualitative approach was used for the collection and analysis of data. This approach helped the researcher examine how firms were facilitating the development of HC. Document sources, such as LCP-related implementation documents, were used with interview data. The data helped provide information on the activities of firms on LC, including plans for training and education of employees for the business year with regard to HCD. Objective 2 relates to examining how employees develop their human capital in the oil and gas upstream sector. It also relates to the examination of challenges in the development of the human capital of employees in the upstream sector. A qualitative approach was used to find out the issues in line with the challenges. Interviews were conducted to find out data on the challenges faced by participants as well as the use of documents such as localization plans and reports. This approach was used to study and describe

ways of acquiring human capital. To be able to find out the views and personal experiences of employees and other relevant stakeholders, interviews were used to collect data on ways that employees develop their skills and competencies. Objective 3 relates to examining the institutional framework for human capital development in the oil and gas upstream sector. A qualitative approach was adopted. LCP documents and aspects of L.I. 2204 were analyzed alongside interviews in addressing this objective.

In setting the bounds for this study, the study focused on upstream operating firms in Ghana engaged in oil and gas exploration and production, looking at the case of Tullow Ghana plc. The participants involved in the study included employees in the upstream sector, with particular attention to Ghanaian employees, thus core technical and management staff. Other participants sampled include the staff of CSOs that are into oil and gas activities, MPs, representatives from MOE, and the PC staff in management level positions. Participants' experiences and perspectives on the topic were solicited, with a focus on the period following the establishment of the LCPs and LC regulations up to the present, i.e., from 2010 to 2020. HC issues centre on the training and education of employees within the upstream firm.

### **3.5. Study and target population**

A number of actors and stakeholders who play key roles in the upstream sector and are linked to the study objectives were considered for data collection. These include the Petroleum Commission, the Local Content Committee, CSOs, oil and gas firms in the upstream sector, the Parliamentary Committee on Mines and Energy, and the Ministry of Energy.

The Petroleum Commission is considered because it is the regulator of the upstream sector and interacts with upstream firms in accordance with the LCP. They also have data and information

about firms in the upstream sector. Likewise, the Local Content Committee (LCC) is tasked with ensuring the implementation of the LC policy works with the Petroleum Commission (PC). Civil society organizations involved in the petroleum sector's activities were also part of this study process. These CSOs are involved in advocacy, research, and policy recommendations in the extractive sector. Firms that are into the production of petroleum were the target firms for this study. In the oil and gas firms, they could provide extensive information on the topic under study.

Some institutional arrangements for the extractive sector are developed in the Parliament of Ghana, besides the oversight responsibilities assigned to the members of the house. Members of Parliament who serve on the Mines and Energy Committee provided expert information on policies and legislation. The Ministry of Mines and Energy is made up of various departments. The target population within the ministry was the staff of the Petroleum Directorate.

These actors and organizations were considered because they are deemed informed and knowledgeable actors and stakeholders in the industry who could provide data and information. The exclusion criteria comprised firms in the downstream sector and firms not involved in oil and gas production.

### **3.6. Case selection and profile of Tullow Ghana plc**

There are about 16 upstream operators with petroleum agreements in the upstream sector, going through activities ranging from exploration to production of oil and gas in Ghana (Petroleum Commission, 2020). A criterion was employed to ensure data would be collected from the most relevant firm(s). As such, whereas some of the firms were active and had started exploration and production, other oil and gas fields controlled by some of the contracted firms are dormant. Firms that have contracts with the PC but have not started production of oil were excluded. Preliminary

checks revealed that because these firms are not fully operational in Ghana, their organizational structures did not offer an enabling environment for data collection, hence their exclusion.

The upstream firms are supposed to achieve some targets concerning the employment of indigenous Ghanaians per the requirements of the LCP (MOE, 2010). Further, firms are supposed to submit training plans to the Petroleum Commission, train employees to help develop their HC, and also give a quarterly update on events relating to their planned LC activities. Some of the firms are relatively new, while others are comparatively old in their operations in the upstream sector. Tullow Ghana plc was considered for this study because it has been involved in the exploration and production of oil since Ghana discovered oil and gas in the upstream sector in 2007. Moreover, Tullow Ghana plc is one of the first firms that started oil production shortly after discovery (Tullow, 2022). The company has a proven track record of experience and success in developing HC. In addition to Tullow Ghana plc, at the time, there were a few upstream operating firms that were undertaking exploration and production of oil in Ghana. These included Kosmos Energy Ghana and Eni Exploration and Production Ghana Ltd. For some of these firms, disclosing information by any means may have implications for the price of their shares, and hence, they declined to participate in the study.

Tullow Oil plc, which operates in about 8 countries, teamed up with Kosmos Energy Ghana and other firms to do exploration, development, and production of oil and gas in Ghana. Tullow Ghana plc commenced business in Ghana in 2005. From 2006, Tullow Ghana plc was involved in the drilling and exploration of wells, which led to the discovery of oil in commercial quantities in 2007. (Tullow, 2022). Tullow Ghana plc has been involved in the development of oil fields in Ghana since 2005. They are the leading producer of oil in Ghana. Consequently, Tullow Ghana plc has employed different nationals from around the globe in its operations in Ghana. They have

also been involved in the training of staff to upgrade their skills and competencies. In the context of this study, Tullow Ghana plc is seen as an important stakeholder that could provide insightful experience for explorative and descriptive information on issues related to HCD in the firm. They are one of the most experienced and largest oil-producing firms among the few in Ghana and worthy of being studied.

### **3.7. Sampling and sampling technique**

The purposive sampling technique was mainly used in sampling participants for the study. Purposive sampling was used for the study as it allowed the researcher to sample participants that were deemed knowledgeable enough about the research topic and could address the research questions being discussed. Core technical staff and management staff members within the firm and organizations were sampled as participants. Other staff members who did not belong to these categories were excluded from the study. The sample size for the study was determined upon reaching the point of saturation during the data collection. At that point, 'new' opinions and evidence were not forthcoming from participants. Participants expressed similar views that had already been expressed earlier by other participants.

At the CSOs that are into oil and gas activities, purposive sampling was used to select participants that are at the top management level, that is, the executive directors and heads of research and policy in these organizations. Managerial staff, such as administrators, were excluded from the participants because the targeted participants were the heads of research and policy as well as the executive directors. The sampled staff are deemed knowledgeable enough to address the research questions due to their roles as policy analysts, advocates, and researchers in the oil and gas sector at these CSOs. The Civil Society Platform for Oil and Gas in Ghana (CSPOG) offers a 'base' of

CSOs who are into oil and gas. Seven participants were sampled from the different CSOs. These include a former member of PIAC who is also part of the CSPOG and an industry player affiliated with the African Energy Consortium Ltd.; a participant from the Centre for Democratic Development (CDD); a participant from the Institute of Energy Security (IES); a participant from ISODEC; a participant from IEA; a participant from ACEP; and a participant from Oil Watch Ghana.

The Parliamentary Committee on Mines and Energy also offers expertise on policies and legislation on extractive resources. Members of Parliament who have been part of the Mines and Energy Committee were included in the study. At the Ministry of Energy, a senior staff member at the Petroleum Directorate, the LC Unit, was purposefully sampled to take part in the research. Staff members at other departments such as Power Directorate were excluded from the participants. A management staff member at the Petroleum Commission, i.e., the LC directorate, was sampled for the study, as was a former member of the LCC. Purposive sampling was also used to sample practitioners from upstream firms other than Tullow Ghana plc.

At Tullow Ghana plc, which is the case under consideration, there was a need to sample a mix of core technical staff and management staff members to speak to the issues and share their experiences. There was also a need to sample participants from different departments/functional units within the firm to enhance the rigour of the data collection and get varying views from different participants. Various departments/functional units at Tullow Ghana plc can be grouped into 'support function departments/units' and 'technical/engineering departments/units'. Within these departments/units are various teams that perform various tasks.

After gaining approval from the Country Manager of Tullow Ghana plc to collect data, the researcher was referred to the Local Content Manager at the firm. Further discussions went on between the researcher and the LC manager to discuss the objectives of the study and the participants needed for it. An obvious sample, initially requested by the researcher to be among the participants, was the LC manager and the Human Resource (HR) manager, because of their roles and responsibilities in managing the LC-related issues and knowledge of LCP and regulations in the firm. The organizational structure of Tullow Ghana plc is such that the localization aspect of the LCPs is under the control of the HR department, which coordinates with other units and departments in pursuing the localization agenda. The HR manager is also in charge of coordinating training and education for employees. The LC manager and the HR manager are considered key participants due to their job roles and are considered to have the expertise to address the research questions. Further discussions went on between the LC manager and the researcher on the organizational structure of the firm, and that informed the sampling of the other participants.

The other participants sampled from the 'support/functional units' included the Logistics/Materials Unit, Environment/Health/Safety, the Integrated Activity Planning Team, and the Office Services Unit. The participants from these units were sampled to represent the management staff category.

The core technical participants were sampled from the engineering/technical department. They included participants from the TEN Offshore Team, the Operations Support Team, the Well-delivery Team, the Engineering Assurance Team, and the Shore-based Team. In all, fourteen (14) participants were interviewed at Tullow Ghana plc including six (6) core technical staff and eight (8) management staff.

In all, thirty (30) participants were interviewed for the study, in addition to document data sources. The breakdown of the participants is as follows: fourteen (14) participants from Tullow Ghana plc, four (4) practitioners in the upstream sector made up of professionals working with upstream firms in Ghana other than Tullow Ghana plc, two (2) Members of Parliament, seven (7) participants from the CSOs, one (1) participant from the PC, one (1) participant from MOE, and one (1) participant from the LCC. Nine (9) of the participants were female, while 21 were male.

### **3.8. Data collection**

In trying to address the research questions, primary and secondary sources of data were utilized. The primary data was collected through interviews, while the secondary data was derived from sources including organizational reports, books, journal articles, official statistics on LC implementation, and other internet sources. Internet sources included searches on databases such as AJOL, JSTOR, OARE, Google Scholar, Science Direct, and Wiley Online because they provide articles and books relating to the topic of study. The inclusion criteria included studies relating to local content, local content policies, human capital, and human capital development, as well as relevant published and unpublished materials from all dates. Local content literature, which did not relate to the extractive resource materials, was excluded. Further secondary data on relevant literature, such as the theories used in this study, was also searched for.

Data collection instruments included an interview guide on the topic of the study. The drafting of the data collection instruments, which are made up of questions, was based on the research questions of the study and a literature review of relevant materials. Interviews were used as techniques to enable the researcher to gather data in the respondents' own words, from which

insights on their interpretations would be obtained. The semi-structured interview guide assisted the researcher in conducting interviews to allow for flexibility in the instrument.

Different interview guides were used for different sets of participants. These are made up of relevant questions drawn from sub-questions related to the main research questions. There was a need for sets of questions to target participants that belonged to different groups of participants. This helped to focus research questions on participants who could offer deep insights and expertise in addressing research questions. Furthermore, not every participant can address every research question or sub-question. Notes were made alongside recordings of various interviews. The first objective was to examine the initiatives of the firm on LC in relation to HCD. Objectives 2 and 3 are to examine HC acquisition and challenges and the institutional arrangements for HCD in the Ghanaian upstream sector.

Data collection was done through interviews at different locations. This was largely due to the COVID-19 pandemic, which made entry into the organizations that were involved in the study difficult. Introductory letters from the University of Ghana were sent to various organizations, including selected oil and gas firms, the Petroleum Commission, the Ministry of Energy, selected CSOs, and targeted Members of Parliament. Data from these institutions was collected concurrently with that of Tullow Ghana plc.

At Tullow Ghana plc, after having an initial discussion on the data collection with the LC manager, she referred the researcher to an HR officer to liaise with participants as well as the researcher and arrange for interview schedules suitable for the participants and the firm. For participants other than Tullow Ghana plc, the researcher arranged the interview schedules with the participants.

While some of the locations for the collection of data from targeted participants were the offices of the organizations, others took place at a distance using technological communication applications. Face-to-face interviews, as well as video interviews using the Zoom app and Microsoft Teams, were all used in the data collection process. The place and type of interview were decided mostly based on the preferences of participants. The choice of video app interviews became necessary due to the COVID-19 outbreak.

A request for an LC plan and report was also sent to Tullow Ghana plc and subsequently received to complement the interview data as document sources. Other reports, such as the Ministry of Finance report on the oil sector and documents from the internet, were used for the study. The collected data was transcribed pending data analysis. Interview data and document sources were collected concurrently.

### **3.9. Data analysis**

The collected data for the studies was transcribed, coded, and analyzed through thematic analysis. This was done alongside the data collection process. The development of themes and the analysis were based on the research questions and objectives of the study. The themes reflect the research questions of the study and give insight into the main issues arising from the research. The emerging themes were first organized under basic themes, organizing themes, and then global themes. Because the analysis of qualitative data is an iterative process, Walcott's (1994) process of description, analysis, and interpretation of data was employed. For each global theme that was analyzed, the key findings of the study were presented with quotes and explanations, which were then followed by discussions on the findings. In analyzing the themes, relevant literature and theory were factored into the analysis and discussion processes to aid the process of triangulation.

### **3.10. Ethical consideration**

Ethical considerations were adhered to in the research. An application was made to the Institutional Review Panel at the University of Ghana, College of Humanities. The application was sent along with all the required documents, including the research proposal and data collection instrument. Permission was then given by the University of Ghana through the College of Humanities Ethics Committee to enable data collection and other research-related activities. Further, introductory letters were sent to targeted organizations to seek their consent. The purpose and objectives of the study were explained to the organizations and target participants in the process of seeking their consent to voluntarily seek their involvement in the research process. Consent was sought from participants to make them aware that the interviews would be recorded. The confidentiality of the views of the participants was explained to them. To ensure confidentiality, the localization report from Tullow plc and interviews will not be made public. Participants' identities are further protected by not disclosing their identities in relation to their quotes in the research report.

### **3.11. Enhancing validity and reliability**

Ensuring validity will produce a better outcome for the research. Different methods can be used to enhance validity at various levels of the research work. Different methods that were used in collecting data, including interviews and documents, helped to enhance the research process by aiding the corroboration of data. The researcher made use of different groups of participants. This involved collecting data from different actors, i.e., data from individual employees, data from CSOs, data from the Petroleum Commission, and data from Tullow Ghana plc, MOE, and MPs, thus enhancing data triangulation. More time was also devoted to the data collection, with a duration of nine months, which helped in understanding the issues being studied and providing

details on the implementation of the LCP. Reliability was also enhanced by detailing the research process and doing the study in line with clear research questions.

### **3.12. Challenges encountered in data collection**

Various challenges were encountered during the data collection process. One of these challenges is the gathering of data amid the COVID-19 outbreak. The COVID-19 pandemic disrupted and unsettled the activities of many people, organizations, communities, nations, and society at large, from which the data was collected as well as that of the participants and the researcher. Gaining entry, particularly into the oil and gas firms, became difficult, causing a delay in beginning the data collection. The difficult entry was a result of the closure of the reception of these firms at a certain point in time as a precautionary measure to avoid the coronavirus. Even after reception at the firm and other organizations became open, gaining access to the premises was still a challenge. This circumstance influenced the interactions between the researcher and the organizations to begin data collection. However, email was used as a means of communication to help the researcher liaise with the oil and gas upstream firm, though it came with its challenges. In other government agencies where data was collected as well, it was sometimes difficult to get data because the response to emails wasn't forthcoming at certain times. This progressively interfered with the data collection processes, affecting plans and schedules for the research process. Furthermore, some participants who initially agreed to an interview schedule sometimes did not turn up, committing to other activities, which meant rescheduling or total cancellation, as participants sometimes kept rescheduling.

### 3.13. Chapter conclusion

This chapter has presented the methodology employed for the study. It has described and justified the methods and processes that were used to achieve the study's goals. Issues related to the philosophical foundations, research approach, research design, sources of data, sampling techniques, methods of data collection, as well as methods of data analysis, have been discussed. The issues discussed also related to the case selection process, ethical considerations, and enhancing the validity and reliability of the study. The next chapter looks at the analysis and discussion of the findings of the study.



## CHAPTER 4

### ANALYSIS AND DISCUSSION OF FINDINGS (PART 1)

#### Local Content initiatives and programmes by firms in facilitating HCD

##### 4.1.0. Introduction

This chapter looked at the analysis and discussion of findings on the objective of examining the local content initiatives and programmes on human capital development in the upstream sector. The main research question that was asked to address this objective is: How do upstream firms facilitate the human capital development of employees in Ghana's oil and gas upstream sector? The interviewed participants mainly included management and core technical staff members from different departments at Tullow Ghana plc. Views from relevant practitioners in other organizations and a participant from the PC and Local Content Committee were also gathered to corroborate the data from Tullow Ghana plc. Some localization plans and reports from Tullow Ghana plc also served as document data sources. The findings and discussions were organized under various themes, using evidence from the data. The themes that emerged for discussion on the objective include localization/succession plans, the use of assessment tools, infrastructural development, and the firm's HCD policy. First, the reporting of key findings was done with quotations and explanations, followed by discussions on each theme.

##### 4.1.1. Localization/succession plan

To start with, there was a need to find out from the respondents as well as available document sources about the initiatives taken by the firm to promote the HC development of employees, with a particular interest in the Ghanaian employees. Various respondents, ranging from core technical to management staff members, gave their views and experiences on initiatives to facilitate the

development of human capital within the firm towards the localization agenda in line with LCP. Some participants gave insights into what the localization/succession plan entails.

The localization/succession planning initiative constitutes processes meant for jobs to be transitioned from ‘expatriate employee’ to ‘local employee,’ i.e., from non-Ghanaian employee to Ghanaian employee. This process gradually increases the number of Ghanaian employees in the upstream sector. In this initiative, training programmes are put in place with timelines so that a local employee develops the necessary skills, knowledge, and abilities to take over a specific job role being occupied by a non-Ghanaian employee. Within this period of succession planning, a Ghanaian employee acquires the skills and knowledge to progress in his career. This process would be difficult without the contribution of the non-Ghanaian employee, who also has the responsibility of training the Ghanaian employee to succeed him or her.

The findings also revealed how the localization/succession plan was initiated at the firm. The localization/succession plan becomes established when there is an initiative taken by the firm with the goal of developing the HC of Ghanaian employees. A localization plan discloses the kind of training programme to be administered by the firm, the project name, the objectives of the training, the duration of the training, and the budget allocation for the training programmes and the implementation strategy (Tulloch Ghana, 2017). Besides, it is a requirement of the LCP and the regulations of Ghana that upstream firms adhere to this plan. This localization plan is coordinated in the firm by the HR department with the support of department line managers.

The findings further highlight how the succession plans are operationalized. These plans are translated into practical programmes meant to aid the HCD. Central to the localization and succession plans are training and education programmes aimed at preparing Ghanaian employees

to take on certain job roles. These programmes largely come in the form of training, which is mostly deliberately done within the firm's institutional arrangement. If Tullow Ghana plc comes up with a localization/succession plan, they are required to submit it to the Petroleum Commission. When the firm submits this plan to the Petroleum Commission, the PC needs to approve it and give feedback to the firm. When there are challenges with the plan, the PC needs to discuss them with the firm and agree on a way forward, thus finding solutions to the challenges.

The next issue of interest was to understand who qualifies to go through the succession plan or how an employee is selected to go through the succession plan. With the issue of how the firm chooses which employee should succeed the other, a management staff participant stated;

“If you are hardworking and competent, it is easy to be identified. For instance, I have a manager that I work with, and I am learning a lot from him. The succession planning is there, and it is good. You want competent people to put them in the succession plan. There is a pool of people, and based on performance, someone will be selected” (Interview, 2021).

The above quotation describes the view of a participant who mentioned some of the attributes that will make it possible for a person to be considered for a succession plan, citing competence and diligence as examples. From the participant's experience, a number of people would be contending for a particular job role, and succession is through competence and training. To add to the above quote, another core technical staff had this to say:

“But they are picking from a pool rather than an individual. Let's say you and I are colleagues, and we have a line manager who is an expatriate. It won't be said that next year you are taking over from Kwasi. Let's say two people are in line to succeed; the person

who is more ready and competent will be made to succeed. But that clear guidance is there” (Interview, 2021).

The above quotation echoes the point that the choice of staff to succeed an expatriate staff depends on certain qualities that the Ghanaian staff must exhibit. Again, in the experience of the participant, instead of targeting a particular employee to succeed an expatriate, a choice is made among a number of ‘potentials’ who can succeed the expatriate employee. In looking at the dynamics of the choice of ‘successors’ another participant who is technical staff gave a different opinion and had this to say:

“There are places where we have pools of people, and there are some cases where we don’t. It is more of maybe one person or two people, but as you said, it is competitive. It is not an entitlement; that is how it runs. It is merit-based. If it gets to a level where we feel that you are ready to move into that role, you have demonstrated in the way you are working and how you communicate with people, because it is not just technical skills, and if you meet all the criteria, then you are promoted to replace the expatriate” (Interview, 2021).

The above statement also depicts the experience of an employee, which conveys the message that though employees are chosen from a group to succeed an expatriate, there are situations where only one employee will be contending to succeed a non-Ghanaian for a role. Moreover, with his experience, not only the technical capabilities are considered, but an employee’s soft skills are also taken into consideration to succeed the expatriate employee. Another highlight of the findings is how the succession plan for a group or individual is agreed upon. A management staff member revealed:

“It is the functional head who finally agrees on the succession plan, the overall functional head of the department. I am with the supply chain, and my functional head as the supply chain director has signed off that he agrees with the expatriate who is working for him that it will take five years for the expatriate to transition his skills to me, for instance. I don’t know what conversation they had. It is for HR to also question that. So, I want to believe that the HR will question that before it is submitted to the Petroleum Commission” (Interview, 2021).

Again, the above extract from the data shows that there is some kind of coordination mechanism among various divisional heads to come to a final agreement on the succession of employees. An important element of this developmental process is how long it takes to transition a job from a non-Ghanaian to a local employee or to go through the succession plan. Participants revealed that it depends on the type of skill to be learned. It also depends on what the role’s demands are and how quickly a Ghanaian employee is able to adjust to taking over the job position. For example, a management staff member stated that a production operator will need between two and four years of training to become a control room operator.

Another respondent also mentioned that the skill and experience level of the expatriate employee are important attributes in the success or failure of the ‘localization’ processes. In addition, a participant said that this dynamic is sometimes dependent on the rotational policy, where at one point an employee is on the FPSO and at another point, the employee is moved to another unit of the firm on a few occasions because of the rotation policy. In support of the issue related to the duration of the localization process, a technical staff made it known that:

“Some of these areas are quite technical, and you need to build competence into that role. So, the technical areas are a bit challenging. That is why, up until today, even as much as we have, or as long as we have been in operation for close to ten years, we still have roles being managed by expatriates” (Interview, 2021).

A participant also compared the ‘office’ work to the ‘fieldwork’ in terms of the duration of the succession plan and pointed out that an employee may come in as an electrical engineer, for example, to work at the office, and he could hit the ground running. She stated with regards to offshore work that the nation typically lacks experience and the situation is a bit different from office work. The duration of the localization process also depends on the internal norms and policies of the firm. In addition, the individual employees and their ability to grasp and prove that they are ready to take over also remain an important part of the process.

In addition, a respondent asserted that in some cases of the succession programme, the basics and the principles are the same. Examples include the human resources, finance, and supply chain departments, where employers believe employees have the competence to work. The core technical areas are where Ghanaians lack the capacity to fill all the technical roles, which may then result in a change in the succession principle. Other participants shared some experiences during the succession, and a core technical staff had this to say:

“From the beginning, you are paired with an expatriate. You run on the schedule of the expatriate who supports and gives you exposure through training, mentoring, and coaching. The experience has been how confident or comfortable they are to give you a role as a Ghanaian” (Interview, 2021).

Another participant made a comment about his succession training experience and said it was quite an ‘aggressive succession plan’. She further stated that localization or succession was key when management saw a prospect in a Ghanaian or a local. The majority of the training is on the job, and the tasks that employee trainers give to people are deliberate as well. Even though some people are engineers, such as operations engineers, they are also exposed to other departments that they would normally not work with. The participant thus sought to reveal that there is also a cross-functional type of training within the firm’s succession programmes.

One of the management staff members mentioned some challenges that are encountered during the succession:

“Now in that succession plan, there have to be clear-cut milestones, indicating what skill sets need to be acquired within a specific time frame. How do you measure whether the person is achieving those skill sets? You need an independent reviewer because the reality is that if I am in a role and you are supposed to take over from me and I am the one making decisions, there has to be someone checking and making sure that a person is not just marking you down and saying that Nana is not ready because it has happened before. So, in a succession plan, you want to have those clear-cut rules. But essentially, they give you the duration and targets that you need to meet. What you have to be doing is meeting those targets, and the reviews are done periodically” (Interview, 2021).

On the interaction between the firm and the PC to ensure the success of the localization and succession plan, a management staff had the view that the firm has discussions with the Petroleum Commission to agree on a partnership approach to how the firm trains and transitions people as well. The transition plans and training plans are all agreed upon in collaboration with the Petroleum

Commission, according to the management staff member. From the findings, a management staff member seems to have the view that they conform to whatever agreement is between the firm and the PC:

“With integrity, we do have transition plans, and we make sure that the training that is required is actually given to people such that, within the time frames that we have or expect to be transitioned, that actually happens. If I am an expatriate, which I am not, and I have four people reporting to me, I am supposed to have a plan in place where, say, after four years, I leave Ghana for them to take over from me. Sometimes, even before the whites and expatriates come into the country, they are told that they have, say, three years to develop the Ghanaians into their roles, so it means there are parameters to this. In as much as they might be uncomfortable or have any reservations” (Interview, 2021).

The above quotation from the data depicts that some values of the firm, such as integrity, guide it, and the expatriates take the necessary steps to ensure that processes are in line with the succession plan and followed according to the required standards. Another revelation came to light when a management staff member differentiated between two types of localization:

“But what you need to know is that I see localization in two forms. You can have localization where the people are localized, or localization where the delivery of the work is not localized. I will give you an example. If you employ me in Ghana to be responsible for all accommodations and Kwaku is coming from London, I am responsible for booking his accommodation and making sure that everything is right. Now you have me here localized to do that. Kwaku is coming from London, and somebody in London books his hotel for him in Ghana and does everything for him, and Kwaku just takes his papers and

instructions and comes to Ghana. So, there are two ways you can look at that” (Interview, 2021).

The above extract from the text shows that the process of localization sometimes results in a situation where a local employee is put in charge of a job role, whereas an expatriate employee performs the associated duties that come with the job role. This means that the local employee is sometimes restricted from performing his expected duties.

On how a final decision is made to hand over a job from a non-Ghanaian to a Ghanaian employee, a participant stated that a decision is made once an employee is able to perform a task, proves it, and is comfortable with what he is doing. Again, an employee’s team members must know that he can actually perform, has gone through all the relevant training, and has been signed off. Further, the perceived risk must be reduced, and everybody who matters in the firm must know that an employee can actually do the job.

On what happens to departments that are fully localized, a management staff member revealed that the firm still has to consider the future and prepare people for an unknown situation. The fact that they are all Ghanaians doesn’t mean localization has ended. It means succession planning is activated, and they are aware that people do not remain in their roles forever, but there is some transition to be made in the future.

On how the local content policy has affected the training and education of Ghanaians, a management staff participant had this to say:

“That forced the company to look more closely at every expatriate role that we have and make sure that we have somebody who can take over the role. That wasn’t originally the case. That has been one of the positives of the succession plan. But in terms of the

development of locals, the development of Ghanaians was already ongoing before the succession planning. We had the potential to miss certain roles where people felt there was no need to have the locals understudy an expatriate, but with the succession planning, there is that deliberate attempt to do that.” (Interview, 2021).

Tullow Ghana plc has been using the localization/succession plan as a means of facilitating HCD in the upstream sector. Through this initiative, career development plans are established to equip Ghanaian employees with the necessary skills and consequently progress in their professional careers. Whereas the localization plan is a broader plan to increase the number of Ghanaian employees within the firm, the succession plan is a framework for identifying and developing the skills and competencies of employees for transition to positions tailored within the localization plan. These programmes are mainly training and education programmes as well as assessment and evaluation initiatives aimed at achieving set goals and targets. Within this period, succession plans and training programmes are used to achieve set targets for long-term and short-term training and succession objectives.

The localization/succession plan has been made possible through a series of interactions leading to training and education programmes and resulting in skills and competencies. For instance, the LC Performance Report for Tullow Ghana plc for the year 2016 disclosed the acquisition of skills and competencies, including the ability to define strategic objectives for a project, the ability to identify risks and constraints for a project, and the ability to develop the work breakdown and coding structures, which has enabled a Ghanaian employee to progress from a Project Controls Supervisor to a Project Controls Team Lead. This is an illustration of how the succession plan has been used to facilitate employees’ skills development and promotion to new job roles.

Furthermore, the LCP, which is backed by the L.I. 2204 has strengthened the foundation for HCD. Firms are required to meet certain policy and regulatory requirements in terms of establishing a succession plan and further executing the plan to achieve the set targets for succession and localization. Pegram et al. (2018) stated that job role localization is a strategy for compliance with the LC policy. As mentioned by the majority of the participants, the policy has enforced the need for firms to develop the competencies of Ghanaian employees. As acknowledged by Asare-Bediako (2018) and Kim (2010), the succession plan guides organizations to develop the competencies and careers of employees. On the contrary, Egbuta (2019), in his study on the Nigerian oil and gas industry, suggested that, for instance, a leadership succession plan has a limited effect on career development. However, a well-planned and well-implemented succession plan would obviously have positive outcomes for the skills and career development of employees. The localization/succession plan begins with the need to implement LCP as per the requirements of the law. The firms then institute the internal arrangements for the localization and succession plan. After the establishment of the succession plan, the firm has to implement the programme which is made up of set targets for training and education to be achieved within a specific time frame depending on the demands of a job role and the skills and competencies needed. As part of the programme, there is a choice of staff for the succession programme which includes a targeted staff member or a targeted group of staff, thus creating a pool of staff from which to choose a successor. Another activity that is performed during the process is the signing-off, where there is some form of certification to show the training has ended. The employee who is being succeeded would have to come to a certain agreement that the trainee employee is ready to take over the job role and has the necessary competencies and skills for the new job role.

However, in some job roles, there are no clear-cut programmes that are designed for an employee to follow suit to succeed an expatriate. It was revealed by a management staff member that, in some job roles, sometimes there is no single person who is identified to be trained to take over from an expatriate. At some point, whoever is deemed capable within a team will take over the job role. This implies that, in such situations, there will come a time when no local employee may be ready to take over a specific job role. The implication of such an occurrence is that there will be a prolonged stay of an expatriate once there is no targeted local who should be given special attention, thus training and preparing for a takeover. This possibility exists despite the revelation that it is also the obligation of the expatriate employee to cooperate with the local employee and the organization as a whole and to achieve set targets vis-a-vis the timelines set out for the job transition period.

Mention must also be made of the emergence of the point that, in some rare cases, a single person might be the only contender to succeed an expatriate. However, sometimes the employee who is thought to have succession potential doesn't develop his HC as expected by the firm. The view resonates with a critique of the HC theory that it is not a guarantee that the lengthy time spent in education or training will always lead to the expected level of HCD (Sonnoteg, 1995). This dynamic makes it disadvantageous to rely on only one employee as a successor. As more Ghanaian employees are involved in the succession plan, it will lead to more training programmes for Ghanaians and for the progress and sustainability of the LC policy.

Another issue to be noted is that not every department or unit has a localization plan. This is due to the fact that some of the departments are fully localized. This means there has been some significant progress in the quest for localization, hence the training of employees. For example, some support function departments are 100% Ghanaian, meaning some departments are fully

localized. The support function speaks to HR, finance, the supply chain, the commercial team, materials, and logistics units. However, the main operations groups, such as reservoir field management and well engineering units, for instance, have not achieved their localization targets. This is to say, there is an indication of some differences in what goes on with the core technical positions and the managerial positions.

While the core-technical roles take a relatively long time for the succession processes for training and education to go through, the managerial roles take a relatively short period of time. This is, for instance, due to the specific skill demands and sophisticated operations within the offshore. While there are differences in terms of duration of training between the core technical staff and the management staff, the experiences of males and females are not that different in terms of going through succession. Neither men nor women were given special treatment in terms of HCD at Tullow Ghana plc. Competence and training seem to be the main factors that aid the progression of an employee into a job role.

The ideas of 'job role localization' and 'personnel localization' also exist in the operations of Tullow Ghana plc. In an attempt to localize jobs, it has resulted in two concepts: job role localization and personnel localization. This was also confirmed by a management staff member at the PC. Sometimes a job role is localized, but the employee or personnel performing the job is not localized. Thus, a job role will be allocated to a Ghanaian employee, while an affiliate employee of the firm or some other non-Ghanaian employee performs some of the roles. This dynamic has implications for the training and development of employees, as urgency would not be attached to the development of the Ghanaian successor. Indeed, this dynamic is intended to satisfy the legislation and the expectations of the PC, rather than to provide opportunities to the local employee. Job role localization is the process of developing the human capital of indigenous

employees and assigning them roles with the aim of replacing non-indigenous employees in the firm. Personnel localization is the process whereby an indigenous employee is given a job role while the tasks associated with the job role are being performed by a non-indigenous employee.

In revisiting the conceptual framework of this study, local content policies will lead to the development of external and internal institutional arrangements. A well-organized institutional arrangement will build up the institutional capital that will then lead to the development of HC and also result in a sustainable local content policy, allowing enough Ghanaians to take up jobs in the upstream sector. The findings of the study have shown that the LCP has been backed by national rules and regulations as well as internal rules and norms. These have yielded institutional capital that has manifested in a mechanism of structures and actors working together, providing resources and support, and going through succession and localization plans made up of training and education processes. This process is in agreement with the conceptual framework of the study.

The institutional theory assumes that institutions enable developmental activities (Harvey, 2010). The training processes, thus the HCD, have led to progress in the LCP. The continual development of HC through the creation of institutional capital aided the localization process and LCP sustainability. Some management and core technical staff of the firm gave an account of their experiences where they have risen through the ranks and benefited from the succession and localization plan. Anderson (2003) is of the view that policy is authoritatively grounded by rules and regulations, and this is in line with the fact that L.I. 2204 is backing the LCP as a tool and strategy for developing the competencies of Ghanaians. The institutional theory assumes that institutions shape the functioning of organizations (Helmke and Levitsky, 2003). The institutional arrangements resulted in the localization/succession plan that is being used to develop HC in the firm, hence in the upstream sector.

This theme looked at localization/succession planning at Tullow Ghana plc. Despite the challenges that come with the localization plan, it has largely enhanced the development of HC through the implementation of the LCP. As disclosed by some participants, though some level of training and succession was going on before the coming into force of the L.I. 2204, the LCP, backed by rules and regulations, has formalized and enforced this process. Institutional arrangements have helped to provide the enabling environment for the HCD.

#### **4.1.2. The use of assessment and development tools**

One tool being used to help assess and develop human capital is the competency framework tool. The competency framework approach is used to help in the assessment of skills needs at Tullow Ghana plc. This will then guide the firm in creating a programme for skill and knowledge acquisition. The findings gave insights into what the competency framework is about. All participants that were interviewed had knowledge about how the competency framework works, and almost all participants had used the framework.

The findings revealed that the competency framework identifies the demands of each job role and then helps in doing the skills gap assessment. The competency framework is basically made up of a bunch of roles that come with the skills required to perform those roles. Likewise, the findings conveyed that through the competency framework, management is able to determine whether employees have awareness, skill level, mastery level, or absolutely no knowledge about a skill. With the competency framework, the firm is able to develop a training plan for each individual based on the identified gaps.

A training regime is chosen after assessing employees' skill requirements. A decision is made about whether the training regime should be on-the-job training or require formal education training, which can be in-person or online for individual employees.

Some of the participants have used this tool in their position as management staff to help in the assessment and development of human capital. A participant shared their experiences with the use of this competency framework tool.

“We have a competency framework that is shared. So, it is currently one of the things we are doing. This is done for individuals, and we start with the job description. We look at your competencies. We look at the gaps and the personal development plan to see where the person wants to be in the next two to three years. Based on that, we are able to have a plan” (Interview, 2021).

The above quotation reflects the processes involved in the use of the assessment tools by Tullow Ghana plc. This ranges from the job description to the development of a training plan based on the needs of individuals. A management staff member commented on which category of staff the assessment tool was aimed at:

“So, this is done for each individual and to be able to know what kind of training will help the individual in the next one to two or three years. So, this is done for almost all employees within my team. We have HR with their support and resources. If training is the need, on-the-job training, mentoring, coaching, or if there is a need to build confidence, we look at all that” (Interview, 2021).

Another respondent had the following to say about the respondent's experiences with the assessment tool:

“The competency framework essentially shows you the skills that you need at your level. You select the position that you want to assess, and then you get the profile of the role. So based on the profile of the role, if you can see my screen, the tool gives you the profile of the role. For this particular one, to lead and communicate the change, you expect to score a three. You do a self-assessment, which is a self-score. From there, your manager does an assessment, and then a gap comes up. So, when the gap comes up, you and your manager agree on how to close it. That is how we conduct our training and development. Based on your gap, you get your own development plan. It is very much driven by both the employee and the manager. The employee has to be interested in their development just to work properly.” (Interview, 2021).

On how the initiative of the competency framework came into being, the findings revealed that the management of Tullow Ghana plc drove this from the group level to be done for all employees, and it goes to show that Tullow Ghana plc has been innovative in improving the mechanisms for developing its human capital. In support of the outcome of this initiative, a management staff participant at Tullow Ghana plc added:

“So, I will just use Akosua as an example. She is a young chemical engineer from the university who just joined offshore a year ago. So, we identified that she needs to find formal or classroom training in oil and gas processing to augment her on-the-job experience. She will be going to the US next month to get that course” (Interview, 2021).

The above quotation also tells us how Tullow Ghana plc looked at an employee’s training needs and saw that she needed formal education. It shows how far the firm can sometimes go to develop the skills of its employees.

Tullow Ghana plc has been using the competency framework as a tool to help in the development of human capital in the firm. Through the use of the framework, different job roles are clarified in various departments within the organizational setup. Further, the roles come with the skill sets needed to occupy them. The implication of this process is the ability to identify specific skills needed and, subsequently, train employees to develop these skills and competencies.

In addition, the skills assessed and further training provided employees with the present and next-level skills required to progress to another job role, enhancing the succession and localization plan. This initiative has enhanced the institutional capital of the firm, which gives the firm the capacity to assess the skill needs of employees and further improve upon their skills and competencies. As Campion et al. (2011) pointed out, the competency framework must be connected to core HR processes such as succession planning to be beneficial to the firm. The initiative has also made it possible for the firm to monitor the progress and performance of the employees in terms of HCD. Through continuous assessment and training, the past and present in terms of the skills and competencies acquired are documented for further decision-making within the organization. As Sultan et al. (2020) agree, the model helps in developing guidelines and providing evidence of the skills needed for recommendations and training of employees.

This initiative, however, focused largely on the ‘technical departments,’ and not every sector of the firm was covered by this assessment model at the time of interaction with participants. This dynamic implies that some departments receive more attention than others. An example can be given of the services management division of the firm, which did not use the competency framework tool. In practice, organizations including Tullow Ghana plc use development tools, but in the era of the LCPs and their implementation, it has enhanced the ability of the firm to assess the skills needs of the employees and help develop their competencies.

Aside from the positive attributes of the competency framework, it has sometimes created difficulties. Where there seems to be a difficulty is at that point of departure, where a line manager is supposed to ‘sign off’ or otherwise indicate that an employee has gone through and completed specific skill training or has gained mastery of a kind of skill needed for a specific job role. This came to light when a participant opined that it has sometimes created some misunderstandings where an employee thinks he is done but the supervisor or line manager has a different view altogether. Notwithstanding the challenges of misunderstanding, it is a viable tool for enhancing HCD.

The institutional theory assumes that institutions enable developmental activities (Harvey, 2010). The training processes, thus the HCD, have led to progress in the LCP. The continual development of HC through the creation of institutional capital aided the localization process and LCP sustainability. Some management and core technical staff of the firm gave an account of their experiences where they have risen through the ranks and benefited from the succession and localization plan. Anderson (2003) is of the view that policy is authoritatively grounded by rules and regulations, and this is in line with the fact that L.I. 2204 is backing the LCP as a tool and strategy for developing the competencies of Ghanaians. The institutional theory assumes that institutions shape the functioning of organizations (Helmke and Levitsky, 2003). The institutional arrangements resulted in the localization/succession plan that is being used to develop HC in the firm, hence in the upstream sector.

Tullow Ghana plc has invested in the development of the competency framework tool in collaboration with a consulting firm. This initiative echoes the view of the ILO (2012) that human capital-related investment is critical for employees in the oil and gas industry to be progressively competitive. Again, in line with the conceptual framework of this study, the internal institutional

arrangement of the use of assessment tools by the firm demonstrates the building of institutional capital (Hoff and Sen, 2005). This manifests in the form of skills assessment mechanisms and support functions given to employees. The process is also consistent with the linkages in the conceptual framework for this study.

This section discussed the use of assessment and development tools by Tullow Ghana plc. The competency framework provides a basis for knowing the kinds of skills that should be included in succession plans for employees. As acknowledged by participants in the firm, this tool has enhanced the development of skills and competencies among employees.

#### **4.1.3. The use of the HC Development Policy**

Tullow Ghana plc has a model for developing the HC of employees in the upstream sector, thus the ‘70:20:10 model,’ where 10 represents the percentage of skills and competencies developed through formal education, 20 is the percentage of knowledge acquired through mentorship and coaching, and 70 represents the percentage of on-the-job training. On the internal policy on HCD and how it works out for various categories of employees, a management staff member expressed this view:

“This is our development philosophy. 70% of your development should be on the job. If it is a skill, you should be able to get it on the job with additional training but not on study leave, which you will go for a year. Again, what we have started doing in the last couple of years is recognizing that the petroleum engineers, the subsurface, and their sector are where you need additional study. What we have started doing for them is making sure they are working and doing it. For that department, we have taken people outside to study. But they combine it with their job” (Interview, 2021).

The above extract shows that Tullow Ghana plc has sometimes taken Ghanaian employees abroad to study in addition to on-the-job training. In such situations, an employee is not considered to be on study leave but rather combining on-the-job training and off-the-job training. Again, attention is given to core technical professionals, such as the engineers in the sector.

To add to the above statement, this is what another participant had to say:

“One thing I can say is that Tullow has a lot in this area, especially when it comes to in-house training and also support for individual development. There is something that the HR rolled out, i.e., 70:20:10. The 70 is about the exposure on the job. The 20 is what you experience through mentorship. As you are attached to a department, you go through a mentorship or coaching process, and the other 10 percent is what you do in the classroom or theoretical, or what kind of knowledge you acquire in the classroom” (Interview, 2021).

As for the reasons for this model and the associated ratio, a core technical staff expressed the view that there is a need to have more practical sections with team members, no matter the academic certificate that an employee holds. On how the human capital development initiative works in the firm with this policy, a respondent revealed how the whole process can start:

“If I have a development need, I will go into the Tullow system under HR. I will key in my development needs, and I can have a conversation with the line head. Let’s say I want to have training in leadership. Then he will help me get whatever support I need from HR. That is how it works, so every developmental head or functional head has that responsibility” (Interview, 2021).

The above statement revealed one of the means that set the tone for training or development of the skills and competencies of employees within the firm. It also revealed a coordinated mechanism

between different units and actors in the firm to aid the development of an employee. Again, an employee can take an initiative to seek support from HR and his line managers to develop their HC.

The findings also revealed issues related to the study period and how it fits into the model of knowledge acquisition. The findings show changes in the policy where, initially, employees could apply for a study leave period and enroll in any programme that they wanted outside their department of operation. This, according to the findings, is not the case currently with the policy. The findings show that five weeks of study leave are given to employees who wish to take advantage of it, giving them 20 working days, but the course has to be related to what their job roles are. A core technical staff made the remark that an employee can't decide whether to pursue a programme outside the job role or what relates to their department.

The firm also has a sabbatical policy. If an employee has worked for three years, he can go for one year and still have a job upon his return. The firm sometimes funds formal education; thus, employees can take study leave with pay, which represents 10 percent of the HC development model. However, it is not as common these days to offer study leave with pay. The findings show that changes in the internal policy on study leave are a result of financial challenges coupled with management concerns about the unavailability of employees during study leave.

Some examples of roles that required certification, for instance, were also mentioned, including an aviation certificate. Thus, some training is mandatory to be able to perform some job roles. An employee may need to have an aviation certificate to be able to append a signature to some of the materials or equipment that are sent offshore, and for that matter, there is sometimes a need for formal education.

The 70:20:10 development policy is facilitating skill development practically and theoretically at Tullow Ghana plc. Tullow Ghana has used the model as an internal policy to aid the development of HC in the firm. This means that the training of employees at Tullow Ghana plc is largely on-the-job training. The findings suggest that on-the-job training has been used to improve the skills of employees after using the competency framework tool to assess the skill needs of employees within the firm.

This model creates an advantage for the firm in that employees largely do not have to vacate their posts for the development of their skills and competencies. For the firm, it reduces the cost of training as separate budgeting for training outside the firm is reduced. Arets et al. (2016) argued that the model provides an organizational context for training and development. Further, the culture of an organization will reflect its own workplace context, where developmental programmes can be structured to suit employees' needs and organizational opportunities. It is able to give support to employees before, during, and after training (Rosemberg, 2013). Conversely, the 70 percent on-the-job training requirement need not be cast in stone, as a shift in policy can be necessary depending on the needs of employees and the opportunities available (Arets et al., 2016). Thus, the policy can be disadvantageous in its application, depending on individual circumstances. The institutional theory assumes that organizational behaviour is a product of values and ideas organized in an institutional context (Zucker, 1993). The firm has put in place an internal policy, thus an internal institutional arrangement of 70:20:10, that has resulted in institutional capital that is being used to develop the skills and competencies of employees in the firm. This has also resulted in equipping some Ghanaian employees with the necessary skills and competencies to enable job uptake in the sector and promote the localization of jobs, leading to the progress of the local content policy. The conceptual framework of this study echoes these linkages, where internal

institutional arrangements in the form of training policies have resulted in institutional capital in the form of coordination mechanisms between actors and departments in the firm. This has also resulted in the training of Ghanaians, aiding in the sustainability of HCD.

Argawal and Argawal (2015), in a review paper, for instance, commented on the trend in the Indian oil and gas industry where employers were increasingly restricting the opportunities for employees to have off-the-job training, hence focusing on on-the-job training. This occurrence is consistent with the training model adopted by Tullow Ghana plc. This means that some oil and gas companies prefer this model, largely using on-the-job training for reasons such as avoiding losing employees to studying outside the job, which has implications for productivity and the cost of replacing the employee.

The subject matter of this section was the use of assessment and development tools. Evidence from the data has shown the HC development policy of the 70:20:10 model, which means that the training of the employees is largely on-the-job training. It also came up that training and education through formal education have been reduced in recent years compared to the earlier years when the firm started its operation. The implication of this policy is that employees are more likely to develop practical skills as compared to theoretical knowledge.

#### **4.1.4. Infrastructural development**

Tullow Ghana plc has established both soft and hard infrastructure to aid HCD. Some participants shared their views on the infrastructure development done by Tullow Ghana plc. A management staff participant had this to say:

“We also set up the Jubilee Technical Training Centre, which was to give hands-on training to Ghanaian nationals to be able to work in the upstream oil and gas sector from a technical

perspective. So, in that area, we encouraged knowledge and skills provided by technology in the area of instrumentation, process engineering, and other disciplines that are technical in nature at the Jubilee Technical Institute, which we established in collaboration with Takoradi Polytechnic” (Interview, 2021).

The extract above tells of some investment in infrastructure by Tullow Ghana plc meant to enhance training. Aside from this infrastructure, the firm has also established a soft infrastructure within the organizational setup for employees to use as training and learning tools. A management staff member made this remark as an indication of soft infrastructural development:

“We have a lot of portals that have brilliant courses. HR has been chasing people to take courses that are free and do not come at any expense to the employee. From the Tullow side, there is little they can do, and the individual is supposed to take the opportunities presented; otherwise, it becomes a waste. We have the infrastructure; we have processes; we have systems; we have a lot” (Interview, 2021).

The above statements highlight internal arrangements made by Tullow for web-based resources. This soft infrastructure is meant to provide opportunities to aid knowledge acquisition for employees at the firm through e-learning. The statement also indicates the seemingly non-compulsory nature of the options to access the resources available to aid knowledge acquisition.

Tullow Ghana plc has developed both hard and soft infrastructure to aid the development of HC. The firm has put up a web-based education platform that allows workers to learn from it. Again, it has established the Jubilee Training Centre to support the training of Ghanaians, hence the development of HC. This became evident when participants shared their knowledge and views on the initiatives in place to promote the HCD of employees, with a focus on Ghanaian employees.

Further, this infrastructural development extends beyond the firm's benefit to the wider society of Ghana because the Jubilee Training Centre also serves the needs of potential employees in the oil and gas upstream sector. As much as the expectations of the firm in terms of training and education are high, it still remains a beneficial establishment for the social development of the nation. Again, the establishment of the soft infrastructure was aiding in the acquisition of knowledge in the firm, where some employees confirmed their utilization of the web-based establishment to improve upon their competencies. However, it also became clear from the findings that not every employee had taken advantage of the online platform to acquire knowledge. Reasons ascribed to this dynamic are that some of the employees do not have the motivation to do so unless it becomes a job requirement to take a course online.

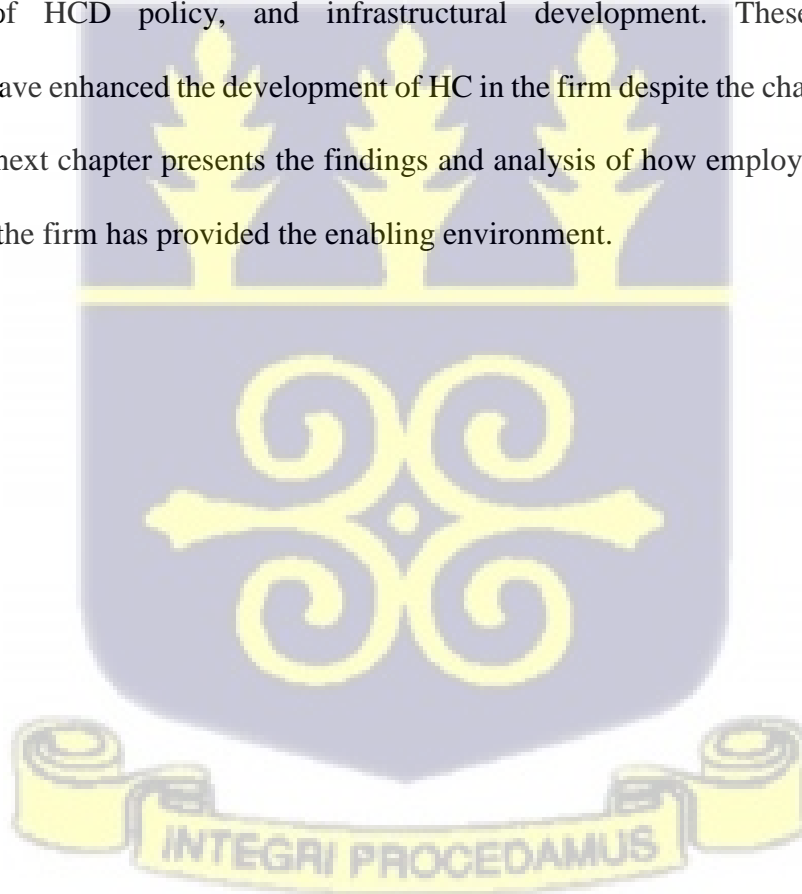
It is a requirement of the LCP for firms to contribute to infrastructure in the country, and this can inform the firms' decision to develop both soft and hard infrastructure. It can be argued that Tullow Ghana plc would have put up such infrastructure even without the existence of LCP. However, some of this infrastructure, especially soft infrastructure, has been established in the era of the LCP.

In the findings from the literature, there are situations where oil and gas firms collaborate with institutions to put up training centres (Peek et al., 2008). This collaboration has also happened with Tullow Ghana plc, where they have teamed up with Takoradi Technical University to establish a training centre. ILO (2012) also made a similar disclosure that in Angola there is a collaboration between oil and gas firms and educational institutions to establish training centres, which is similar to what Tullow Ghana plc and Takoradi Technical University have done to aid HCD in Ghana. By putting internal institutional arrangements in place, it has resulted in e-learning capacity as institutional capital, which aids HCD in reflecting the conceptual framework of this study.

In this section, infrastructure development as a means to facilitate skills development was discussed. The firm has provided a soft infrastructure that enables employees to enroll in web-based courses. It has also produced hard infrastructure through collaboration with the Takoradi Technical Institute, which extends to the training of potential employees or students.

#### **4.1.5. Chapter conclusion**

This chapter presented the findings, analyses, and discussion on the issue related to how Tullow Ghana plc facilitates the HCD of employees. It became known that the firm was facilitating HCD through localization/succession planning, the use of the competency assessment tool, the establishment of HCD policy, and infrastructural development. These processes and establishments have enhanced the development of HC in the firm despite the challenges associated with them. The next chapter presents the findings and analysis of how employees acquire HC in the sector when the firm has provided the enabling environment.



## CHAPTER 5

### ANALYSIS AND DISCUSSION OF FINDINGS (PART 2)

#### How employees develop their HC in the upstream firms

##### 5.1.0. Introduction

This chapter shows the findings and discussions of the study in relation to the objective of examining how employees acquire HC in the oil and gas upstream firms. The data was obtained through qualitative interviews and document sources. The views of participants who are managerial and core technical staff members at Tullow Ghana plc, as well as relevant practitioners, were discussed alongside findings from the literature. The collected data provides evidence on knowledge acquisition methods used by employees. Some themes that emerged from this objective include internal training, external training, e-learning, and personalized learning initiatives. Key findings from the data are presented and explained, followed by discussions of the findings.

##### 5.1.1. Internal training

Employees at Tullow Ghana plc gain knowledge in a variety of ways. One of the means of knowledge acquisition is through internal training. Internal training regimes come in different forms, and one of these internal training methods that largely shapes the knowledge acquisition and skill development of employees is on-the-job training. The on-the-job training method is a way of acquiring knowledge and skills where employees learn through observation and the performance of tasks under the supervision of a skilled employee. As a result, a relatively inexperienced employee is given the opportunity to study how tasks are performed as well as learn by performing tasks. Some of the participants at Tullow Ghana plc shared their experiences and views on how they acquire knowledge, and this is what the core technical staff member had to say:

“I currently work as a senior maintenance engineer in the office. I started from scratch as a technician. I have worked on the FPSO for close to four years. I have practical experience, which is helping me in what I am doing. I worked from scratch, going around with the technicians, doing troubleshooting, while things were going wrong, what you think should be done” (Interview, 2021).

The above statement is an indication that some employees have acquired knowledge while working and are being given the opportunity to practice certain tasks. Again, the quotation shows how deliberate programmes like troubleshooting are used to help employees acquire knowledge on the job. In support of the statement on on-the-job training, this is what another management staff member had to say:

“I have gone through the mill. I have worked there, and I have gone through that process to get to where I am. You can’t support operations offshore if you don’t understand what is being done there. You need to understand how the process works. That practical, hands-on experience, which I didn’t have, I worked for. I was working on projects where I was leading the project. So those are some of the avenues where you can build capacity, lead projects, and do this. Working onshore is an example, and going on secondment” (Interview, 2021).

The above quotation from a technical staff reveals how he has built up his competencies over the years and made it possible for him to rise through the ranks. The staff had a hands-on practical section to elevate him to a different capacity and job responsibility. While having an on-the-job training section, some of the staff had gone through the process of mentoring or coaching to aid

their skills development and knowledge acquisition. Another management member who has been mentored and coached revealed:

“Every meeting, I could be sitting at the back or just observing what goes on. Sometimes he will allow you to also lead some of these meetings with his team. And he will also be watching from behind to see how it goes. At the end of it, he would provide feedback as to how it went, and this is what you are supposed to do next time. There is on-the-job mentoring and training that goes on. It is not only the practical side but also about your human relations, how you talk to people, and how you accept people. So, all these are part of the mentorship training that I had to go through. I was privileged to have done that with about two or three expatriates” (Interview, 2021).

The preceding revelation shows how a mentee was guided in acquiring knowledge at work. This involved practical programmes for him to develop his soft skills, which come with feedback from his mentor. Further, the participant’s experience indicates that during the mentorship sections, both technical and soft skills are acquired. In sharing the experiences of how employees have acquired knowledge, a management staff participant revealed that:

“In terms of mentoring, yes, I have had former mentors, and I talk to them once a month. They discuss it with me and all that stuff. In the end, there is a model called 70:20:10. Whoever I meet, I make sure I learn. So, there are guys who are above me, and they don’t keep things from me, so I learn. I deliberately improve myself. I have had mentoring; I have had managers who are my mentors, and I talk to them. I have gone to formal education leadership training, and I have been taught all the soft skills, so I have done all of it” (Interview, 2021).

In the above extract from the data, the employee revealed various means of acquiring knowledge, citing mentoring, formal education, and his personal initiative to learn. Another core technical staff member mentioned some experiences he had as a mentee and stated that an employee who is the mentee has to develop soft skills to align with the mentor to make the mentoring process easier. Because of the diversity at the workplace, where you meet people with different backgrounds, employees need to adjust to working with their mentor. An employee needs to portray a good character, exhibit good values, and show leadership when the need arises. There is a need to be able to adjust one's attitude as a mentor and mentee to be able to acquire knowledge through the mentoring process. A core technical staff member gave his experience in knowledge acquisition from working with non-Ghanaian employees:

Another means of acquiring knowledge is by meeting skilled employees from various parts of the world. They come with very diverse experiences directly related to the job. The firm has these employees who have worked in other parts of the world and have shared their various experiences about how things are done, what equipment is used elsewhere, and why it is used. The environment becomes very multicultural and quite multi-national, so that also prepares and helps in developing employees. Another management staff member had this to say:

“In my experience when I joined, I had line managers who were British, and I had line managers who were Australian, Austrian, Indian, and Scottish. These are the nationalities you get to work with sometimes, and each comes with its own positive pack. Things that they see, places they have worked, companies they have worked with, and all that helps in the mentoring process as well” (Interview, 2021).

To a large extent, the most popular way of acquiring human capital in the firm is through on-the-job training. This was attested to by the majority of the respondents, both management and technical staff. This is because of the organizational policy on human capital development, which is the 70:20:10 policy mentioned earlier. The Local Content Report for Tullow Ghana plc for the year 2017 showed that employees make use of internal processes such as on-the-job training to acquire hands-on working experience. The employees have done training on the job in different ways, such as going through practical sections of troubleshooting. There is also the organization of seminars and workshops within the firm to boost knowledge acquisition. Tullow Ghana plc also uses team building as part of the process, and various teams have specific roles. The team-building approach also aids knowledge acquisition by employees, through which they acquire hard skills and soft skills such as interpersonal skills and communication skills.

According to the findings of Figgs (2005), employees in the upstream sector largely acquire knowledge through on-the-job training, which appears to be the most common method of training in most firms. According to Mathis and Jackson (2010), this method saves firms the cost of sending employees away and increases employee flexibility, which is one of the reasons firms prefer it. As much as on-the-job training remains a popular way of acquiring knowledge, it comes with its own set of challenges as well. Employees who are supposed to train others may not have enough time or desire to train colleagues. This can therefore make training ineffective and limit employee knowledge acquisition.

The findings revealed that the firm was using mentoring and coaching within the workplace setting as a common method for employees to acquire knowledge. This has enhanced their skills and competencies at the workplace. Further knowledge acquisition between two employees involves a lot of sacrifices and compromises, as stated by participants. This dynamic suggests an employee

should have the ability to adjust to working with people from diverse backgrounds. The knowledge acquisition process at Tullow Ghana plc has also been shown to consider both soft and hard skills, cross-functional training, and managerial training. Passmore (2007) espoused that coaching and mentoring support the career development and skill development of employees. Likewise, Klinge (2015) revealed that mentoring provides skill enhancement and confidence for employees. Other informal means, such as learning through interaction with diverse multinationals and networking, were also attested to by participants, as well as in the Local Content Report for Tullow Ghana for the year 2017, as contributing means of knowledge acquisition.

The improvement in the skill set of employees has given employees the opportunity to gain promotion, thus succeeding some other employees. This gain of competencies, hence the opportunity for succession, signifies the progress of the localization and succession plans. The ability of local employees to go through this succession plan greatly enhances the realization and sustainability of the local content policy. This is in line with the conceptual framework for this study.

The HCD is a continuous process within the firm. As evident in the findings, employees continually develop their competencies. This observation is shared by the assumption of the human capital theory that the process of HCD is a continuous process involving training and education. In the context of this study, knowledge acquisition by employees has implications for different stakeholders, thus having benefits for the employee, the firm, and the nation at large, which is also consistent with the assumptions of the HC theory (Becker, 1993; Romer, 1990; Schultz, 1961). While employees add to their competencies and a possible increase in earnings in line with the claims of the HCT, firms benefit through productivity, and the nation benefits through attaining progress and sustainability in the LC policy, thus localization. Some studies done in the oil and

gas sector by Bozick et al. (2017) and the ILO (2012) convey similar findings that on-the-job training is central to the development of human capital in the upstream sector. Bozick et al. (2017) hold that firms in the upstream provide the needed support and facilitate this process of on-the-job training.

This segment of the study looked at internal training methods. Evidence from the findings has shown that methods of HCD in the firm through internal training, are made up of on-the-job training, coaching and mentoring, and interaction with multinationals in the firm, and this is largely dominated by the on-the-job training method, which is also due to the HCD policy adopted by the firm, thus the 70:20:10 development policy.

### 5.1.2. External training

Employees at Tullow Ghana plc sometimes get the opportunity to acquire knowledge through external means, such as formal education. This came up during interview sections with employees, and this is what a core technical staff member had to say:

“I was studying for a diploma in petroleum engineering, long distance, in the United Kingdom. The company noticed, and a few senior leaders noticed that they wanted me to do a full M.A” (Interview, 2021).

The extract above reflects an initiative by an employee to study and the support of his managers to fund his formal education. To add to the above extract from the data, another management member had this to say:

“There is a training budget, and this is done with your line manager. I have the opportunity to support people in doing their courses. I will help them with it to get it approved so people

can get sponsors or scholarships to do their masters or upgrade themselves. But normally, the narration or the direction is always to do something that is aligned with your role and aligned with the aspirations of the company. You can't be in the role and go and do a course that is not in line with what you are doing" (Interview, 2021).

The extract above shows instances where management has taken the decision to support other employees in taking courses through formal education. A management staff member also stated that there are instances where employees have the opportunity to acquire technical knowledge outside Ghana:

"We have been able to build the skill sets of the nationals in the industry, particularly in the fabrication area, in the fabrication of structures for the FPSOs. We also helped 55 people in Ghana get work permits and go to Singapore to help in the remodeling of the FPSO Kwame Nkrumah, localizing and imparting knowledge and skills to the Ghanaian nationals" (Interview, 2021).

The quotation above shows an instance where the firm sponsored employees to go to another country for practical experience. The firm was able to send many people at a time to go and develop their human capital.

A practitioner in an upstream firm had a different experience from Tullow Ghana plc. For her firm, employees sometimes get the opportunity to train at a university in Europe that is owned by her firm. The university offers programmes created for the skill needs of the employee.

Employees at Tullow Ghana plc were using external training as a means of acquiring HC. Employees have sometimes acquired knowledge in tertiary institutions both in Ghana and abroad, which became evident during interactions with participants. However, acquiring knowledge

through formal education is limited in Tullow Ghana compared to on-the-job training. This dynamic is a consequence of the organizational policy to use the 70:20:10 model of HCD.

Further, in recent years too, there has been a need by the firm to cut down on the formal education budget, due to the fact that the COVID-19 outbreak has affected their business in terms of revenues. Besides, Armstrong (2010) and Erant et al. (1998) mentioned that formal education provides only a small part of the knowledge acquired at work. However, the theoretical foundations normally learned in formal education are important steps in understanding some practical work at the workplace. Further, Tullow Ghana plc employees were acquiring HC through practical experience in other organizations. An example is employees' attachment to a Singapore firm that builds FPSOs.

In revisiting the theoretical perspectives, one element of the HC theory is the use of formal education in the development of the competencies of employees (Wolter, Stefan, and Ryan, 2011), thus being used by Tullow Ghana plc. Furthermore, in accordance with Becker (1993), the type of education would likely lead to the type of skills or HC to be acquired. Tullow Ghana plc has offered formal education meant to develop both generic and specific skills. Further, through the institutional arrangements, employees at Tullow Ghana plc have benefited from the acquisition of competencies through experiential learning outside Ghana. Thus, the firm has been able to build institutional capital in the form of support roles and resources to aid this process, and this is in line with the conceptual framework of this study.

The issue that was looked at in this part of the study is the external training of employees. It has been revealed that employees sometimes have the opportunity to study in formal educational

institutions and also have practical experience in external organizations. However, opportunities for formal education are limited compared to internal training.

### 5.1.3. E-learning

The e-learning process involves the creation of learning portals to provide employees with learning information and services that enable them to access the content through the internet facility at Tullow Ghana plc. The IHRDC website supports the e-learning process, and employees are also encouraged to access the website to take online courses. To throw more light on soft infrastructural development, a management staff member made known his experience:

“One thing I can tell you is that there is a lot of online space now, and we currently have what we call IHRDC. It is a website that puts online courses on the internet from A to Z. The individual and his hunger level or passion to acquire knowledge count. Over the years, the company has prioritized and invested heavily in training people and giving them external exposure in terms of courses, secondments, and work. Some of the officers have had the chance of working, training, and going on workshops” (Interview, 2021).

The extract from the data above highlights the internal arrangements made by the firm to promote web-based education at the workplace. Again, the extract shows that, in some cases, it is the individual that has to capitalize on the opportunities created by the firm to educate himself at the workplace.

Tullow Ghana plc has e-learning facilities through which employees are able to acquire HC. These internal schools are made available to employees. It is to explore and undertake online courses to peruse if you are within Tullow Ghana plc, which is also a very good development from HR. It also makes it possible for employees to take courses on their own that are outside the department's

needs, thus enabling personalized learning initiatives. Employees have utilized these facilities to acquire knowledge and improve their competencies in the upstream sector. There are some instances where, per the career development plans of employees, they are required to take courses using this web-based facility. However, in other cases, employees have also taken courses of their own interest. One such website that offers this opportunity is the IHRDC.

Grant (2003) suggested that one of the useful ways of transferring and acquiring knowledge is through the use of e-learning portals. Following the outbreak of COVID-19, the use of e-learning facilities as a medium for knowledge acquisition has become increasingly dependent. This is so because, aside from the need for budgetary review due to the effect of the COVID-19 outbreak, it was also seen as a safer alternative in terms of the reduction in health risks associated with face-to-face interactions in education. Furthermore, due to the COVID-19 outbreak, there were travel restrictions that limited opportunities to travel to specific locations and institutions for training and education. However, Armstrong (2010) and Pollard & Hillage (2001) are of the view that e-learning should complement face-to-face learning, not substitute it.

The human capital theory assumes that the requirements of HC are affected by factors including technological changes and cost-benefit considerations (Wallenborn, 2010). Tullow Ghana plc has capitalized on the technological changes employed and the introduction of more web-based courses to improve the competencies of its employees. Again, the institutional capital built in the form of technological know-how and support roles through internal institutional arrangements has made it possible for the development of e-learning facilities.

This section looked at the development of employees' HC through e-learning. It was realized that e-learning is a means through which employees acquire HC. Web-based learning programmes are

sometimes recommended by employee trainers. The IHRDC is a tool adopted by a firm like Tullow Oil plc that is being used to educate employees.

#### 5.1.4. Personalized learning initiative

Aside from other methods that are facilitated by the firm, employees sometimes take their own initiative to learn, which can also be done through formal or informal means. Respondents shared their views on how they have used their own initiative to acquire knowledge. A respondent shared her view and had this to say:

“I have made it my goal to get close to those in positions higher than me so that I can learn from them. I have learned a lot from the people who are ahead of me, and I have also learned a lot from my peers. I will say that all the relationships I have built with people in positions outside my area have helped me a lot in my leadership skills, helped me in my decision-making, and so many other areas” (Interview, 2021).

The quotation above shows an employee who acquires knowledge from interactions with other employees she encounters at the workplace, and this has helped her acquire some skills at the firm. On how the firm supports personal initiatives, it came up from the findings that Tullow Ghana plc has an open-door policy that allows an employee to freely go to their ‘bosses’ anytime that they want, thus there is that freedom of interaction among their employees. It removes some level of hostility, and an employee can easily reach out to other staff for assistance, explanations, and tips for learning whenever they want. Another participant made it known that at times there is a need to invest financially in one’s own development:

“Sometimes, what I see most is that some people self-sponsor themselves to do what they want to do, especially where they know it is not aligned with the company, and where they

want to be in the future. You are at liberty to sponsor yourself in any course that you want. Probably, somebody may be denied by the company. That is where you need the full-time scholarship probably, to go out of work” (Interview, 2021).

The extract from the findings sought to explain that if an employee thinks a programme is good for her career development but is denied funding for the programme by the firm, then the employee takes the option of study leave without pay and pursues that programme.

A participant gave her view on how her values drive or lead her to acquire knowledge and made it known that she believes in continuous improvement. She had the view that she believed in the development of people and wanted to be in an environment where people were being developed. Among her values are development, education, and continuous improvement. Another respondent added his view on personal initiative as a means of acquiring knowledge:

“First of all, I think that one’s own development is his own responsibility. You can’t just sit down and expect somebody to come and develop you. If you want to get developed, it is important that you find out what opportunities are available that you want in your career. I have also taken it upon myself to develop. I have seven degrees currently, which I paid for myself, and I have taken the opportunity of the training and schemes that Tullow has as well” (Interview, 2021).

The quote above depicts the experience of an employee who took her HCD into her own hands, going above and beyond what Tullow Ghana plc offers in terms of training and furthering her courses of interest.

On the motivation to take personal initiative, a management member at Tullow Ghana plc had this to say:

“I paid for them myself because Tullow did not offer that training, and that is where I want my career to go. So, I am in charge of my career development, and I know exactly where I want to be. Tullow is not offering that training, and they don’t offer degree programmes but they support some degrees and professional certifications as well. I wasn’t interested in those they supported. I wanted to chart my own path” (Interview, 2021).

The above quotation points out the need for an employee to take initiative in training, thus not depending on what is offered at the firm alone. On how an employee can benefit from taking personal initiative, these are the views of a management staff participant:

“Even though HR and line managers are there to support, you should always drive that development. This is where I want to be in the next year or two. So, I would need to do this training. Sir, can you sponsor me? Sir, can you advise me on what to do to achieve this role or to be able to be in this role? That is the kind of direction we normally give to employees” (Interview, 2021).

The above extract from the data shows that sometimes when an employee takes a personal initiative, she may have some informal mentoring at the workplace.

Some employees at the firm have taken it upon themselves to initiate human capital development processes. For instance, a management employee confirmed his initiative to get around employees in higher positions to learn from them. Another personal initiative of the employees in the firm is sponsoring themselves to go through formal education. Per the values of some employees as well as the norm at Tullow Ghana plc., employees are encouraged to take their personal development into their own hands. This individual’s personal initiative cuts across both management and core technical staff.

In the view of Armstrong (2010), individual learning and other organizational learning initiatives complement each other to promote success in knowledge acquisition. This implies that in the firm there is a need for individuals to take the initiative to learn, which can lead to both the acquisition of generic or specific skills and enhance employees' chances of taking up certain job roles in the firm. Eraut et al. (1998) also stated that self-directed learning can improve employee knowledge acquisition. Furthermore, in the case of Tullow Ghana plc, the firm's organizational culture creates an enabling environment that allows employees to take individual learning initiatives. For instance, the 'open-door policy' at Tullow Ghana plc allows easier access to staff for assistance in relation to knowledge acquisition.

Also, the firm's e-learning portals facilitate individual learning initiatives by employees. However, Armstrong (2010) is of the view that e-learning is not so effective for developing soft skills such as team building and communication skills because the development of these skills relies on interpersonal encounters. E-learning can still offer a foundation to prepare employees for practical sections and offer a valuable knowledge acquisition endeavor.

The human capital theory assumes that in firms' investments in the HC of employees, employees are sometimes expected to pay for their development, especially when the skills to be acquired are considered generic, which may not be in the interest of the firm at the moment in time (Becker, 1964). In that direction, Tullow Ghana plc employees sometimes take their own initiative for their career development.

The resort to individual learning initiatives by employees in the firm was looked at in this section. As revealed by the employees, they sometimes take it upon themselves to acquire certain skill sets for their career development.

### 5.1.5. Chapter conclusion

This chapter presented, analyzed, and discussed the issue of how employees acquire human capital in the upstream sector. It was realized that employees at Tullow Ghana plc acquire knowledge through internal training, external training, e-learning, and personalized learning initiatives. These methods of HC acquisition have assisted in the acquisition of both soft and hard skills. Internal training, such as on-the-job training, coaching, and mentoring, dominates the knowledge acquisition process due to the HC development policy of the firm, thus the 70:20:10 model. The next chapter discusses the challenges faced in developing employees' HC.



## CHAPTER 6

### ANALYSIS AND DISCUSSION OF FINDINGS (PART 3)

#### Barriers to developing employees' HC in the upstream firms

##### 6.1.0. Introduction

This chapter shows the findings and discussions of the study in relation to the challenges faced in developing HC in the oil and gas upstream sector. The data was obtained through qualitative interviews. Participants included management staff of CSOs, MPs, the MOE, the PC, technical and management staff from Tullow Ghana plc, and relevant practitioners in the upstream sector. Some of the themes that came up include: perceived deliberate delay in skills transfer; occasional misunderstanding between the PC and the firm; the risky and expensive nature of business; difficulty in finding experienced professionals; cultural diversity; inadequate educational infrastructure; limited capacity of stakeholder organizations; lack of employee motivation; and inadequate information on localization and training. First, the key findings of the study are presented with quotations and explanations. This is followed by discussions of the findings.

##### 6.1.1. Perceived deliberate delay in skills transfer

As a result of the need to employ competent employees to administer the business of the upstream firm, Tullow Ghana plc has a number of non-Ghanaian workers performing various roles in the organizational set-up. However, perceptions about the conduct of some of the non-Ghanaian employees in relation to the performance of their duties at the workplace serve as a barrier to the development of human capital in the firm. Some findings from the interviews are presented below. The majority of the participants interviewed at Tullow Ghana plc attested to this perception. A core technical staff member at Tullow Ghana plc had this to say on the perceptions about non-Ghanaian employees:

“It is all because at that time expatriates were not really ready to go out of the country. People were happy; they were happy here. So, it was quite challenging for some to leave their jobs. They will tell you that they had to learn the job for 15 years back in the day. We had cases like that where the local employees were told they had about seven to 10 years on the job to learn from and take over from me” (Interview, 2021).

The above quotation sheds light on the perception that non-Ghanaian employees may take longer than required to impart the necessary skills and competencies to the Ghanaian understudying the non-Ghanaian employee. This also sheds more light on the point that such perceptions and situations have improved over the years.

On the other hand, some employees appear to have justified the perceived longer durations by stating that they were intentionally used to transition skills and job roles to Ghanaian employees. With some employees having perceptions about the conduct of some expatriate workers, another core technical staff member also mentioned that some of the job areas are quite technical and an employee needs to build competence into that role, making the technical areas a bit challenging. He further stated that it is the reason Tullow Ghana still has roles being managed by expatriates, though it has been in operation for around ten years.

Some participants further expressed their views on this perception and stated that it is made clear to the non-Ghanaians what is expected of them when the firm is employing them. When expatriate staff arrives, they are informed that teaching is part of their job description. So, it all depends on the individual Ghanaian employee to know how best he or she can tap the knowledge of the non-Ghanaian, according to a core technical staff member. In relation to the above perception of some expatriate workers, another participant gave a ‘balanced’ view of the issue and stated that:

“Some clearly will not want to leave, because they will not get these kinds of packages elsewhere in their own countries. In terms of integrity, they may not want to leave, but some are also happy because they know who they are. They know that with the skill set they have, if they were to work themselves out of a job, they could go elsewhere and get a similar job, and they are happy to do that” (Interview, 2021).

A core technical staff member at the firm disclosed that the conversation has shifted from just blacklisting people by non-Ghanaian employees to what non-Ghanaian employees are doing to help Ghanaian employees:

“In the past, we used to have a lot more of that. However, that is why, for example, we have onboard trainers and training departments onshore who will try to make the process as objective as possible. It is not a matter of simply saying the guy is not good. The next question is why he is not good. Where are the actual gaps? I can’t just call my boss and say, Akosua is not good” (Interview, 2021).

The above quotation also highlights that, comparatively, the number of expatriates perceived to have that attitude is on the decline. Conversely, the data gave the impression that different multinationals have different ways they were trained and have gained experience, and this could be a challenge. Some employee trainers have been trained very hands-on, formally and informally, so it sometimes creates inertia among some employees and creates these perceptions. But once everybody gets to a place where they understand that this is what the firm wants and this is the direction of the firm, the momentum then picks up. Another management employee had the view that, though the perception exists and, for him, that is the reality, it boils down to human nature, but performance management mechanisms have been put in place to improve this situation:

“It is human nature. It is difficult sometimes, and what we are doing differently is that we are driving performance; it is performance-driven. If you are not achieving localization as a manager, then that affects your performance and affects your bonus. We are human, we are dealing with human beings, and we are telling people to boot themselves out of their jobs. So, what we are looking for is also the right people who are really interested in developing people, not just coming to work for pay. Performance management is finding the right people who are generally interested in people’s development. We are also trying to increase our monitoring, which has been weak in the past” (Interview, 2021).

The above quotation also reflects the perception under discussion and further explains how this perception is being dealt with such that bonuses are given to employees who are able to achieve the succession plan targets. Another core technical staff member also had the view that, because human beings are ‘undeniably selfish’, there is a tendency for people to say that the Ghanaian employee is not ready and can’t do this job so that they may be ready to extend their time in Ghana. But it was revealed that with the performance management processes in place, they were helping to deal with the situation.

Meanwhile, a non-Ghanaian employee shared his view that he is competent enough to get jobs elsewhere, and with his current job role, the Ghanaian employees will need some time to get used to the tasks; it is a bit challenging to acquire the necessary competencies because it requires the use of a new tool. The employee was of the opinion that he was ready to impart knowledge and skills to his team members. Meanwhile, a practitioner in an upstream firm made mention of the sense of entitlement and sentimentalism on the part of Ghanaian employees as a challenge to HCD in the process of localization.

The attitudes of non-Ghanaian workers during training can impede the transfer of skills to Ghanaian employees. Perceptions at the firm suggest that some of the non-Ghanaian employees deliberately delayed transferring skills to their Ghanaian counterparts during the succession period. This became evident when the majority of the staff interviewed at Tullow Ghana plc alluded to this perception. The delay in skills transfer has implications for the duration of the training and the number of employees that can be trained within a period of time. This issue remains a barrier that came out strongly as being among the limiting factors to the progression of Ghanaian employees in terms of skills acquisition and localization at Tullow Ghana plc. As Santos and Stuart (2003) pointed out, employee perceptions during training can negatively or positively influence the outcome of training. In the case of Tullow Ghana plc, the negative narrative appears to be affecting the training of employees. Pham, Gijsselaers & Segers (2011) also suggest that perceptions of the working environment during training affect knowledge acquisition at the workplace.

Some of the participants tried to justify this perception and suggested that it doesn't make 'sense' for a person to boot himself out of an office, hence employing any means necessary to hold on to a job role once the person derives utility from it. Ablo (2018) suggested that it is a natural attempt for foreign employees to protect their jobs; thus, these employees make efforts to keep their jobs. While a few of the staff that were interviewed attributed this process to genuine reasons, the majority of staff interviewed maintained their stand on the perceived deliberate delay of the transition programmes. This dynamic has implications for employee motivation to train. Training may not be rewarded, instead resulting in a delayed promotion.

However, a minority of participants opined that it was "human nature" to exploit existing conditions in order to reap benefits. Some interpretations of the findings suggested that sincere non-Ghanaian staff performed as expected and were competent enough to land other jobs

elsewhere even if they were to leave Ghana. So, there was no need to deliberately delay training and succession.

The perceived delay, as mentioned, occurred for different reasons. First, this occurred because ‘comfortability of the non-Ghanaian’ in living and working in Ghana. The second issue is related to the belief that some of the Ghanaian employees being trained are sometimes not ready to take over a job role. This dynamic suggests that successful training and succession require cooperation, shared responsibilities, and hard work from actors.

On the other hand, the analysis that was done on some job roles by Pegram et al. (2020) in the upstream sector illustrated that, indeed, some job roles may require many years. For example, between 10 and 15 years of work experience may be required to develop the necessary competencies to take on certain job roles. Revelations from the data also suggest that this situation of perceived deliberate delay of skills transfer by non-Ghanaian employees to Ghanaian employees has been significantly reduced due to measures put in place by the Petroleum Commission and the Government of Ghana. It is a requirement of L.I. 2204 to indicate and justify the duration of the transition of a job role from a non-Ghanaian to a Ghanaian employee. Furthermore, for a work permit to be granted to the non-Ghanaian worker, there has to be approval from the PC as to the agreed number of years for a succession plan to take place. This means the institutional arrangements have helped in reducing this perceived occurrence. The institutional arrangement guides, constrains, and directs people’s choices and actions (Schlager and Cox, 2017). To some extent, the rules and regulations governing the upstream sector are reducing the deliberate delay in skills transfer, though the perception still exists in the firm. This suggests that the deliberate delay in skills transfer in recent years is not as bad as it used to be when the firm started operating in Ghana.

This component of the findings and discussion looked at issues of delay in skill transfer. Participants' perspectives and perceptions indicate that non-Ghanaian employees deliberately delay succession planning for personal reasons, thereby delaying Ghanaian employee training. Indications from the participants also show a trend in the gradual lessening of this challenge as the years pass due to the institutional arrangements.

### **6.1.2. Occasional misunderstanding between PC and the firm**

Various actors within the upstream space are supposed to work together for the benefit of these actors and the nation at large. Occasional misunderstandings among these actors came up as an issue that can pose a hindrance to the effective training of Ghanaians in the upstream sector. Some findings are presented, followed by discussions on the issue.

A management staff member at Tullow Ghana plc was of the view that when the local content law came into being, Tullow Ghana plc had already been in the upstream sector for five years, and the time difference brought about the misunderstanding on the implementation of the LCP. The firm started operating before the local content law, and it became problematic to abide by these laws. Difficulties arose between the firm and the PC due to the timing of the operationalization of LC laws that weren't in place at the beginning of the firm's operations in Ghana. A Member of Parliament also made a statement to allude to the occasional misunderstanding:

“Some of the companies that existed before the passage of the Act think that there are some stabilization clauses. The retrospective effect is one of the challenges. Like Tullow, it becomes a bit of a problem for them to commit funds to it because of this clause. They can only take advantage of new laws that will benefit them, but if the laws are passed to their disadvantage, they have the right to reject them” (Interview, 2021).

The above statement reflects the effect of the timing of the passage of rules and regulations on the working relationship between actors and how this can affect the achievement of set targets and goals. It again reveals how the firm can capitalize on favourable new laws while rejecting those that are deemed unfavourable. The findings also showed how the Petroleum Commission and Tullow Ghana plc find resolutions to issues that arise as a result of misunderstandings. A management staff participant at Tullow Ghana plc is of the view that:

“Apart from that, the fact that we had a very good relationship with the Petroleum Commission, they are actually supporting us. We have partnerships for capacity development initiatives. We don’t really see challenges like before. But what I can say is that, at the moment, I don’t see any challenges between us and the Petroleum Commission. We meet with them regularly. For example, I meet them at least three times a month to discuss our local content strategy. For me, that is a good forum where we can talk about our reporting requirements, and our local content reports. So as long as there is communication, and we have adopted a partnership approach with them, everything is discussed, clarified, and moved on” (Interview, 2021).

The excerpt above is an example of how the two actors are able to work together even if a challenge arises from their working relationship. Again, the statement seems to depict a peaceful working relationship between the firm and the PC at the moment, thus also showing some challenges existed in the past. Building healthy relationships through partnership and frequent meetings has helped the firm and the PC work together.

As a consequence of some requirements of the regulating agency, the Petroleum Commission and the oil and gas firms are supposed to coordinate and collaborate to achieve set targets, which are

policy goals in developing human capital. It is a requirement of the LCP and local content regulations for the upstream firms to submit training programmes within the 1<sup>st</sup> year of having a license to operate in Ghana to the Petroleum Commission. Not only are the upstream firms required to submit the programmes, but they also provide a quarterly and yearly report on the progress made with these submissions.

The interplay between the Petroleum Commission and Tullow Ghana plc can impede the development of HC in the oil and gas firm. The lack of LC laws when the firm began operations, for example, resulted in a reluctance by Tullow Ghana plc to follow rules on localization and succession, impeding progress in the development of HC in the firm. Though the LCP was in place some years before the LC laws became operational, Tullow Ghana plc had some stabilization clauses in their oil and gas extraction contract with Ghana, hence the initial disagreement with some aspects of the local content laws. The implications of the misunderstanding are a lack of proper coordination and collaboration. The way these two organizations work to achieve set targets can be affected by occasional misunderstanding between the actors.

Reducing misunderstanding among stakeholders is important for the attainment of goals and can be done through being sincere and transparent in dealings, meeting requirements, and responding with urgency to the needs of stakeholders. As coordination brings about harmony, it will be difficult for misunderstandings to bring about harmony, thus affecting the unity of purpose and action in achieving common goals and objectives. Baur et al. (2010) also pointed out that mutual understanding among stakeholders promotes the development and attainment of goals.

The findings of this study resonate with those of Ovadia (2017), who stated that there were discrepancies and misunderstandings among different organizations during regulatory duties

performed in the upstream sector. Further, poor coordination as a result of misunderstanding among actors resonates with the findings of Grunstein and Diaz-Wionczek (2017), who argued that coordination challenges exist in implementing LC strategies. Misunderstanding among stakeholders can lead to a lack of consensus in achieving set goals.

In this section, challenges emanating from the interplay between the PC and the firm were looked at. Evidence from the findings has shown that there are sometimes misunderstandings between the PC and the firm. An example is the non-compliance with local content laws on HCD. However, this trend of non-compliance, which was peculiar to the period after the coming into being of the L.I. 2204, thus after the year 2013, has largely been resolved after the organizations adopted a partnership approach to pursuing the LC goals. This misunderstanding was impeding the training and development of employees at the firm.

### **6.1.3 Risky and expensive nature of business**

Businesses would like to minimize or eliminate risk as well as reduce the cost of business operations. The findings on the risky and expensive nature of business are presented with quotations and explanations. This is followed by discussions of the findings. Various participants gave their views in line with the theme under consideration. A core technical staff member who is a practitioner in the sector had this to say about the risky nature of business:

“You have to prove, as a local, that you are actually ready, and you can slot in when you are given the opportunity. You have to prove that to a lot of stakeholders. Not just your direct boss, but other people as well who have a say. Because the mistake that one person makes may really affect a lot of people and castigate a lot of other things or challenges down the line” (Interview, 2021).

The above quotation is an indication of the point that the firm, as a business entity, would not want to take chances of making mistakes. An employee will have to practice to be perfect, and the firm wouldn't risk handing over certain tasks to the trainees.

“Looking at an operation offshore where we have over 120 people, you are producing oil with gas and separating it. It is a highly skilled business. If you don't have the right competencies, you might have issues. We have what happened in the Gulf of Mexico and other incidences over there. It is a highly skilled industry, and you need to have the experience” (Interview, 2021).

The above quotation also goes to add to the point that, because any mistake during extraction activities can lead to accidents or disasters at the workplace, little opportunity is given to inexperienced employees to perform tasks considered sophisticated. To add to the above, this is what another practitioner in the sector had to say:

“Oil and gas production is quite an expensive and risky business, and a lot of the risks involved are because we are dealing with live hydrocarbons. Apart from that, you always have a business risk where mistakes could cost you a lot of money” (Interview, 2021).

The sophisticated nature of oil and gas production can hinder the development of HC in the oil and gas upstream sector. In the field of work, a mistake made by an individual can lead to accidents or interruptions of work. This dynamic sometimes limits the opportunities that are given to workers to practice certain tasks, leading to skill development. As asserted by a participant, a mistake by one employee can bring a whole FPSO down; therefore, there is a need to be cautious in giving certain roles to trainee employees to perform. Meanwhile, it is the performance of tasks that will lead to gaining experience and, hence, the acquisition of knowledge and skills. Finding the balance

between training employees and minimizing or eliminating disasters at the workplace can prolong the training of employees in the firm.

The expensive nature of the business can also hinder HCD. Businesses are made to take the best possible decisions to enhance shareholders' profits and meet performance targets. According to some participants, this can lead to fewer opportunities for employees to gain practical experience because decision-makers are unwilling to risk an employee's skill development, which can lead to poor business performance. Unsatisfactory performance has implications for business profits. Pegram et al. (2018) also revealed that oil and gas companies sometimes give limited opportunities for local participation due to the highly capital-intensive nature of the business.

It came up in the findings that because various stakeholders, including the government, are always expecting the firm to meet production targets at the end of the business cycle, implying limited chances to give training opportunities to employees sometimes, the firm tends to focus on doing its business. The focus of operations will be more on extracting the expected amount of oil, making the business aspect of the firm a priority over training Ghanaian employees. Once the firm has the employees, whether Ghanaian or non-Ghanaian, to work to meet production targets, any attempt to prioritize Ghanaian employee training at the workplace can have an impact on production targets.

However, the fact that a business entity, Tullow Ghana plc, has production targets to meet and stakeholders to satisfy does not mean they should not also meet their training targets. That is why the firm has plans for the business cycle that include training employees. That notwithstanding, there will always be a priority to meet production targets over training targets. The same caution

will be used in avoiding disaster at work rather than taking the risk of having an inexperienced employee perform a task that team members are unsure of the employee's readiness to perform.

This section looked at how business interests can limit the training opportunities and tasks given to Ghanaian employees during operations by the firms. Participants suggest that the sophisticated nature of upstream operations, as well as the need for the firm to make a profit for the shareholders, sometimes limits the opportunities given to inexperienced Ghanaian employees to have hands-on training experience. This is so because there is little room to make mistakes in some sophisticated business operations.

#### **6.1.4. Difficulty in finding experienced professionals**

The difficulty in finding experienced professionals came up as a barrier to the HCD in the upstream firm. Most experienced professionals have learned a lot of things that can help the progress of organizations and the development of individuals. Aside from contributing to the productivity of firms, they can help develop the skills and competencies of workers in the firms. The findings on the theme are presented with quotes, explanations, and discussions. One of the practitioners in the sector who participated in the interview had this to say:

“The main difficulty is finding experienced professionals. With the office roles, the people have transferable skills, so the learning is really about understanding the oil and gas value chain. In the technical functions, we don't have ready-made people in the industry. For instance, one thing about geology, drilling engineers, reservoir engineers, petroleum engineers, subsea professionals, and production people, we don't have them in Ghana. You have to train them in Ghana. Now you can argue that there are people available outside

Ghana. Yes, there is a small pool, and even then, we have done an extensive talent swoop, and the majority of people don't want to move to Ghana" (Interview, 2021).

The quotation above reflects the unavailability of a section of the professionals needed to work in the upstream sector in Ghana. It again shows the difficulty in finding a core technical staff member who is experienced or convincing Ghanaians abroad to work in the upstream sector in Ghana. The data also revealed reasons why experienced Ghanaians who live abroad are not attracted to Ghana. On the attraction of experienced Ghanaians outside the country, a management staff member at Tullow Ghana plc is of the view that:

"Because these are people who have established themselves and their families in the diaspora. From our own experience, the people that we were able to attract in the beginning have left. Some leave for family reasons, and those who move their families to Ghana want to return when their children reach secondary school age. So, then, we have to rely on training our own talent from the ground up, and that takes time because we need to bring people in so that experienced people can have the capacity to train them, so you can't take, for instance, ten people at a time. You have to train them over a period of time. That takes time to train" (Interview, 2021).

The preceding statement emphasizes the need for experienced people, particularly in oil and gas firms, who can assist other firms' competencies, and this experienced personnel is limited in both the nation and the upstream firms. It again reveals that family considerations made by these experienced workers are an important issue in making decisions to live abroad over a job offer to live in Ghana. To add to the above quotation, another core technical staff at Tullow Ghana plc revealed:

“The top talents that you need to come in and help develop others, you have to pay a premium for them. So now all of them feel like if you are coming locally, you have to take it as a discount. So, you have other people who are willing and who really want to come back” (Interview, 2021).

The extract above also reveals financial considerations as one of the factors that determine the relocation of Ghanaian professionals from abroad to work in Ghana. On the transition from school to being employed, a core technical staff member made this statement:

“You may have people with school qualifications, but for you to perform engineering functions, you need a lot of experience. The work is very dangerous, sophisticated, and expensive, such that if you make a mistake, you can bring the whole FPSO down, which is worth over two billion dollars. So it is not for the novice; people have to get the relevant experience before they can acquire the necessary skills and help train others” (Interview, 2021).

This quotation above is also another statement that gives the impression from the participant that people need to work for a good number of years before they can be in that position of competency to also transfer skills and knowledge to people, and because of the sophisticated nature of some of the petroleum production processes, it takes a longer time to develop human capital in such situations:

“Because there were a lot of Ghanaians in the diaspora who wanted to be back. They are not coming because the money is not good. But we have a lot of Ghanaians who are out there with Exxon and the ‘Totals’ and all that. They will come with an oil and gas premium. We don’t even want to pay them a premium here because our own GNPC is against that,

because they say that it will create inflation, they will claim disparity of pay, and so forth, and that will put pressure on GNPC. So, they were against it. There were people there at a high level who were against that. They should have made sure the Ghanaians who are passing through received the same premium as the guys in the UK. These are some of the huge disparities” (Interview, 2021).

The above quotation suggests that some state-owned companies, such as the GNPC are indirectly part of the problem of why upstream firms in Ghana are not attracting experienced Ghanaian employees working in other firms abroad. This is due to the possibility of financial demands from GNPC employees when their colleagues outside the country are attracted to work in Ghana with the payment of a premium.

A lack of experienced professionals can limit the development of HC in the oil and gas firm. Experienced staff is needed to develop inexperienced staff. The suggestion by core technical staff member at Tullow Ghana plc is that the lack of experienced employees at Tullow Ghana plc has affected the number of employees that have been trained at the firm. The more experienced people there are, the greater the capacity to train more staff. The implication of this dynamic is the inability to train enough Ghanaians to meet the targets of the LCP with regard to localization due to the limited experience of staff. One issue that emerged from the findings was the concentration of the challenge of the staff's lack of experience within the core technical space. Examples of these core technical staff who are lacking within the Ghanaian context range from different types of engineers to subsea operators.

The inability to attract experienced Ghanaians can be a consequence of socio-economic reasons. There is a preference for Ghanaian professionals in the oil and gas industry abroad to live in the

countries where they are based due to the fact that these professionals have settled well in these countries and wouldn't like a change of environment to resettle and work in Ghana even though they are Ghanaians. The uncertainty surrounding the change of job and place of residence is one of the consequences of changing working environments. The individual's interest in prioritizing family preferences as opposed to financial benefits also comes into play. Whereas economic gains can be a consideration, family reasons also influence professionals' choices to reside in Ghana or elsewhere.

Just like in other industries and sectors outside oil and gas, there is always competition to attract professionals, and the financial benefits of employees remain central to the ability of Tullow Ghana plc or the state of Ghana to attract experienced professionals to Ghana who will be needed to help develop other talents and professionals. As put forward by Malkocevic (2020), there is a shortage of staff in the industry worldwide, and this implies competition and difficulty in attracting competent staff, including Ghanaians living outside the country to return to Ghana. On the contrary, some participants claimed that, due to financial considerations, the reverse is happening; thus, experienced Ghanaians are leaving the country for jobs in other firms outside the country. This dynamic is also in line with the fact that the firms in the industry find ways of attracting experienced professionals to work for them (Malkocevic, 2020). Orr and McVerry (2007) stated that competitive compensation is widely used as a foundation for the attraction and retention of staff in the oil and gas sector.

This theme looked at how a lack of experienced staff in the firm can limit the number of employees that are trained in the firm. More experienced employees in certain job roles, such as the core technical roles, are needed to transfer skills to relatively inexperienced employees. Experienced professionals are more capable of transferring skills to relatively inexperienced professionals.

### 6.1.5. Cultural diversity

Another theme that emerged from the challenges of human capital development is cultural diversity. The employees at Tullow Ghana plc come from different cultural backgrounds. The findings from the data revealed how the cultural orientation of staff can affect their conduct in their field of work at Tullow Ghana plc. A member of Tullow Ghana plc's core technical staff member agreed that cultural diversity can have an effect on the development of skills and competencies:

“You know you have a mix of nationalities on board the vessels, with every nationality having various characters, and their cultures are very different. With Ghanaians, the average Ghanaian is relatively reserved and calmer, and other cultures don't have that. The American culture, for instance, is very outspoken, and sometimes that can be misconstrued to mean that the demeanor of a Ghanaian is not competent or confident enough to do the job, and it has taken a while for people to realize that you can't always use demeanor and that those cultural differences, you can't equate that to competence” (Interview, 2021).

The view of the participant above shows how cultural differences can influence employee perceptions of the abilities of Ghanaian employees to deliver on the job. In the statement above, the participants revealed how colleagues and staff members can judge your abilities based on your demeanor at the workplace. The participant sought to give his view on how Ghanaians, who are generally reserved, for instance, might be taken not to understand certain processes as opposed to staff members from a cultural background that sees talking, for instance, as confident and knowing. On coping with such a situation in terms of cultural dynamics at the workplace, a core technical staff member at Tullow Ghana plc had this to say:

“That is why the formal competency assessment is important. It moves us away from subjectivity. They were more comfortable working with other expatriates of the same nationality who also had many years of experience. It is more comfortable if his supervisor has 20 years of experience versus a local Ghanaian, who probably has five to seven years of experience. You know, that makes him more comfortable. That is what it is, so you have that as well. So, notions or stereotypes are another challenge that we have had” (Interview, 2021).

The above quotation further adds that, aside from perceptions of an employee, the employee’s experience level also comes into play during teamwork in the firm. Employees would prefer to work with more experienced colleagues.

Cultural diversity can affect knowledge acquisition at Tullow Ghana plc. Cultural background and orientation can affect employees’ conduct, perceptions, and behavior at the workplace. Employees are able to develop better working relationships with colleagues with similar cultural backgrounds, leading to the seeming neglect of a Ghanaian employee in some work situations, which can delay knowledge acquisition at the workplace. A participant disclosed during the interview section that some non-Ghanaian employees have sometimes mistaken the relatively calm demeanor and conduct of some Ghanaian employees in the workplace for a lack of confidence to perform a certain task. This undoubtedly limits opportunities to perform tasks at the workplace and can impact knowledge acquisition there. The more an employee has hands-on, practical experience, the more likely he is to develop his competencies.

However, Argawal & Argawal (2015) indicated in their studies that the involvement of indigenous-corporate relationships such as cross-cultural bridge promotion has the potential to

bring new ideas, and thus collaboration with people from different cultural backgrounds can lead to new knowledge, which contrasts with the findings on this theme. Cultural dynamics can affect how employees from different cultural backgrounds learn from each other.

This portion of the findings and analysis raised the issue of how cultural orientation can affect social interactions at the workplace due to the ways of life of different multinationals, which then affects perceptions about Ghanaian employees. As testified by some participants, the reserved nature of Ghanaian employees can sometimes be misconstrued as a lack of confidence to perform certain tasks and limit opportunities given to some employees, negatively affecting their hands-on experience to develop their skills and competencies, particularly with the offshore operational activities. However, a discussion on how employees acquire HC revealed that some employees also acquire HC through networking with multinationals. This suggests that cultural diversity at Tullow Ghana plc can contribute to HCD or be a barrier to it.

#### **6.1.6. Inadequate educational infrastructure and curriculum in Ghana**

The educational infrastructure and curriculum in Ghana are also one of the challenges in developing HC in the upstream sector. Interview participants gave their views on education in the nation and its effects on the development of HC. The majority of participants mentioned education in the country as a barrier to HCD in the upstream sector. During the interview, a member of the core technical staff member who is a practitioner in the sector revealed the following:

“To be brutally frank with you, our educational system doesn’t equip one. Apart from the fact that it was a little over ten or eleven years ago that we had our first oil, prior to that we never had experience here, so we had to bring a lot of expatriates over the years. Our educational system is heavily focused on acquiring knowledge with little practical

experience. The job requires purely practical experience, and that has been lacking. I am 10 years in the industry and am still learning. It takes a lot of years to acquire the knowledge” (Interview, 2021).

The extract from the data attributes the shortage of technical personnel to the curriculum of Ghanaian education. In the view of the participant, what is taught at schools and tertiary institutions does not equip students with enough practical competencies to be able to cope with the demands of working in the oil and gas upstream sector. To add to the above quotation, a core technical practitioner added:

“For me, we need to have a balanced educational system where knowledge goes together with practical experience. It takes certain technical courses we are doing at the university and practical experience, which the guys are acquiring. At times, you get the impression that the system is heavily biased. Learn the theory and pass the exams. That is a challenge, you know. Unlike the expatriates that I am working with, they start with the experience right from day one; they grow up within the space, and their knowledge base is fantastic. That, for me, is the difference, and it takes time” (Interview, 2021).

The above statement also illustrates a situation where the potential employee does not acquire the necessary competencies during studies at the tertiary level, such as foundational knowledge. The findings also compared the Ghanaian employee to a non-Ghanaian employee who is relatively equipped with the necessary practical skills.

Another practitioner is of the view that, apart from students that take the initiative to have an internship with firms at every level of their studies, the educational system at universities and other tertiary institutions does not provide enough time and arrangements to connect students to firms

for hands-on experience. He further stated that when the students are told to start from scratch, they become frustrated because they feel they have a bachelor's degree. However, the degree they hold does not provide them with the necessary practical skills.

Another participant from the CSOs further raised concerns about the seeming reduction of the technical and practical nature of the nation's polytechnics, which are now converted into universities, and whether this has not further affected the abilities of the institutions to train Ghanaians to a level to work in the technical space in the upstream sector. Then again, the data pointed out the need for personal initiative on the part of a student to go through internships and attachments to develop practical skills to be able to work in the sector. A core technical staff member stressed the need to have more practical experience with the educational system in the country with regard to the oil and gas sector:

“If you are an electrician or something, you start from point zero. Rather than going to the university earlier, you start as a mechanic. You are on the tools, you work, you can change bearings, and you have hands-on experience as opposed to somebody who has a B.Sc. He knows where the gear is, and he knows how it functions when you have a bearing and a pump. If they ask you to check the bearing or how you resolve this problem, then you are in trouble” (Interview, 2021).

The findings in the preceding extract also provided an opinion that tends to inform us of the importance of acquiring basic practical skills through alternative means such as apprenticeship before enrolling in a university programme. This is to acquire certain practical skills to complement what will be taught at the university level. In order to improve the technical skills of employees, a core technical staff member stressed the need to attach more importance to technical

education in Ghana, stating that technical and vocational schools should also be given the same prominence as polytechnics and universities to be able to produce professionals such as instrument technicians, mechanical technicians, or electrical technicians who can get opportunities to work on the FPSO. The participant stressed the need to maintain the core business, especially with the polytechnics, which will help the Ghanaian students cope, and that with the setup that we have in Ghana, the nation is gradually losing what the oil and gas economy requires. On meeting the required standards and certification, this is what a CSO participant had to say:

“The point is that there are standards by which some things are done. You need electricians, mechanical guys, engineers, and people who do fabric maintenance. For some of the skill sets, I can say we have Ghanaians at the top. But a lot of the work offshore, you realize at times, is based on certification, and that is where we are found lacking because it is an international environment. That is the challenge, so when you hire electricians, for instance, they should have the experience and certification. For a rigging supervisor, there are certain standards and certifications to meet, and a lot of these qualifications are international. So that is what sometimes creates the problem. By and large, a lot of work has been done to bridge this gap” (Interview, 2021).

Another core technical staff member also raised concerns about the competencies of some of the instructors in the educational institutions in Ghana who teach the students, stating that some of the lecturers at the tertiary institutions are not well informed to train students, that is, potential employees.

“I am sorry, but they are rusty because they don’t have the industry knowledge. They are smart people and brilliant, but they don’t have the oil and gas industry knowledge. So, the

things that they teach the kids are just theories. Some of the theories are even wrongly used and outmoded. A chemical engineer went into a 6-month course to do oil and gas and turned into an oil and gas professor. The professors themselves need to be tied to the industries. We should develop oil and gas professors who work with the industry. In trying to solve our problems, you should understand the industry so that you can churn out students who really know what oil and gas are all about. Or they just show up as a chemical engineer, not really an oil and gas engineer” (Interview, 2021).

The above extract from the data illustrates how an instructor who is relatively underequipped with the necessary competencies hinders the development of students, and thus potential employees that are translated to the workplace. On the competencies of the products from the institutions in Ghana, a participant from the CSO had a different view, stating that the universities in Ghana are able to produce students who are capable of working in the oil and gas sector and that the 4 years of training for their first degree is able to equip them with the necessary competencies in the oil and gas sector. The participant expressed his disagreement with occurrences where Ghanaians are sponsored to go and study courses, which may not be the priority for development in the oil and gas sector. The participant further had this to say:

“Ghanaians were moved to go and study oil and gas MSc. in Dundee and the rest. They went to teach them management. The practical work to be done by the drillers, the riggers, and the rest, the interpretation of data, is not part of these programmes. But, when you go to ‘Tech’ and the rest, the BSc, the Diploma, and the rest of programmes take the real work. We are talking about the real work to be done on the field...” (Interview, 2021).

The educational system and curriculum can hinder the development of HC in the oil and gas upstream sector. The educational system, which is supposed to equip students and potential employees with the requisite human capital needed to work in the upstream oil sector, arguably does not offer the foundational knowledge that will make it easier for the continual training of employees within the firm who go through the Ghanaian educational system, particularly the technical programmes and technical jobs, respectively. Findings from the research raise a number of issues that support this claim.

First, the views of participants suggest that there are challenges at the pre-tertiary levels. The students are not well equipped with the necessary skills to prepare them for the next developmental stage in their training at the firm.

The next issue that plays out in the challenges with the educational system is the preparation that employees in the sector receive from tertiary institutions in Ghana during formal education. The findings suggest that the curricula are more theoretically focused than practical. This means a lack of the necessary practical skills to cope with operations at the job site, including training. The implication is that employees will sometimes have to get through the basics of tasks, delaying their HCD at the workplace. But some other views from participants tend to oppose this claim that tertiary institutions are not equipping students with the necessary competencies. However, the data on the issue of the educational system and curriculum largely supports challenges with the educational system in Ghana in terms of developing employees for the upstream sector.

Furthermore, the findings suggest that the instructors who are supposed to guide and train the students are not well equipped to do so. For instance, a participant questioned the knowledge base

of some of the instructors about the oil and gas industry and even some outmoded theories that are being used to teach students that will be of little help to them as employees within the sector.

Another issue of concern is the certification and standardization of some oil and gas-related courses. Certain standards and certifications have to be met in some programmes, that are comparable to world standards in the industry but are not available in the Ghanaian educational system. Employees within the sector who would like to acquire knowledge and earn such certifications would not have the opportunity to do so because educational institutions do not offer those courses. This was also acknowledged by a participant from the PC, the regulating institution that is working on improving the situation.

Again, the educational infrastructure in the country does not offer all the necessary conditions for staff to develop some hard skills for the upstream sector. According to the findings, not all oil and gas-related programmes can be studied in the country due to a lack of infrastructure for practical work. Again, the infrastructure in the educational setups in Ghana does not equip students well with the necessary instruments, and these students later become employees in the sector and have little practical knowledge.

Panford (2014) argued that there is a disconnect between what is taught in the educational institutions and what industry and the economy require in the oil and gas sector from the Ghanaian perspective. The findings of this study are largely associated with the findings of Panford (2014). Prempeh and Kroon (2012) also share this view in their study on the oil and gas industry in Ghana. However, there have been gradual efforts to introduce oil and gas-related courses, which was not the case previously. An example is an institution like the University of Cape Coast in Ghana, which has introduced some oil and gas-related courses to its curricula.

The HC theory assumes that training and education result in the acquisition of skills, competencies, and knowledge. However, there seems to be a challenge with the education system in Ghana in terms of the infrastructure and curriculum that are needed to produce the needed competencies for the core technical areas in the upstream sector. A critique of the HC theory is that it is not always the case that an investment in education will lead to the acquisition of the relevant HC (Stefan et al., 2011). This suggests that people could enroll in educational programmes in Ghanaian educational institutions without acquiring the relevant skills and competencies for job roles.

In this segment of the findings and analysis, it became known that inadequate infrastructure and inadequate curricula of the relevant tertiary institutions in Ghana were impeding the training of students and potential employees to give them the needed foundational skills, for example in core technical areas, to enable them to continue with their HCD in situations where they are employed by the upstream firms. The findings indicate that the capacity of Ghanaian educational institutions makes the continuous development of employees' hard skills difficult.

#### **6.1.7. Limited capacity of the stakeholder organizations (PC and upstream the firm)**

One of the challenges in developing HC in the sector has been the capacity of some stakeholder organizations to perform their roles. The upstream firms as well as the PC sometimes have limited capacity to perform their duties in line with the training and education of their employees. The findings are presented below, followed by analysis and discussions. Almost all of the participants acknowledged the limited capacity of both the PC and Tullow Ghana plc with regard to performing their roles in line with HCD. On the issue of challenges in line with the capacity of stakeholder organizations, a core technical staff member at Tullow Ghana plc revealed:

“I would say it is financial; that definitely has to be taken into consideration, but the other thing is for people to be trained. If you tell me that I should take new graduates, I can't. I can only take one graduate because I have to work. I have to work, and I have to train the person. Spending time on training, working, and knowledge sharing takes time and energy. You have to do it in a way that gives the people training themselves the capacity to deliver on their jobs as well. It is just something that has to be done very well and also have the capacity to work and the capacity to train as well” (Interview, 2021).

The above quotation shows a situation where employees have a task to deliver in terms of their job expectations and meeting targets, while at the same time training other staff becomes a challenging one. Of essence to this quotation is the issue of time, as well as setting goals and targets for an employee. To add to the quote above, another member of Tullow Ghana plc's management staff member stated:

“I would say, first of all, capacity and time, in the sense that it takes time. When you look at the law, it was drafted in such a way that it assumes that when you start producing, you hire a 100% graduate and train them. It doesn't work like that in reality. As I said, it takes time. So, two people will come after two years, another two will come, and you have to follow a pipeline. People have to deliver on their day jobs. It is a matter of time” (Interview, 2021).

The above quotation describes the view of a management staff member at the firm about time limitations. He stressed time as a constraint that will not permit employees to train others due to job commitments. On the issue of capacity, another respondent gave his view on the capacity of international firms' vis-a-vis that of a national oil company.

“I have a tight schedule myself; I just don’t have the time. We can’t, so it won’t be enough. You don’t have enough IOCs to train everybody. The way we can do it is by using your national assets and changing your national company to become an IOC; then he hires everybody. You also have the reservoirs and all that to produce more oil, so you can do a lot. If your national asset is serious, he can hire half the people. So, they can increase the capacity by 100%” (Interview, 2021).

The narrative from the above quotation seems to propose the need to shift the burden of training Ghanaian employees from the oil and gas firms to the Ghana National Petroleum Cooperation (GNPC). Some of the participants also made comments about the limitations of the PC, and this is what a participant from the CSO had to say:

“We all agree that it is nascent. It is new, but within the Petroleum Commission itself, the regulators, we have people who are enforcing the law but don’t have the competencies needed to do enforcement. Companies outsmart them all the time. It leads to conflict and tension, which in themselves deal with the problems that need to be resolved” (Interview, 2021).

The quotation above sought to highlight the PC's inexperience, making it difficult to make some important decisions regarding the sector's regulation. A management staff member at Tullow Ghana plc acknowledged some of the firm’s limitations in developing HC. He stated that the COVID-19 outbreak has affected the plans of the firm, and issues related to career development have received little attention because the focus is on how the organization can survive. Again, the restructuring of the firm meant that they had to focus on stabilizing it. On the issue of cost, this is what another respondent had to say:

“I think first of all you are looking at cost. If whatever training is formal, it would have been budgeted for. Yes, oil prices have been on a roller coaster right now. When it comes to training or being able to prepare yourself, there is a budget to support training, but then it all boils down to whether the company has enough money to sponsor people through certain training and certain courses” (Interview, 2021).

The quotation above shows that the financial capacity of the firm is one of the factors affecting the HCD. The price fluctuations in the oil and gas business can affect planning in general as well as the training budget for the firm.

Some participants who were interviewed made comparisons with some organizations in the upstream sector and stated that the nation can set up a similar body like PIAC, which provides oversight of petroleum revenues, to also be in charge of oversight of LCP implementation. The body can also be involved in looking at the inclusion of Ghanaians in the sector and having a labour office in charge of employee development issues in the upstream sector.

The capacity of the oil and gas firm and PC constrained the development of HC in the firm. For instance, time constraints limit the ability of employees within the firm to train other employees. This is so because of the commitment to attaining set goals in terms of production. Employees are supposed to perform their jobs and, at the same time, find time to train other employees. Employee trainers tend to focus on achieving other performance targets in line with their core duties, which they are accountable for at the end of the yearly business cycle of the firm, rather than having enough time to train, coach, and mentor trainees. As a result of these dynamics, training durations decrease, while the number of employees who can be trained by an experienced employee also decreases. This means that the strategy of using firms as a means of developing HC in the upstream

sector may not yield desired outcomes with the current institutional capital of the firm. This became evident in the findings, where a participant shared their experience with regard to the training of employees within the firm.

Another barrier to the development of human capital within the firm is limited finance. The fluctuations in the oil and gas prices in the sector worldwide sometimes cause the firm to revise its budget with regard to training. This means that projected targets for the affected years in terms of training may not be achieved. The implication is that the training of employees, including Ghanaian employees, is affected in terms of the budget, the number of people, and training activities.

Another instance is unforeseen circumstances, such as the outbreak of COVID-19, that affected oil production. During the outbreak of COVID-19, for example, the company had to cut costs in its training operations, which hampered employee training progress. A management member at Tullow Ghana plc admitted to this occurrence. Meanwhile, employees were encouraged to take advantage of the web-based training programmes. Studies done by Gwayalka (2014) as well as Ostenson (2017) are in agreement with the claim that capacity in the form of finance in upstream firms is a barrier to the effective implementation of training and education programmes to aid the development of HC in the oil and gas upstream sector.

Furthermore, the PC is working to improve HCD in the sector through the application of L.I. 2204 and guidelines. However, the capacity of the PC limits its ability to work effectively. As mentioned by some respondents, including staff of the PC, the capacity of the PC to monitor compliance is limited. For instance, the PC finds it challenging to verify information with regard to training progress and reported localization performance gotten from Tullow Ghana plc. This finding on

limited capacity is shared by other studies, such as Suleman and Zato (2021) and Ackah and Mohammed (2018). Targets will be difficult to achieve if institutional arrangements at the PC level do not translate into the strategic institutional capacity to improve regulation, particularly monitoring compliance.

This section has given insight into how the capacity of relevant organizations can be a barrier to the development of HC, and this was acknowledged by almost all interview participants. The time needed to train more employees is limited by the need to perform job roles. Limited funding for training and education programmes is a challenge in developing HC. In addition, the limited capacity of the PC to perform its regulatory duties effectively affects the monitoring of succession and training programmes by the upstream firms.

#### **6.1.8. Lack of employee motivation**

Employee motivation appeared to be one of the barriers to the development of HC in the upstream firm. Some aspects of the data related to the issue of employee motivation are presented below. The issue of motivation as a challenge to HCD in the sector came mainly from employees at the firm. During the data collection process, a management staff member at Tullow Ghana plc revealed:

“People have to be motivated; you see, people have to be motivated. You know, it also boils down to remuneration. Once people have been able to push themselves and have been given the role, they expect to be handsomely rewarded. That leads directly to how motivated they will be. Others will also want to try and get there. They are always resolving issues here and there with salaries, with people taking up very high positions, and yet the increment that they are given is nothing to write home about. And we don’t have any

regulations or laws to help us. These things lead to morale issues and demotivation” (Interview, 2021).

In the quotation above, the participant, while sharing his view on motivation in the form of financial rewards, made a point about an employee ‘pushing himself to take on a job role.’ To add to the above quotation, a management staff participant commented by making comparisons with the salaries of expatriate employees:

“But then you know the salaries of the average oil and gas employee around the world. I think when it comes to legislation, the system is a bit weak; the PC is pushing, but there is not a lot of incentive to take over roles. Because when you are a local and you take over a role that an expatriate is occupying, you are paid less than one-seventh of what an expatriate is earning. However, you bear all of the responsibilities that the expatriate had. So, if it is me, and I am interested in money and not in the role itself, the question is: why will I always take on more responsibility and be paid less? So, there are not a lot of incentives there when it comes to localization” (Interview, 2021).

Localization in the oil and gas industry is linked to the ability to acquire the necessary skills and competencies, hence acquiring human capital to succeed a non-Ghanaian employee. With the above quotation, the low incentives and financial rewards demotivate employees to aspire to certain roles with localization. To add to the above quotation, this is what a respondent had to say:

“I go in there, and you are not going to pay me much, and you give me the same responsibility, so why do I force myself? I rather stay where I am, and you pay the expatriates for them to do whatever they want to do. And it was deep, for example, when I was being trained. As part of the succession planning, I had to run a rotation with an

expatriate. One way or the other, I just got to know what he is paid, and I was not getting even a fifth of what he is getting. But when he goes off, the expectation is that I do the same things that he does. So, there are not a lot of expectations in there; that is where the PC would have to come in when we look at equal work and equal pay” (Interview, 2021).

The above quotation also reflects the opinion of a participant who shares the view that there is no need to go through training if the responsibilities afterward will not come with financial benefits. The views of the participants further reflect the need for the PC to find some form of solution to the salary disparities in the sector. On the issue of brain drain, another core technical staff member pointed out this scenario:

“The door is always open for Ghanaians, and as humans, as we are, we want big opportunities. So yes, we know there are Ghanaians in Angola. Brain drain happens everywhere, and they poach. Aside from the poaching, the ordinary Ghanaian would like to have a bigger opportunity. If they compare their salaries to how much other people earn, they have the tendency to move outside the country. We should find a way of retention. If I am a company and I train you, you need to be bonded for, say, 10 years. People come to town and thus go for recruitment. At both upstream and downstream, people come for recruitment. And so, if we train our Ghanaians and we don’t bond and incentivize them, trust me, humans will escape” (Interview, 2021).

The extract above reveals how some experienced professionals are recruited to other countries, and these experienced professionals, as discussed earlier, are also needed to help train other employees. Financial considerations again seem to play a role in attracting these professionals.

A management staff member from the regulatory institution, the PC, added his views:

“Another challenge that we are battling with is the salary difference between the Ghanaians and the expatriates. We understand that expatriates everywhere earn more than locals. The gap should not be as large as it is in the oil industry. Normally, what we are doing now and insisting upon is that if two people are doing work that requires similar qualifications and experience, their basic salary has to be the same. Then, if the person is an expatriate, you agree to an expatriate premium for the foreign worker on tax differentials. The fact that maybe he has to rent a house here or something for the other inconveniences and the risk he has taken. There should be a certain mark-up or percentage on the base salary. These are some of the challenges that we encounter” (Interview, 2021).

An employee’s desire to acquire new skills to move up in their career within the organizational structure can be affected by the financial rewards that come with it. Localization and succession are linked with the ability of an employee to attain certain skills and knowledge to take up a job role, which means the acquisition of human capital. When employees believe that even if they train to develop their skills and competencies for a job role, the financial rewards that come with it are insufficient, they may choose not to aspire to these positions. This can therefore be a barrier to the HCD of Ghanaian employees in the upstream firm. Santos and Stuart (2003), as well as Baldwin and Magjuka (1991), acknowledged that post-training opportunities and benefits serve as motivational factors for employee training. Employees sometimes have to move out of the country because relatively better opportunities are given to them elsewhere.

Ranjbarfard et al. (2014) made mention of a lack of appropriate reward as a barrier to knowledge acquisition in the oil and gas upstream sector. In agreement with the findings of this study, Ranjbarfard et al. (2014) support the need to appropriately reward employees after training to

enhance their HC development. Participants acknowledged that the rules and regulations in the petroleum sector do not help in providing improved remuneration for the locals.

If institutional arrangements within the firm do not produce institutional capital capable of enhancing employee benefits after skill acquisition, employees will not be motivated to put in much effort to develop their HC. Moreover, the individual is at the centre of training and education, so when many other challenging factors, such as difficulty in finding experienced staff and cultural diversity issues, among others, are dealt with, inadequate motivation, whether intrinsic or extrinsic, will be key in developing the HC of employees.

The HC theory assumes that training and education will result in increased remuneration for employees, thus having implications for social and economic benefits (Becker 1993; Schultz, 1961). This assumption seems not to be so, based on the experiences of some Ghanaian employees who have trained to acquire skills and competencies. Skills acquisition is also expected to result in increased financial rewards. However, similar job roles being occupied by employees with similar skills and competencies may attract different financial rewards depending on the nationality of the individual. Ghanaian employees, after acquiring skills and competencies, may be promoted to a new job role but receive lower financial rewards than their expatriate colleagues in similar job roles. This suggests that nationality can also be a determinant of financial rewards after employee training and promotion. Such a situation can lead to the demotivation of some employees to train for and assume certain job roles.

The subject matter for this section was employee motivation and HCD. The findings revealed that a lack of employee motivation was affecting the training of employees in the firm to take on certain job roles. This is because of the apparent inadequate financial rewards accompanying certain roles

occupied by Ghanaian employees as compared to similar job roles occupied by expatriate employees. The regulator of the upstream sector, the PC, also confirmed the disparities in salaries between Ghanaian and non-Ghanaian employees in the upstream sector.

### **6.1.9. Accessing adequate information**

Accessing adequate information has emerged as a challenge in developing HC in the upstream sector. Some findings on the issue are presented below, followed by an analysis and discussion. Participants from the PC, CSOs, MOE, and MPs largely held the view that accessing adequate information on HCD is a challenge. On the other hand, participants from the firm largely held the opinion that enough information on the plans and outcomes of the employees' training is provided to the PC by the firm. But the staff at the PC also felt more could be done in terms of providing detailed information, and the PC should also have an improved strategy and capacity for verifying information provided to it by firms. A management staff member at the Petroleum Commission had this to say during an interview:

“You know, with regulation, there is always a problem of information asymmetry between the regulator and the firm. The companies have more access to information than the regulator. The challenge now is for you to do a certain regulation; you need to find a way to get the company to voluntarily divulge the information that you have. That is a big challenge: getting the right information from the company to guide you in monitoring their operation. There is also a problem when they are reporting” (Interview, 2021).

The quotation is an acknowledgment by the regulatory body of the fact that the firms have access to more information than the Petroleum Commission, and thus the PC depends on the firms for information used in taking decisions and monitoring compliance. Building on the above quotation,

on whether they always doubt the reports from the firms, a management member from the PC had this to say:

“Not that they don’t report accurately. But they tailor the information that they give you to meet your requirements. For instance, if you say you want to increase the number of Ghanaians in managerial roles. They will sit down and redraw their organogram such that certain positions that Ghanaians are occupying will be earmarked as managerial roles. If, for instance, we have a Ghanaian occupying an HR lead or engineering lead that is not a managerial position, the next time they bring that role to you for the purposes of reporting, they will label that role as a managerial position. Then you only have two people under him. So, getting them to report accurate and fair information is a big challenge” (Interview, 2021).

To add to the above statement, the PC participant revealed, for instance, that the firms are supposed to prepare training budgets, and they do train people in terms of man-hours. It is very difficult to challenge them on how much you value in-house training. These are some of the challenges in terms of monitoring, too. The budget for training requires you to spend a minimum amount on training individuals. Further, the findings revealed that sometimes a managerial position can be redefined as a technical position for reporting purposes. On the limitations on the reporting regimes of the firms, a participant at the PC revealed:

“One thing that I can say is that sometimes they try to prolong the localization period. We agree that this position should be localized for 4 years. When they come, they will tell you that the Ghanaian successor is not learning fast enough. So, within 4 years, he will not be fit to occupy that position, we want to extend it by one or two years. Sometimes in some

jobs, they will tell you that you have qualified Ghanaians available; they try to redefine their job description to make it very technical” (Interview, 2021).

Employees’ HCD can be hampered by inadequate information. Information is needed to make decisions about the outcome of training and take further decisions. Additionally, inadequate information hinders decision-making and makes it difficult to monitor compliance by firms in terms of training employees. The PC, i.e., the regulatory agency, has sometimes received information from the firm that they consider limited. For instance, it was observed from the findings that sometimes job roles in the localization/succession reporting are redefined, as claimed by a management member of the PC, and the implication is the inability of the PC to effectively track the succession plan for a job role and follow the training programmes of the Ghanaian employees associated with that job role.

Suggestions by a participant from the PC about seeming occasional inaccuracies of information in reports by the firm raise a critical concern for assessment and decision-making on localization by the PC. This situation constrains the monitoring of the progress in the implementation of the succession plan in accordance with the LCP. The PC’s inability to verify the correctness of the information from the firm shows a lack of capacity on its part.

The institutional theory assumes that institutions enable or constrain organizations to function well (Ostrom, 2005). The inability of the PC to independently verify certain information on training suggests limitations in the rules. This will not allow the organization and the regulatory agency to function as expected. Again, the institutional theory assumes that within an organization are mechanisms for information dissemination and monitoring compliance (Haveman, 1993; Fligstein, 1995). However, the findings suggest limitations in the monitoring process on the part

of PC in terms of localization and training. Pereira et al. (2019) stated that host governments tend to rely on the information provided by the IOCs, which is in agreement with the findings of this study. Brazil, on the other hand, has developed a certification system that assists the industry and the Brazilian government in assessing compliance with the relevant metrics agreed upon in contracts (Pereira et al., 2019).

This portion of the study looked at how information can affect the decisions made about the training and education of employees in the firm. The PC would have to get adequate information on the training activities from firms to make decisions and monitor the progress of succession and training plans. The findings of the study have shown that difficulty in accessing adequate information can hinder monitoring and decision-making on training in the firm.

#### **6.10. Chapter conclusion**

This chapter looked at the challenges of developing HC at Tullow Ghana plc. Various challenges came up affecting the development of HC in the firm, and these included delay in skills transfer by some expatriate employees, occasional misunderstandings between stakeholder organizations, the risky and expensive nature of business, difficulty in finding experienced professionals, cultural diversity, inadequate educational infrastructure, the limited capacity of stakeholder organizations, a lack of employee motivation, and inadequate information on localization. The implication of these challenges is the firm's inability to train enough local employees with the relevant skills to take up jobs in the upstream sector. Diverse barriers were also noted in the literature as impeding the localization agenda. These challenges appear to be dominated by issues related to the capacity of stakeholder organizations, limitations in institutional set-ups, and a lack of proper local content implementation strategies. For instance, from the Nigerian perspective, gaps in the local content

laws and regulations appear to dominate the discourse in terms of implementation challenges (Okpe, 2014; Nwaokora, 2011). Further challenges with regard to the institutional arrangements are discussed in the next chapter.



## CHAPTER 7

### ANALYSIS AND DISCUSSION OF FINDINGS (PART 4)

#### Institutional arrangements on HCD in the upstream sector

##### 7.1.0. Introduction

This chapter shows the analysis and discussion of findings in relation to the objective of ‘examining the institutional framework for human capital development in the oil and gas upstream sector.’ The related question for this objective is: how do institutional arrangements affect the development of skills and knowledge acquisition in the oil and gas upstream sector? Institutional arrangements are looked at in the context of the study in terms of the rules and regulations, policies, and standards that are in place to guide the development of HC in the oil and gas upstream sector in Ghana. The same institutional arrangements being used for HCD in the sector apply to Tullow Ghana plc and similar firms. First, findings are reported, followed by analyses and discussions on the themes. Some of the themes that were used in analyzing the objective included provisions of the LCP on HCD, rules and regulations on the LCP for HCD, and the effectiveness of institutional arrangements.

##### 7.1.1. Provisions of the LCP on HCD

Ghana's local content policy was established to help the nation reap certain benefits, such as the development of skills and competencies among Ghanaian employees in the upstream sector. In the LCP document, there are clearly stated objectives for the LCP. Among the key policy objectives in relation to HCD is to develop local capability in all aspects of the oil and gas value chain through education, skills, and expertise development.

Again, the policy direction is stated in the LCP. As part of the LC policy, there are directions for mandatory local content in the oil and gas upstream sector. This requirement stipulates that all actors and stakeholders, i.e., companies and operators, for example, contractors and project executioners, and actors who have contracts in the upstream sector, shall make local content as part of their delivery process, thus including training and education of Ghanaian employees. It is a requirement of the LCP for operating firms to submit a training programme to the PC within 12 months of the acquisition of a license to operate.

An annual local content plan shall cover every project operation or transaction. It addresses training, education, and the development of Ghanaians in the sector. Another attribute of this policy, in line with employment and training, is that this process should lead to continuous growth, which should be measurable. Further, an operator in the oil and gas sector is supposed to ensure that opportunities are given as far as possible for the employment of Ghanaians with the right competencies and qualifications.

Another issue is to put up an annual recruitment and training programme and this shall ensure that the targets that have been set for the three categories of staff, namely, management staff, core technical staff, and other staff, in terms of localization, are clearly spelled out. Additionally, the policy document provides for a strategy to be used to achieve set goals. The strategy to achieve this interest means that certain goals, objectives, and requirements should be part of the policy document.

The findings from the interviews also gave some insights into issues with the LCP. The considerations made on the basis for the establishment of goals and targets on employment and

training were an issue of concern, according to some respondents. A respondent from the CSO expressed a view:

“First of all, let me say, we have targets to be achieved with the LCP for specific years, but we are not there yet. The first challenge that I have found is with the setting of the targets, for which there is no basis. The PC started assessing capacities and competencies 2 years after the implementation. So, my question is how they set the targets. You can deduce from the results we are getting that not much thought went into the setting of the targets. It wasn’t evidence-based or very robust. It has impacted where we want to be in terms of planning the LC and HCD itself” (Interview, 2021).

The above quotation sought to point out that not enough work was done to arrive at targets that were developed in line with training and localization. This means there was a need to, among other things, ascertain the readiness of Ghanaian nationals to fully participate in the oil and gas sector and ascertain the capacities of the oil and gas firms to know what they could achieve and what they couldn’t within a specific period of time before setting training targets linked to localization.

Another MP had this to say:

“That is why I said it was overambitious. Because if you set a target of achieving a certain level of management staff in an organization, like the oil and gas industry, the first and foremost is to assess your own strength at that point in time. How would you be able to intentionally train Ghanaians to be able to train Ghanaians in some of these positions? Do you get my point? You don’t just allow it; it must be intentional. The government must invest in that. Unfortunately, government investment did not go far. (Interview, 2021).

The next issue with the LCP concerns women's participation in the sector. The LCP mentions the need to encourage women to participate in the oil and gas sector. On the issue of women's participation, a management member from Tullow Ghana plc had this to say:

“We don't have a specific policy, but we have been increasing our diversity status. What we do is, if we advertise a role and notice that only men apply, we usually go out and look for qualified women and encourage them to apply for the roles. And they have to go through the process, and it would have to be based on merit” (Interview, 2021).

The above quotation sought to portray that, despite the lack of a clear policy for women's participation and development in the sector, they still have plans for women, creating awareness that there are opportunities to capitalize on. The findings also revealed through the opinions of participants that the demographics in the petroleum sector are a reflection of how more males have taken certain courses, like engineering, than females. But there is a gradual shift because you see more women doing engineering, and that is a reflection of what some women in the upstream sector have taken upon themselves to be doing, thus a campaign for women's inclusion in the sector. On the need for more women in the sector to acquire human capital, a participant from the CSO had this to say:

“They are using STEM to ensure that women are encouraged to venture into the sciences and engineering. Remember that offshore is a very harsh environment. Let's keep in mind that the working conditions are quite harsh. Unfortunately, where you find women in oil and gas are administrative functions. So, most of the work has been more administrative in nature than field function” (Interview, 2021).

The above statement touches on an initiative put forward by the government of Ghana to encourage women's participation in the sector. Again, the statement sought to point out that working conditions with regard to offshore work make it difficult for women to partake in upstream sector activities, consequently limiting them mostly to administrative work. Another participant from the CSOs had this to say:

“Yes, of course, there should be a conscious effort to get women involved and all that. Oil production is not only offshore. It is sometimes onshore. The fabrication work is carried out only onshore. We are going to be a producer in the Voltain Basin if we get our data right, and women can be largely involved. And I don't doubt the competence of Ghanaian women to deliver. Physically, they won't be like men, but most engineering work is not done by the physique; it is done by the intellect” (Interview, 2021).

A participant from the Ministry of Energy is also of the view that the LC policy is a good one and is gradually attaining its goals with regard to the HCD, while again lauding the STEM programme as a good initiative to improve women's participation in the sector.

The local content policy makes provision for some good initiatives but comes with some gaps as well. For instance, it has provided a clear policy goal wherein the context of the HCD has made provision for indigenizing knowledge and expertise in the upstream sector. Besides, the policy document also spells out the vision of the nation, i.e., Ghana, which is to achieve 90% full local participation by the year 2020. Further, the policy document mentions the objectives of the local content policy, including the development of the local capability of Ghanaians through education, skills, and expertise development, thereby making clear what the nation wants to attain. Another

element of the policy document is the policy direction, which states the things that need to be done to achieve the policy goals.

The vision, objectives, and directions given in the policy document largely provide a good guide to developing HC in the oil and gas upstream sector. Birkland (2016) mentioned the elements of a policy design. This includes clearly stating the policy's goals, which in the case of the LCP are meant to promote the development of skills and competencies as well as increase employment of Ghanaians in the upstream sector. Additionally, Birkland (2016) mentioned the necessity for a policy design to include a causal model which describes the strategy and direction to achieve the goals that are also included in the LCP design. Again, Birkland (2016) stated that a policy design should include targets to be achieved, which are also spelled out in the LCP. Also, the LCP document specifies the tools of the policy, thus the tools to put the policy into effect, which include legislation, information, and capacity building.

Again, in terms of the LCP's provisions to promote training and education, the policy provides a clear plan for how Ghanaians should be trained in the upstream sector. It is largely concise in terms of policy direction and strategy. For instance, the policy stipulates the time frame within which a firm is supposed to submit its training plans. This should come with a budget and timeline as well as the associated skills and competencies to be acquired by Ghanaian employees within this suggested period, which is supposed to be achieved. Quarterly reports are supposed to be submitted to the Petroleum Commission throughout the year and specified by the policy document as an update on what is being done towards achieving the set targets, thereby enhancing monitoring of the implementation.

On the other hand, no clear strategy was put in place that could be used in cross-checking training-related information that is provided by the firm to the PC. Further, the policy document states the need to encourage women to participate in the upstream sector and, in this context, the development of HC in the upstream. For women to fully participate in the oil and gas upstream sector, they need to acquire human capital. However, no clear strategy or clear-cut plan was put in place to aid the development of women in the oil and gas upstream sector. The implication is that the oil and gas firms, for instance, Tullow Ghana plc, will not be compelled to develop an internal policy to train more women in the upstream sector. This became evident when a management employee acknowledged that there was no internal policy for the employment and training of Ghanaian women in the upstream firm. Further, the LC regulations do not make any explicit provision for the training of women, which also seems to be a consequence of the lack of clear guidance in the policy document.

Additionally, if the nation decides to prioritize that a clear policy strategy should be developed to promote increased women's participation, that would be a good idea. But some respondents' views suggest that making policies and laws on training and employment could mean that the nation is forcing companies into a difficult task of employment and training, which means women may not even be available to take the opportunities in the oil and gas sector. This situation generally reflects the presence of women in the oil and gas upstream sector from a global perspective. The oil and gas sector has a smaller number of qualified people in the middle ranks and upwards to select from as many talented women do not join the sector or drop out at a point after joining (Rick et al., 2017).

In comparing the local content policy with that of other nations, Ghana has a separate local content law that guides contracts with operators, whereas in a nation like Brazil, local content is negotiated

as part of contract agreements between operations and the nation (Stones et al., 2015). This dynamic makes it possible for local content to be agreed upon and implemented on the strength of different firms on a case-by-case basis, which is not the case in Ghana. But the Ghanaian model also creates a standardized guide for the nation to have LC agreements with relevant operators. It also eliminates perceived favouritism and corruption in negotiating LC contracts with firms.

The local content policy linked the training of Ghanaians to employment targets for Ghanaians, such that training should lead to the localization of jobs in the sector. The economic benefits were put into consideration, aside from the personal and social benefits that the policy provides in terms of training and participation by Ghanaians in the upstream sector. However, the ability of the business environment to achieve these targets was not well analyzed, resulting in the setting of ambitious targets using firms as the primary tools to achieve HCD and the employment of Ghanaians. Asiago (2017) argued that some nations are not able to attain the target of the LCP because they set unrealistic targets. In all, the LCP has been designed to provide policy goals, direction, strategies, and tools to enable the HCD in the firm. Despite its gaps, the policy content has implications for the outcome.

### **7.1.2. Rules and regulations on the LCP for HCD**

In order to implement the LCP, policy instruments such as rules and regulations are used. Another theme that is looked at in line with the institutional arrangements is the rules on the LCP for HCD. The Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), were enacted to give effect to the LCP, which was already in place by 2010, and include provisions for training and education to develop the competencies of Ghanaian employees in the upstream sector. Further, some guidelines were issued by the Petroleum Commission to help in the implementation

of the LCP. Some provisions from the institutional arrangements are presented alongside findings from the interviews. This is followed by a discussion of the findings.

The local content regulations make provisions for information rules. Information with regard to the training and education of Ghanaian employees is supposed to be provided to the PC for the purposes of implementing the policy. Section 7 of the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), provides for the submission of LC plans for the training of Ghanaian employees. Section 17 of the Petroleum Regulation also makes provisions for the training sub-plan.

Another category of rules in the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), is the progression rules. Progression rules are the rules that guide the succession plan in which a Ghanaian employee develops the necessary competencies and takes over a job role previously held by a non-Ghanaian; they are the rules that guide progression and connect knowledge acquisition to job roles. Section 18 of the L.I. 2204 also provides for these progression rules.

The next set of rules that are looked at are the pay-off rules, thus the rules on monitoring compliance and enforcement. These rules are meant to ensure success in the implementation of the policy. Sections 42 and 43 of the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), make provision for the filing of documents by firms and the establishment of guidelines by the PC. Sections 44, 45, and 46 make provisions for local content monitoring, investigations, offenses, and penalties, respectively.

In Ghana's Petroleum (Exploration and Production) Act, 2016, Act 919, there is a requirement for contractors or upstream firms to prepare training plans for Ghanaian employees. According to

Section 60(4) of Act 919, a firm would have to prepare and submit a training programme to the PC for approval.

In the year 2018, the Petroleum Commission came up with ‘Guidelines on Employment and Training of Ghanaians and Succession Plans for Expatriate Positions in the Upstream Petroleum Industry-No. LC002/03, 2018.’ It is a provision that an upstream firm that hires an expatriate worker also make arrangements and train a Ghanaian to succeed the expatriate at a later date. The period for localization is subject to review and approval by the Petroleum Commission. Further, it is a provision in the guidelines that companies should make their best efforts to train a Ghanaian successor. Again, training plans for the local employee should be submitted to the PC. Furthermore, in training locals in the succession plan, the focus should be on the position to be occupied, not the person occupying the position. The succession plan for the Ghanaian employee must clearly state the following:

The name(s) of the Ghanaian citizen(s) being trained by the applicant company to take up that role in Ghana, as well as the location where he/she is being trained; the duration of the training programme, which shall include the following: the start and end dates; the certification and qualification to be obtained by the Ghanaian on successful completion of the training programme; the anticipated time the Ghanaian successor is to take over from the expatriate; and allocating a dedicated training budget for the implementation of the succession plan and the training programme.

Chapter 4, Section 25 of the 1992 Constitution of the Republic of Ghana makes provision for the right to education for Ghanaians. Though there is no explicit provision on HCD in the constitution,

it offers the basis for the enactment of legislative instruments and regulations for the management of natural resources, including oil and gas resources.

Aside from the provisions from the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), the Petroleum (Exploration and Production) Act, 2016, Act 919, and the guidelines on training, participants also made revelations about some gaps they identified in the rules and regulations. One of the gaps relates to information asymmetry. During the interview sections, participants from CSOs and the LCC raised concerns about the adequacy and timing of information related to succession planning and the localization of job roles. The fact that information on succession and localization comes from the oil and gas firms makes it difficult to verify the correctness of the information the firms provide. A participant from the CSOs had this to say:

“Tullow organizes meetings with civil society each year and gives data and their plans to us, and it is the same thing that the Petroleum Commission gives to us. The gap between the policy and implementation is the information gap. They should find a way of independently doing that” (Interview, 2021).

A participant from the LCC acknowledged the need to bridge some regulatory gaps in relation to provisions on job roles.

“In terms of human resource development, the gap is that even though the schedules in the L. I. mention broadly the target for core skills and for managerial skills, the main gap is the regulations’ failure to list all the job roles that are reserved for Ghanaians, which we are trying to do through the guidelines, and also set specific targets for certain job roles in terms of the period of localization” (Interview, 2021).

Another gap revealed by a participant from the PC is the lack of punitive penalties in certain aspects of the law. Even though the law has provided for administrative penalties over the years, the participant is of the view that the laws are not deterrent enough. The law could have added punitive penalties for failure to comply with localization, such as a prison sentence. On the other hand, a participant from the CSO is of the view that laws and policies can't do everything, adding that if you put the law in place and there are no human resources to do that, you can't punish any company for not complying with the laws. The Petroleum Commission can't direct the firms to do what they lack the capacity to do. On how the local content and participation regulations have affected the development of HC, this is what a management staff member had to say:

“The L.I. came in and kind of bolstered what was there and made it legal for people to follow what the expectations were. For me, if localization wasn't on the agenda, I would not have been employed in 2009 because there wouldn't have been a need to get a local to fill in. So yes, it was there, and then, once it came in as a law, we now say that you should bring somebody there for each role. The person has 5 years to be able to hand it over. So, the law came to formalize something that was kind of being run in the background” (Interview, 2021).

To add to the above, a participant from the CSOs stated that:

“Without the passage of the LI, it would have been meaningless. It wasn't until after the passage of the L.I. that the policy became meaningful. Before the LI was passed, we had engagements with some oil and gas companies. They were required to comply with policy and also with the laws of the countries they were coming from. Companies like Tullow took the LC into consideration as seriously as possible, and they recruited some locals, but

as young as the industry was at the time, there wasn't much to give to these oil and gas companies, and we have learned our lessons, so over the years we have seen some improvement in the LC delivery" (Interview, 2021).

Ghana has put in place rules and regulations (policy instruments) that have helped in the implementation and progress of the LCP in line with HCD. Various categories of rules are in place and being used to facilitate the implementation of the LCP in line with HCD. As provided for in the local content regulations, the instrument makes available information rules that ensure that stakeholders are given information related to the HCD. Information is necessary for making decisions and monitoring compliance with localization. Thus, adequate information has implications for the effective monitoring of HCD in upstream firms.

Birkland (2016) disclosed that a characteristic of using regulation as a policy instrument is that it enhances accountability. Adequate information would allow firms to be held accountable for how they are developing HC. Conversely, gaps are also identified in the local content regulations with regard to the instruments' ability to compel the release of timely and adequate information. This gap has affected the timeliness and adequacy of the information given by the firms to the PC, as stated by a participant from the PC. Likewise, the information on specific job roles and the duration of years that should be used for training and education to enable occupancy by Ghanaians is not explicitly spelled out, hence leaving firms to be able to 'manipulate' the duration for training and the succession plan of Ghanaian employees in the firm.

Further, the LC regulations provide for the progressive rules that guide the succession process from training to occupying positions within the firm. This enables the firm to follow a process of transition during which the skills and competencies of the Ghanaian employee are developed for

the eventual uptake of a position. These rules are helping to provide certainty about the administration process, and this is in line with Levine et al. (1990) characteristics of regulative policy instruments that provide some certainty with regard to the processes and compliance with targets.

Furthermore, the policy instrument provides for pay-off rules, which assist in the implementation of the LCP on HCD. The provision has made it possible for the PC to take action on compliance through the communication of HCD issues on the LCP with the firms. The findings, for example, revealed that the PC had in some cases questioned the firms to clarify issues that the PC deemed were not in compliance with the HCD rules. The firms sometimes have to explain to the PC why an expatriate employee has stuck to his position despite exhausting the period that he is supposed to be working for the firm. Pay-off rules have implications for HCD because they compel the firm to follow the directives in achieving the goals and targets of the HCD. Despite these provisions, the PC's limited capacity was impeding its ability to conduct an effective monitoring process.

The policy instrument also provides for some offenses and associated penalties. For instance, there are fines associated with the provision of false information. However, no explicit sanctions are mentioned with regard to offenses relating to HCD in the policy instrument. Though sanctions are costly to the offender, they also improve the effectiveness of the policy instrument and compliance with the rules (Birkland, 2016; Levine et al., 1990). Pereira et al. (2019) mentioned that the use of sanctions in the regulatory instruments in the oil and gas sector may also be problematic. If sanctions are too low, they may be accepted as normal, and firms can resort to not complying with the rules and paying for the sanctions. High sanctions can also lead to investors seeking business in alternative countries.

Besides, pay-off rules include incentives (Wieble and Sabatier, 2017). However, the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), did not make provisions for incentives to firms that are able to train and educate a certain number of employees or attain set targets on the HCD.

The intent of the provisions in the guidelines on employment and training is to add more information on the conduct of the succession plan. The guidelines demand the provision of certain information in the succession plan to be submitted to the PC and administered by firms. These include the name of the person to be trained, whether the person is already working or has been shortlisted to be trained and work in the firm at a particular time, the duration of the training, the location of the training, the skills expected to be acquired, and the cost of training each individual. The guidelines on training have addressed some important issues concerning training that were not detailed in L.I. 2204. The guidelines basically throw more light on the HCD issues that are stated in L.I. 2204. This institutional arrangement has added further directives on issues regarding the training of employees in the upstream sector. For instance, it has clarified the information on the content of the succession plan.

Despite some gaps in the rules and regulations, it also became evident from the findings that the implementation of LCP and the complementary institutional arrangements had contributed to the HCD in the firms in the upstream sector. Indeed, the policies and rules governing local content came to enforce and formalize what the firms had begun to do in some ways. The institutional arrangements brought in elements like targets and timelines within which to guide the development of HC as a means to employment. Through the legislative instrument, firms are obliged to participate in the HCD. However, much has not been achieved with institutional arrangements

with regard to the setting up of the Local Content Fund (LCF) and how it is being deployed to assist in the training and development of Ghanaians. For instance, an MP and a CSO respondent questioned the state of the LCF fund and how it is being put to effective use.

The institutional theory assumes that institutions can be regulative, structuring behaviour and responsibilities (Scott, 2001). Likewise, Hodgson (2006) mentioned that institutions structure social interactions. Institutions have been put in place by the nation to regulate activities with regard to HCD in the upstream sector. Again, the institutional arrangements have helped to structure how HC should be developed in the upstream sector. According to Huem (2008), Norway had strong institutions before the production of oil, making it possible to attain good outcomes from petroleum resources, emphasizing the importance of good institutions in the management of oil and gas resources. Oluwayi (2012) mentioned that just as a nation like Ghana emphasizes monitoring in its LC policy instruments, nations like Jordan and Qatar, even though they have LC in their own contractual agreements, do not place much emphasis on monitoring mechanisms. This dynamic means that nations have their own priorities in designing LCPs and LCP instruments.

### **7.1.3. Effectiveness of the institutional arrangements**

In order for the LCP to achieve its goals and targets with regard to HCD, the implementation of the policy and the application of the policy instrument must be effective. While the majority of the participants from the CSOs shared the view that the implementation of the policy has not been effective enough, participants from PC and the MOE had a different view, stating that Ghana has done well with the implementation of the LCP and thus localization. Among the participants from the firms, too, there was a mixed view. Whereas some participants had the opinion that Ghana has made progress with the development of HCD, others also had the view that Ghana has not done

enough with the implementation. A participant from the CSOs is of the view that Ghana has good policies and laws, but what is missing is oversight of the implementation of the policies and application of the law. The participant sought to state that the nation has almost all the institutional set-up right but finds it difficult to translate that into good outcomes.

For the reasons that participants gave for ineffective policy implementation or otherwise, they shared various views. Some participants shared the view that the limited involvement of some government agencies has contributed to the ineffective implementation of the policy. A participant talked about the seemingly limited involvement of the Parliament of Ghana in the implementation of the LCP and questioned the capacity of the parliament to be involved in the oversight of the policy. The participant blamed the parliament's poor oversight as one of the factors that affected the implementation of the policy.

Another participant from the MOE also had the opinion that much needs to be done in terms of HCD. Even though the government has done well so far, there has been a lot of progress. He revealed the need for the curricula of educational institutions to meet the needs of the oil and gas industry and the need for students to be given the opportunity to be trained in oil and gas firms. Another respondent from the CSO had this to say:

“I would say we have not been effective enough if you look at the outcome. So, it is not very effective. However, we have made some efforts” (Interview, 2021).

A practitioner in the upstream sector is of the view that the policy has been successful in pushing the succession plan through. But what is lacking is a sophisticated system from the regulator to make sure that it is progressing. He added that in terms of the effectiveness of the implementation,

it was an average performance. A Member of Parliament had this to say in relation to the LCP implementation:

“We have performed ok, but I think we are still far behind. And we still need to back up. With the passage of the E&P Act, 2016 (Act 919), we have what we call the ‘local content fund’ where the IOCs are required by this fund to train local partners, or Ghanaians, in the upstream industry. It has not been very effective since its passage into law in 2017” (Interview, 2021).

On the reasons why participants think Ghana has not been effective in the implementation of the policy, a practitioner in the upstream sector had this to say:

“So, it is also a mixed feeling for me, but overall, I would say that we have not been effective, but it is because of the poor planning that we have been through from what we did from the beginning. We are trying to patch things here and there. But if we had done things well from the beginning, it would have been better. Apart from the planning, the implementation, and the monitoring, we don’t have a baseline to start with, and the monitoring is not hinged on any clear indicators like what Sudan has done for its people, so when I compare Ghana to Sudan, I would say that we have not been effective” (Interview, 2021).

Some participants were of the view that the GNPC should be supported by the government to be largely involved in the production of oil and gas resources and to help train more Ghanaians for the sector. A participant from the CSO had this to say:

“So GNPC, when it goes into production, will go with the other Ghanaian artisans and suppliers.... That is where we can say that we have local content in the whole operation

upstream. But what we see today is a fringe benefit. And so, yes, we are implementing the fringe benefit, but in the larger cake, we have not positioned ourselves. That larger mechanism is an explorer, with Ghanaians exploring and producing the very resource that we have. We have not seen that” (Interview, 2021).

From the above statement, the findings reveal that when GNPC gets involved in the production of petroleum, it is likely to translate into increased participation of Ghanaians in the upstream. This will enable more Ghanaians to acquire competencies when they participate in the sector’s activities.

A participant from the CSOs pointed out the low-level involvement of CSOs in law and practice. The respondent made the point that as long as there exists a body like PIAC, responsible for the oversight of petroleum revenue expenditures, there is also a need to involve CSOs in events leading to the production of petroleum resources such as employment and training.

On the issue of some ways in which information can be effectively communicated, in the course of implementing the policy, a participant from the CSOs shared this view, using GRIDCO as an example, stating that on the website of GRIDCO you are able to tell which power plant is generating power and how much they are generating, minute by minute. As a result, the Petroleum Commission should have had a dashboard where Ghanaians could view job opportunities and actual jobs that Ghanaians could perform to inform decisions about programme for training and education.

The current institutional arrangements have been used to develop HC in firms in the upstream sector, despite the challenges that come with them. The findings suggest that some progress has been made in developing HC in the upstream sector, as discussed in previous chapters. However,

it has not been translated into the expected employment outcomes. Diverse opinions on the implementation have been expressed by participants, suggesting that though some initiatives have been put in place to aid HCD, much needs to be done, implying the attainment of some progressive results.

There is progress with the training and education of employees, particularly through the localization/succession plan. This seems to have informed the views of the participants, who are of the view that some progress has been made in developing the knowledge, skills, and competencies of Ghanaians in the sector. Conversely, some participants who suggested ineffective implementation of the LCP gave reasons for their stands, citing poor planning for the implementation, inadequate indicators to measure progress, poor monitoring of compliance, poor oversight, and limited involvement of organizations such as the GNPC, CSOs, and the Parliament of Ghana, leading to ineffective implementation of the policy.

The ability of the nation to be strategic in developing HC rather than largely depending on the oil and gas firms came up as an important element in developing HC for the upstream sector. Views from participants suggest the overdependence of the firms rather than using the GNPC, for instance, as a strategic agency to push the national agenda of training Ghanaians has also not helped the course of implementation of the policy in line with HCD. Furthermore, the findings indicate that the Local Content Fund is not being used effectively to train Ghanaians.

Van Meter and Van Horn (1975) mentioned some elements that should be looked at to enhance discussion on the effectiveness of the policy implementation process. These include actions and decisions taken by actors toward achieving set goals and targets, the consequences of these actions, as well as the extent of delivering expected services. According to Ayee (2000), it is somewhat

difficult to determine the effectiveness of a policy. But policy effectiveness with regard to implementation can be discussed in terms of what has been achieved in relation to the goals or objectives of the policy.

The objective of the policy in terms of HCD was to train employees in the upstream sector. However, neither the LCP nor the L.I. 2204 provided a clear measure of the number of employees expected to be trained by firms over a specific time period. Further, the training is supposed to aid in the attainment of employment targets for Ghanaian employees in the sector. The findings from the study suggest that the institutional arrangements have assisted in developing the skills and competencies of Ghanaians, as evident, for instance, in the Tullow Ghana Local Content Performance Report for the year 2017.

Though the objective of the policy in the context of this study was to train Ghanaians, the LCP document, for instance, did not disclose how many Ghanaians should be trained at what skill level within what period of time. These indicators would have been helpful in measuring the extent of achievement in terms of the policy goals of training. On the other hand, using the training of employees as a means to attain employment targets has not worked out since the localization level is below what is expected. As a strategy for linking training and education to succession, Tullow Ghana plc has yet to meet the targets set for the core technical staff, in particular, and the effectiveness of the policy is being questioned. Meanwhile, the target was to achieve 80% localization in all categories within ten years of the implementation of the policy. But mention must also be made that it is not only training through a succession plan that can be used to achieve these employment targets but also direct employment, i.e., recruiting new and experienced employees.

Gaps that range from the policy's design and implementation to the rules and their applications affect the success of the policy. However, considering the inexperience of the nation upon the discovery of the oil and gas industry, coupled with the setting of ambitious targets for training leading to employment, the nation has made some progress in HCD. To some extent, the implementation of the policy through the legislative instrument has enabled and enhanced the training of Ghanaian employees at Tullow Ghana plc, but has not translated into the expected employment outcomes.

#### **7.1.4. Chapter conclusion**

This chapter looked at the institutional arrangements for developing HC in the upstream sector, which is the same arrangement for Tullow Ghana plc. The themes that were used in analyzing the objective included provisions of the LCP on the HCD, rules and regulations on the LCP for the HCD, and the effectiveness of institutional arrangements. The local content policy makes provision for some good initiatives but comes with some gaps as well. The findings support the argument that, through the local content policy, Tullow Ghana has enhanced the HCD of Ghanaian employees in the sector. Various categories of rules are in place and being used to facilitate the implementation of the LCP in line with HCD as provided for in the L.I. 2204, though it comes with gaps as well. In addition, guidelines have been provided to improve clarity on issues that were not given enough details. To some extent, implementation of the policy through the rules and regulations has enabled and enhanced the training of Ghanaian employees at Tullow Ghana plc, but has not resulted in the expected employment outcomes.

## CHAPTER 8

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS, CONTRIBUTION TO KNOWLEDGE AND SUGGESTION FOR FUTURE RESEARCH

#### 8.0. Introduction

This part of the study revisited the research objectives, summarized, and concluded the study. Recommendations, contributions to knowledge, and suggestions for future research on this study are also looked at.

#### 8.1. Summary

##### 8.1.1. Local content initiatives and programmes in facilitating HCD

The objective under consideration was to examine the local content initiatives and programmes by the upstream firms in Ghana's oil and gas sector. As evident in the findings of this study, it came up that the firm has put in place a number of initiatives and programmes to facilitate the development of skills, competencies, and knowledge acquisition at Tullow Ghana plc.

The local content initiatives put in place by Tullow Ghana plc include the following: First, the firm has put in place a localization/succession plan, which is a component of the LCPs, to enable the training and education of Ghanaian employees. This initiative has helped the uptake of jobs by Ghanaian employees. In this initiative, there is a plan to develop the competencies of Ghanaians and transfer job roles to Ghanaian employees in the firm, thus taking up roles occupied by non-Ghanaian employees. After going through training programmes that are in accordance with the localization/succession plan, Ghanaian employees can develop the necessary competencies. Within this broader localization plan is the succession plan for various job roles occupied by non-Ghanaians. Central to this succession plan are training and education programmes aimed at

developing the skills, knowledge, and competencies of Ghanaian workers to enable them to perform tasks associated with these job roles. Another element of the succession plan is the time frame attached to each succession plan, where for every job role, there is a time frame within which a non-Ghanaian employee is supposed to help train and transition a job role from a non-Ghanaian to a Ghanaian employee. However, it is not always the case that there is a successful transition as planned within the given time frame. The implication is to keep the non-Ghanaian employee in his role for a long time while the training period for the Ghanaian employee is extended.

Again, the main actors involved in this initiative are the individual employees, thus the Ghanaian and non-Ghanaian employees who serve as trainees and trainers, respectively. Also involved are the departmental and functional heads who facilitate the process, assess the skills needs of the employees, implement training programmes, evaluate the process, and take decisions regarding the transitions and progressions to be made with regard to jobs and personnel. The firms as well as the PC and the regulators play a major role in the process, where the firm and the PC have to agree on the succession plan before it can be carried out. The PC also has to perform the roles of monitoring and evaluation per the requirements of the local content rules and regulations.

Further, the implementation of the localization/succession plan requires certain processes and activities. The LCP and the local content regulations are the starting points for the localization plan in that they provide direction and legal backing, respectively. Accordingly, the firms are able to establish the localization and succession plan, which is further sent to the PC for approval, which can be followed by implementation. Prior to its approval, there are some discussions that can go on between the PC and the firms. Other activities that are expected to occur during the process include the selection of successors, the evaluation of the training programme, the assessment of the successors' readiness, and the signing off on the training programme. A localization plan

discloses the kind of training programme to be administered by the firm, the project name, the objectives of the training, the duration of the training, and the budget allocation for the training programmes and the implementation strategy.

The distinction between the two concepts of job role localization and personnel localization also came up. Sometimes a job role is localized, but the employee or personnel performing the job are not. Thus, a job role will be allocated to a Ghanaian employee, whereas an expatriate employee performs the role. Generally, the views of management staff with regard to their experiences with the succession plan did not differ from those of core technical staff. While some departments under support functions are fully localized, core technical departments still have more work to do, with variations in the duration of succession due to the demands of the job role.

The conceptual framework developed helped in analyzing the study, and the same can be said of the institutional theory and the human capital theory on which the study drew. It has been established in this study that the LCP led to institutional arrangements, which then offered the firm some institutional capital to aid in training and education, which is in line with the conceptual framework of the study. The study further contributed to the theoretical perspectives on how institutional capital can lead to HCD and lead to the sustainability of LCP, and it also contributed to the theoretical gap on the localization of institutional capital in the extractive resource space. The continual development of HC through the creation of institutional capital is aiding the personnel localization process and LCP sustainability. However, these processes are met with various challenges when developing HC. The findings on the succession and localization plan support the notion that this initiative enables training and education, leading to career development, but some literature also contradicts this finding. For instance, Egbuta (2019), in his study on Nigeria's oil and gas industry, suggests that a leadership succession plan has limited effect on

career development. The localization/succession plan, which is a requirement of the LCP, has enhanced the training and education of employees at Tullow Ghana plc.

Second, the use of assessment and development tools is another way in which the firm facilitates the development of HC. The competency framework approach, for instance, enables employees to assess their skills needs, what skills and competencies they have acquired, their present skills level, the skills they have mastered, as well as the skills they require to progress to the next stage of their career development. This skills assessment has been used in certain departments as the basis for planning career development for employees. It has also enabled the firm to determine training and education programmes for employees during the implementation of the succession plan, thereby aiding the development of HC in accordance with the local content policy.

Third, Tullow Ghana plc, for instance, has put in place a policy for developing its human capital in the upstream sector, thus the “70:20:10 model,” wherein, in terms of percentages, 10 represents the formal education, 20 is knowledge acquisition through mentorship and coaching, and 70 represents on-the-job training. This model largely uses the on-the-job training method, and this is able to allow employees, trainers, and trainees to interact as they work to promote knowledge acquisition. In accordance with the LCP, the succession plan requires non-Ghanaian employees to transfer skills and competencies to Ghanaian employees, and this arrangement creates an opportunity for more practical engagement between the employees to aid the LC agenda. The policy also offers opportunities for mentorship and coaching as well as formal education. The policy, however, limits the opportunity for employees to have off-the-job training, which offers different learning opportunities in different environments.

Fourth, Tullow Ghana plc has established both soft and hard infrastructure to aid the development of HC in Ghana. An example of soft infrastructure is the development of e-learning tools, while an example of hard infrastructure is the establishment of a training centre in collaboration with the Takoradi Technical University. The training centre was supporting the nation at large, thus helping to develop the competencies of students and potential employees. The e-learning tool offered the opportunity for employees to acquire skills and knowledge by taking up web-based programmes.

### **8.1.2. How employees develop their HC in the firm**

The second objective of the study was to find out how employees acquire skills and competencies in the upstream sector and the challenges they face. In relation to the objective, two main themes were developed. The first theme is how employees develop their HC in Ghana's upstream firms. It was realized that employees at Tullow Ghana plc acquire knowledge through internal training, external training, e-learning, and personalized learning initiatives.

With regards to internal sources of HC acquisition, prominent among the methods are on-the-job training, mentoring, and coaching. The internal methods were dominating the knowledge acquisition process as a result of the internal policy of Tullow Ghana plc, which is the 70:20:10 human capital development policy, where seventy (70) represents 70 percent of training programmes done on the job. Internal sources have both advantages and disadvantages. The system is able to combine work and training internally while developing practical skills, thus saving the cost of training from external sources. However, creating a balance between working to meet expected business and performance targets and training employees can limit training opportunities for employees as trainers are expected to perform their core task of meeting production targets, for instance.

Internal training has resulted in the acquisition of both hard and soft skills by employees at Tullow Ghana plc. Employees at the firm were also using external sources of training, mainly through formal education. Comparatively, this off-the-job method is limited compared to the internal method; thus, it caters for only 10 percent of an employee's development per the HCD policy of the organization. Further, the employees at the firms were using the e-learning facility as a means of knowledge acquisition. E-learning has become very useful since the COVID-19 outbreak, and employees were being encouraged to use the facility, which reduces the face-to-face interaction and hence the personal contact between trainees and trainers, thus reducing the spread of the disease. A web-based resource that employees were using for e-learning is IHRDC. Furthermore, employees at Tullow Ghana plc acquired knowledge through personalized learning initiatives, where employees funded courses that would be beneficial for their career development within the firm and beyond the firm.

### **8.1.3. Challenges with acquiring HC in the upstream firms**

Several challenges appeared to be affecting the development of HC in the upstream sector, and these included a perceived delay in skills transfer by some expatriate employees, occasional misunderstandings between stakeholder organizations, the risky and expensive nature of business, difficulty in finding experienced professionals, cultural diversity, inadequate educational infrastructure, the limited capacity of stakeholder organizations, a lack of employee motivation, and inadequate information on localization. There are also challenges related to the institutional arrangements for the HCD.

The attitudes of non-Ghanaian workers can impede the training of Ghanaian employees. Perceptions at the firm suggest some of the non-Ghanaian employees deliberately delayed

transferring skills to their Ghanaian counterparts during the succession period. The delay in skills transfer has implications for the duration of the training and the number of employees that can be trained within a period of time. Again, the interplay between the Petroleum Commission and Tullow Ghana plc was affecting the development of HC in the oil and gas firm as a result of occasional misunderstandings among these stakeholders.

The non-existence of the LC laws when Tullow Ghana plc started its operations in Ghana, for instance, initially resulted in a reluctance to follow the rules on localization and succession, hence impeding progress in the development of HC in the firm. Also, a lack of experienced professionals can affect the development of HC in oil and gas firms. More experienced people at the firm will likely increase its capacity to train more employees. The implication of this dynamic is the inability to train enough Ghanaians to meet the targets of the LCP with regard to localization. Cultural background and orientation can affect employees' conduct, perceptions, and behaviour at the workplace. The findings suggest that non-Ghanaian employees are able to develop better working relationships with colleagues with similar cultural backgrounds than the seemingly limited interaction with Ghanaian employees in some work situations, and that can delay knowledge acquisition at the workplace.

The educational system and curriculum in Ghana hinder the development of HC in the oil and gas upstream sector. The educational system, which is supposed to equip students and potential employees with the requisite human capital needed for upstream, does not offer the expected foundational practical skills that will make it easier for continual training and development of employees within the firm who went through the Ghanaian educational system. The capacity of oil and gas firms in terms of personnel, finance, and time constraints also affects the development of HC in the upstream firm. An employee's desire to acquire new skills to move up in his career

within the organizational set-up can also be affected by the financial rewards that come with it. When employees are not appropriately rewarded when they take on new job roles, their motivation to train to aspire to such roles is affected. Again, inadequate information can affect the development of HC in the upstream sector. Information is needed to make decisions on the outcome of training and take further decisions. Additionally, inadequate information affects decision-making by the PC and makes it difficult to monitor compliance. There are other challenges related to gaps in policy and regulation.

#### **8.1.4. Institutional arrangements for HC development**

The local content policy makes provision for some good initiatives but comes with some gaps as well. To a large extent, the vision, objectives, and directions given in the LC policy provide a good guide for developing HC in the oil and gas upstream sector. Further, the LCP document specifies the policy instrument for putting the LC policy into effect, which includes legislation, information, and capacity building. Again, on the provisions of the LCP to promote training and education, the LC policy to a large extent offers a plan on how the training of Ghanaians should be done in the upstream sector. It is concise to a large extent on policy direction and strategy.

On the other hand, a clear strategy was not put in place that could be used in cross-checking training-related information that was provided by the firm to the PC. Further, the policy document states the need to encourage women to participate in the upstream sector and, in this context, the development of HC in the upstream. For women to fully participate in the oil and gas upstream sector, they need to acquire human capital. However, no clear-cut plan was put in place to aid the development of women in the oil and gas upstream sector. Again, no clear standard was set as to the number of employees that a firm should train within a specific period of time.

Ghana has established rules and regulations that have helped in the implementation and progress of the LCP in the oil and gas upstream sector. Various categories of rules are in place and being used to facilitate the implementation of the LCP in line with HCD. As provided for in the L.I. 2204, the instrument allows for information rules, which ensure that the regulator is given information related to the HCD. The LC regulations provide for progressive rules that guide the succession programme from the training of employees to occupying positions within the firm.

Furthermore, the policy instrument provides for pay-off rules that assist in the implementation of the LCP on HCD. The L.I. 2204 provides information rules that guide the dissemination of information on HCD. The provision has made it possible for the PC to monitor compliance through the communication of HCD issues on the LCP with the firm. The policy instrument also provides for some offenses and associated penalties. For instance, the fines and possible imprisonment associated with the provision of false information. However, no explicit sanctions are mentioned with regard to offenses relating to HCD in the policy instrument. The Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), do not make provisions for incentives to firms that are able to train and educate a certain number of employees or attain set targets on the HCD.

Despite some gaps in the LCP, it also became evident from the findings that the implementation of the LCP and the complementary institutional arrangements had contributed to the HCD at Tullow Ghana plc. Indeed, the policies and regulations governing local content came to enforce and formalize what the firm had somewhat begun to do. The institutional arrangements brought in elements like targets and timelines within which to guide the development of HC. Through institutional arrangements, firms are obliged to assist in the HCD. However, much has not been achieved with institutional arrangements in the setting up of the Local Content Fund (LCF) and

how it is being deployed to assist in the training and development of Ghanaian employees. To some extent, the current institutional arrangements have been used to enhance the development of HC in the upstream sector, despite the challenges that come with it. The findings suggest that progress has been made in developing HC in the upstream sector. However, it has not been translated into the expected employment outcomes.

## 8.2. Conclusions

The aim of this study was to examine the local content policies on HCD in the upstream sector, with a focus on the operating upstream firms. Specifically, the study examined the LC initiatives and programmes on HCD in Ghana's oil and gas upstream sector, how employees acquire HC in Ghana's upstream sector, challenges faced in the acquisition of HC, and the institutional framework on HCD in the oil and gas upstream sector. Related research questions about these objectives were adequately addressed. The study made use of a qualitative approach and a case study design. The study involved the views and experiences of 30 participants, sampled purposively, as well as evidence from document sources. The researcher also used a semi-structured interview guide to collect data while drawing insights from human capital theory, institutional theory, and a conceptual framework to help analyze the findings.

The study found that Tullow Ghana plc was facilitating HCD through localization/succession planning, the use of assessment and development tools, the establishment of HCD policy, and infrastructural development. Employees in the firm were also acquiring HC through internal training, external training, e-learning, and personalized learning initiatives. However, there were several challenges to the acquisition of HC, including perceived delays in skills transfer by some expatriate employees, occasional misunderstandings between the firm and the PC, the risky and

expensive nature of business, difficulty in finding experienced professionals, cultural diversity, inadequate educational infrastructure and curriculum in Ghana, the limited capacity of stakeholder organizations (the PC and the firm), a lack of employee motivation, and inadequate information on localization.

From the analysis of the findings, the study argues that, through the LCP, there has been an enhancement in the HCD of Ghanaian employees in the sector. A particular example is the establishment and implementation of the localization/succession plan, which is a requirement of the LCP. Central to the succession plan are training and education programmes. The LCP and the L.I. 2204, as well as their implementation, had some gaps. Notable gaps included a lack of clear plans to improve women's training and participation, a lack of incentives for firms in the payoff rules to train Ghanaian employees, and a lack of mechanisms to properly monitor information and monitor implementation of the policy. Meanwhile, the LCP lays out objectives, targets, and directions to achieve the set goals, and the L.I. 2204 makes provisions for information rules, progression rules, and payoff rules that guide the development of Ghanaian employees.

Despite the fact that the firm was going through some training and education programmes for its employees, the LCP and the local content regulations came to formalize, enhance, and enforce the HCD with these institutional arrangements. Though the implementation of the LCP has enhanced the training and education of employees, it has not translated into the attainment of employment targets for Ghanaian employees. Tullow Ghana has yet to achieve the 80% target for management and core technical staff. The firm has provided soft and hard infrastructure to promote soft and hard skill development and knowledge acquisition.

In general, the use of the HC theory and the institutional theory was useful to the study as they offered some insights into discussing the findings of the study. The same can be said of the conceptual framework, which was also useful in explaining some of the findings of the study. From the perspective of the human capital theory, the findings of the study suggest that employees at Tullow Ghana plc have gone through some form of education and training to acquire knowledge and skills, which supports the assumption of the human capital theory. Skills acquisition is also expected to result in increased financial rewards. However, similar job roles being occupied by employees with similar qualifications, skills, and competencies may attract different financial rewards depending on the nationality of the individual employee. Ghanaian employees, after acquiring skills and competencies, may be promoted to a new job role but receive lower financial rewards than their expatriate colleagues in similar job roles. Furthermore, in line with the institutional theory, institutions have been used to enhance the training and education of employees at Tullow Ghana plc. LCP has been backed by regulations that guide training and education activities in the firm. This has enabled the training of employees.

Through the development of the conceptual framework for this study, some theoretical contributions to the discourse of LCP have been made in terms of the linkages between the concepts. For instance, the training processes, and thus the HCD, have led to progress in the LCP. The continual development of HC through the creation of institutional capital as a consequence of policy implementation and institutional arrangements aids the employee localization process and LCP sustainability. This framework modifies the conceptual framework put forward by Huang and Cao (2016).

Furthermore, the research will be useful in practice. Practitioners in the sector can consider the findings and recommendations of the study in making decisions on LCP and HCD. The research

can also help in shaping policies by the government of Ghana, the Petroleum Commission, and the upstream firms on the development of HC in line with the LCP.

### 8.3. Recommendations

- In order to reduce the burden of training employees at the upstream firms, there is a need to strategically involve the GNPC in the development of HC. The government should facilitate the capacity-building initiative within the GNPC so as to position the company to train more Ghanaians for the upstream sector. There is a need for the government and GNPC to collaborate and invest in incubators and highly capital-intensive equipment to give that practical, hands-on experience in universities offering technical oil and gas programmes. This will reduce the dependence on the discretionary decisions of upstream firms.
- Capacity in terms of funding and trainers, as well as time constraints and the need to meet some business targets, affects the number of employees that firms can train at a time. In order to improve the hands-on experience of Ghanaian students and potential employees and also train more Ghanaian employees in the firms, the government needs to agree with the oil and gas firms to give experiential learning to the agreed number of new graduates each year in exchange for tax incentives.
- The government of Ghana, working in collaboration with the relevant tertiary educational institutes, should ensure that they identify the technology and hands-on gaps and do a capacity audit to help equip the educational institutes with the necessary infrastructure. This would help people graduating from these educational institutions be ready to hit the ground running in the upstream sector when they have an opportunity to work. Tertiary

institutions should make their courses more practical to make it easier for students to cope if they get a job and continue their development within firms.

- It became evident that there was no clear-cut effort by firms or the government of Ghana to aid the human capital development of women in the sector. In order to improve women's participation in the upstream sector in terms of training as a means of employment, the government should offer scholarships using the Local Content Fund (LCF) to female students who are willing to study oil and gas-related courses in the core technical programmes.
- The Petroleum Commission needs to improve monitoring and ensure that it is done. The regulator needs to be firmer in that direction and ensure that firms are strictly adhering to rules and regulations and operating within the local content requirements in line with the training and development of Ghanaians. In trying to monitor the training and succession plans, the PC should be able to improve personal interactions with Ghanaian employees to monitor the progress of the training and the challenges faced.
- The government should amend the rules for every job role. The laws should specify the maximum number of years that expatriates can stay in the country to do a specific job. The number of Ghanaians to be trained by expatriates as well as the upstream firms should also be specified, as should the level and type of skills expected. This would bring clarity to the number of years expatriate employees are supposed to transfer skills and job responsibilities to their Ghanaian counterparts.
- Stakeholders need information to make decisions. It is very important that the MOE and the PC sensitize Ghanaians as to the opportunities available in the sector and the benefits they can derive from those opportunities. The PC should also display on its website relevant

information on localization, career opportunities in the sector, and information on HCD in the upstream sector. This would provide information and transparency to aid the education and decision-making of relevant stakeholders within the upstream sector.

- Employee motivation was one of the barriers to HCD. The PC should collaborate with the MOE and firms to address any disparities in salaries between Ghanaian and non-Ghanaian employees so as to improve the financial rewards associated with working in the sector. This would motivate employees to train for and advance into certain job roles within the organizational setup.
- As much as cultural diversity is useful in sharing knowledge among employees, it can also impede the development of human capital at Tullow Ghana plc. Periodic orientations should be organized across departments for staff. This will raise awareness of perceptions and the need to promote good working relations.

#### **8.4. Contribution to knowledge**

The study makes some contributions to knowledge. Reviewing relevant literature on LCP in the oil and gas sector revealed that there is limited literature on the HCD of employees in the oil and gas upstream sector. This study has contributed to addressing this gap. The researcher has carried out a study to explore and describe how employees develop their human capital, using Tullow Ghana plc as a case study, interviewing management and core technical staff and relevant stakeholders, and studying barriers to the human capital development of employees in Ghana's upstream sector.

The themes addressed provide insights into the objectives, which contribute to knowledge on how upstream firms facilitate HCD in line with localization, how employees acquire HC, and

the challenges faced in doing so. Until now, the studies produced by other researchers in the discourse of LCP, particularly in the Ghanaian upstream context, on skills development and knowledge acquisition have concentrated on the development of the HC of potential employees and students. But this study focused on employees in the sector and also focused on international oil firms (Tullow Ghana plc).

For instance, the study has shown that central to the facilitation of HCD at Tullow Ghana plc is the use of a localization/succession plan that is made up of training and education programmes meant for the acquisition of skills and knowledge. In this process, Ghanaian employees are trained and transitioned to a new job role. The main processes involved are the assessment of skills gaps among employees, the development of a training plan, the submission of a training plan to the PC, approval of the training plan, the commencement of training programmes through the use of internal training methods, external training methods, e-learning or individual learning initiatives, a combination of different training strategies, and the signing off process when training is over. A number of factors affect the localization/succession plan, including the requirements of a job role, the experience level of the employee trainer, how well a trainee employee can adapt to behavioural, and attitude changes that come with training, and the firm's internal rotational policy.

Some challenges associated with this training process are delays in skills transfer, the limited capacity of the firm and the PC, and a lack of employee motivation. Cultural orientation, for instance, appears to have both a negative and positive effect on the training of employees at Tullow Ghana plc. Whereas employees within the firm acquire knowledge through networking with multinationals from various cultural backgrounds, the demeanor of some Ghanaians at the workplace is sometimes perceived as a lack of confidence to perform certain tasks by some

expatriate employees, thereby limiting opportunities for hands-on experience and delaying their HCD.

Further, concerning the research implications, the conceptual framework adds to the theoretical perspectives on the functioning of institutional arrangements in the creation of institutional capital in the upstream sector context. It was already established that institutional arrangements at the national and organizational level (policies, external rules, and internal rules) can lead to the creation of institutional capital (Huang and Cao, 2016; Oliver, 1997). The logic framework put forward by Huang and Cao (2016) also tends to theorize about the relationship between institutional capital and the competitive advantage of an organization. The conceptual framework for this study is built on how institutional arrangements can lead to the development of HC. The conceptual framework of this study contributes to the theory of how institutional capital can result in the development of HC in the upstream sector. The study also discussed how the acquisition of HC in a firm setting can lead to policy sustainability and, thus, local content policy sustainability in the upstream sector. The continual development of HC through the creation of institutional capital as a consequence of internal and external institutional arrangements aided the training and personnel localization processes and LCP sustainability. The continual development of HC through the creation of institutional capital as a consequence of policy implementation and institutional arrangements helped the personnel localization process and LCP sustainability. In the context of the oil and gas upstream sector, the conceptual framework for this study modifies the logic framework constructed by Huang and Cao (2016).

Accordingly, with the conceptual framework for the study, LCP for the upstream sector will result in the establishment of external and internal institutional arrangements; both internal and external institutional arrangements will build up into institutional capital in the upstream sector;

institutional capital will then lead to the development of HC; developing HC will then lead to a sustainable LC in the oil and gas upstream sector; the transition from concepts and processes from the establishment of the LC policy through to the LC sustainability of the conceptual linkages is met with challenges. This conceptual framework will be useful in theorizing about employee training in upstream firms.

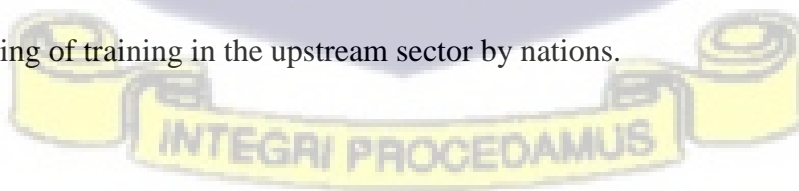
Again, an objective of the study was the examination of the institutional arrangements (policies, rules, and regulations) guiding HCD in the upstream sector, and this goes beyond Tullow Ghana plc. The same set of policies, rules, and regulations guide the development of HC in Ghana's upstream sector, hence the usefulness of the findings in applying them to similar firms in the upstream sector. Further, the study analyzed the rules on HCD in the L.I. 2204 into information rules, transition rules, and pay-off rules, clarifying the process of HCD in the sector. Payoff rules are made of sanctions and incentives. Whereas there are general sanctions for offenses but not specifically on HCD, there is no provision for incentives for firms that are able to train more Ghanaians for the upstream sector.

The studies also shed more light on the concept of localization in the upstream sector, where there was job role localization and personnel localization. Job role localization is the process of developing the HC of 'local' employees and assigning them jobs occupied by expatriate employees in the firm. Personnel localization is the process whereby a local employee is given a job role while the tasks and responsibilities associated with the job role are being performed by an 'expatriate' employee. Though job role localization is discussed in the literature, the study has shed more light on how job role localization can result in personnel localization.

The study has also provided knowledge through its recommendations and findings that will be beneficial to policy and practice. The recommendations and findings can offer suggestions to decision-makers and relevant stakeholders, such as the government, PC firms, individual employees, CSOs, and interested parties. This can shape policies and training for HCD in the upstream sector.

### **8.5. Suggestions for future research**

The study has given insights into the local content policies and programmes on HC development in the oil and gas upstream sector, using Tullow Ghana plc as a case study. This study focused on foreign firms operating in the oil and gas upstream sector in Ghana using a case study design. It is suggested that studies be done on similar firms in the upstream sector to ascertain their HCD processes. Further, it is suggested that research be done on indigenous Ghanaian firms operating in the upstream sector to see how these firms are developing HC. This can aid in the comparison between HCD in foreign-owned firms and HCD in firms owned by indigenous Ghanaians. Gender-related studies in the discourse of HCD in the upstream sector seem to be limited after reviewing the literature on LCP. Further studies can be conducted on the training of indigenous women in oil-producing nations and their participation in the upstream sector. Much has not been achieved with institutional arrangements with regard to the setting up of the local content fund (LCF) and how it is being deployed to assist in the training and development of Ghanaians. Studies can be done on the funding of training in the upstream sector by nations.



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**APPENDICES**

**APPENDIX I**

**DATA COLLECTION INSTRUMENT (INTERVIEW GUIDE)**

**LOCAL CONTENT POLICY AND HUMAN CAPITAL DEVELOPMENT IN GHANA'S**

**OIL AND GAS UPSTREAM SECTOR**

Objectives of the study

- To examine the initiatives and programmes on HCD by in Ghana's oil and gas upstream sector.
- To examine how employees acquire human capital in Ghana's upstream sector and the challenges faced in the acquisition of the HC
- To examine the institutional framework on HCD in the oil and gas upstream sector

Research question (1)

**How do Ghana's upstream firms facilitate the human capital development of Ghanaian employees in the firms?**

Sub-questions

1. What is your view on the progress or otherwise of LCP in terms of HCD in your firm and Ghana at large?
2. How do firms support the training and education of employees?
3. To what extent does the LCP inform the training and education of employees?
4. How does an employee qualify to be trained at the firm?
5. How do the values of your organization affect the HCD?

6. How are mentorship and coaching carried out in the firm?
7. How are the skills needed by employees assessed?
8. How do you ensure a successful HCD in the firm?
9. How is training and education funded in your organization?
10. What are the limitations of the programmes and initiatives by firms in developing HC?

Research question (2)

**How do employees develop their human capital in Ghana's upstream firms and what are the barriers encountered in the acquisition of HC?**

Sub-questions

1. What do employees value as human capital?
2. When and how do employees acquire human capital?
3. What factors influence an employee's decision to acquire human capital, and to what extent is their HC acquisition influenced by the LCP?
4. What information is available for employees on how to develop their human capital?
5. How do technology and mentorship shape your knowledge acquisition at the workplace?
6. What forms of training do you go through, formally and informally?
7. How long do you have to understudy a mentor to upgrade your skills?
8. How have firms supported your HCD?
9. How resourceful are you to invest in acquiring skills and competencies in your professional career?

Sub-questions on challenges

1. How capacitated are firms and employees in developing human capital?
2. What challenges do employees face in meeting their skill development targets?
3. To what extent does a lack of financial resources affect HCD?
4. How do the educational system and infrastructure in Ghana affect the development of human capital?
5. Could you explain some challenges faced in coordinating and collaborating with other stakeholders in developing HC?
6. What are the challenges firms face in meeting the Petroleum Commission's and employees' expectations in developing their skills and competencies?
7. How good is the infrastructural arrangement of firms to facilitate training and education?
8. How good is the oversight of LCP and upstream firms' activities by governmental institutions?
9. How can the firm mitigate the challenges mentioned?

Research question (3)

**How do institutional arrangements affect the development of skills and competencies in Ghana's upstream sector?**

Sub-questions

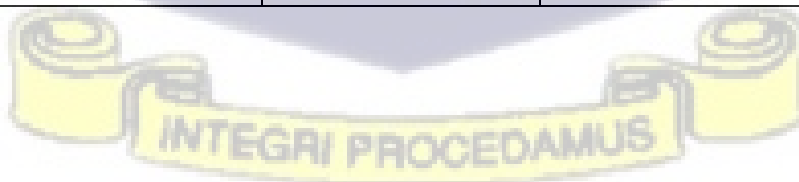
1. How would you describe the kind of rules, norms, laws, and regulations that guide HCD?
2. What are some of the gaps in the institutional arrangements that affect HCD?
3. How do institutional arrangements affect HCD within gender groups in a firm?
4. What is the state of the local content fund, and how is it being used to support training, education, research, and development?

5. Would you consider the institutional arrangements in the upstream sector effective enough in developing human capital?
6. How are provisions in the institutional arrangements limiting the development of HC?
7. Which aspects of the policies and legislation are enabling and disabling the development of HC in the upstream sector?
8. What amendments can be made to the policies and legislation to improve the development of human capital?



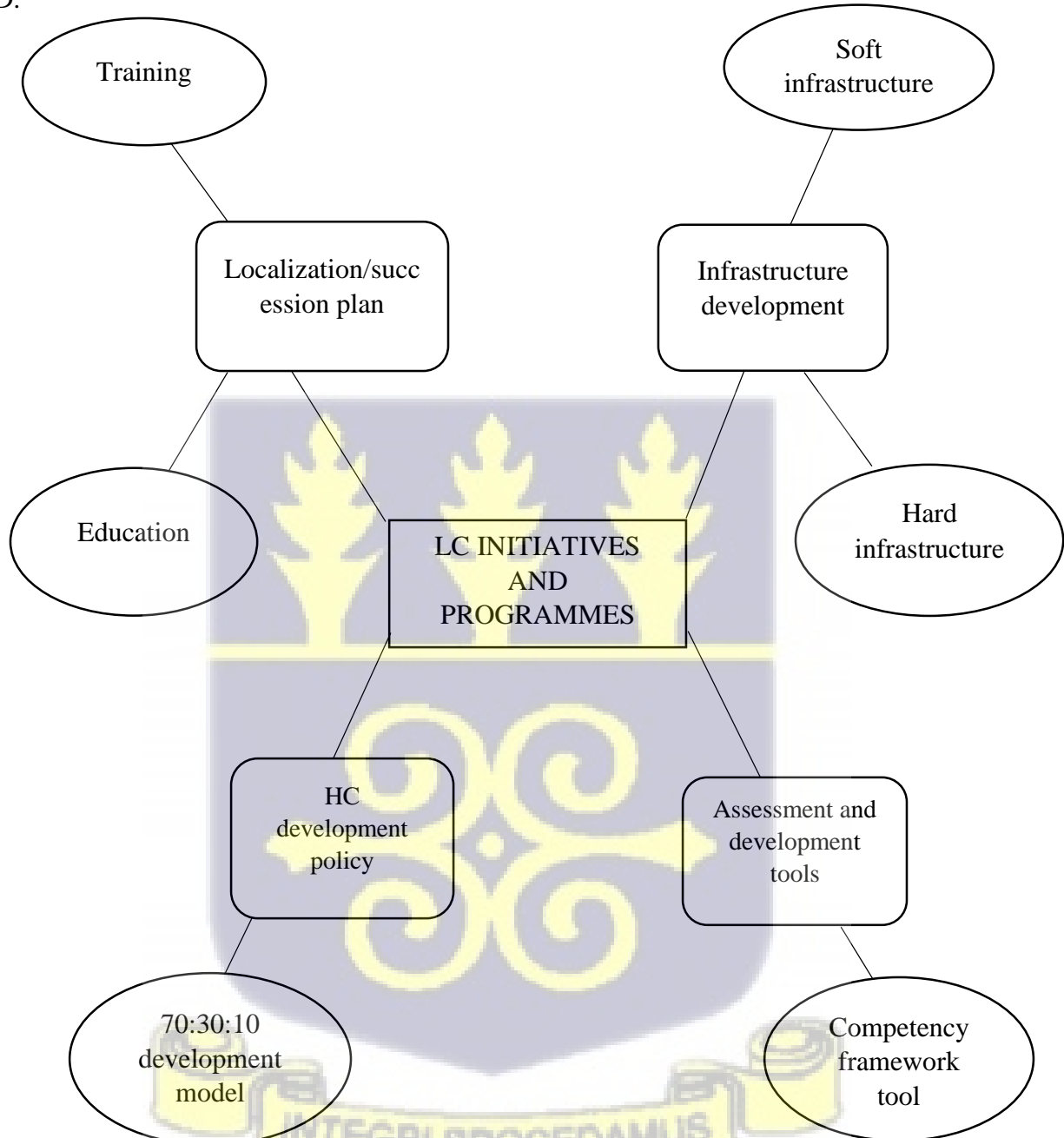
**Research Matrix**

<b>Research question</b>	<b>Data collection</b>	<b>Source of data</b>
How do upstream firms facilitate HCD in Ghana's oil and gas upstream sector?	In-depth interview Document sources	1. Petroleum Commission 2. Tullow Ghana plc 3. Practitioners in the upstream sector. 4. LCC
How do employees develop their human capital in Ghana's upstream firms?	In-depth interview Document sources	1. Tullow Ghana plc 2. Practitioners in the upstream sector 3. PC 4. LCC
What are the barriers encountered in developing human capital in the upstream firms?	In-depth interview	1. Petroleum Commission 2. Upstream firms 3. Parliamentary Committee on Mines and Energy 4. Ministry of Energy 5. CSOs 6. Practitioners in the upstream sector. 7. LCC
How do institutional arrangements affect the development of skills and knowledge acquisition in Ghana's upstream sector?	In-depth interview Document sources	1. Petroleum Commission 2. Upstream firms 3. Parliamentary Committee on Mines and Energy 4. Ministry of Energy 5. CSOs 6. Practitioners in the upstream sector. 7. LCC



**Appendix II**

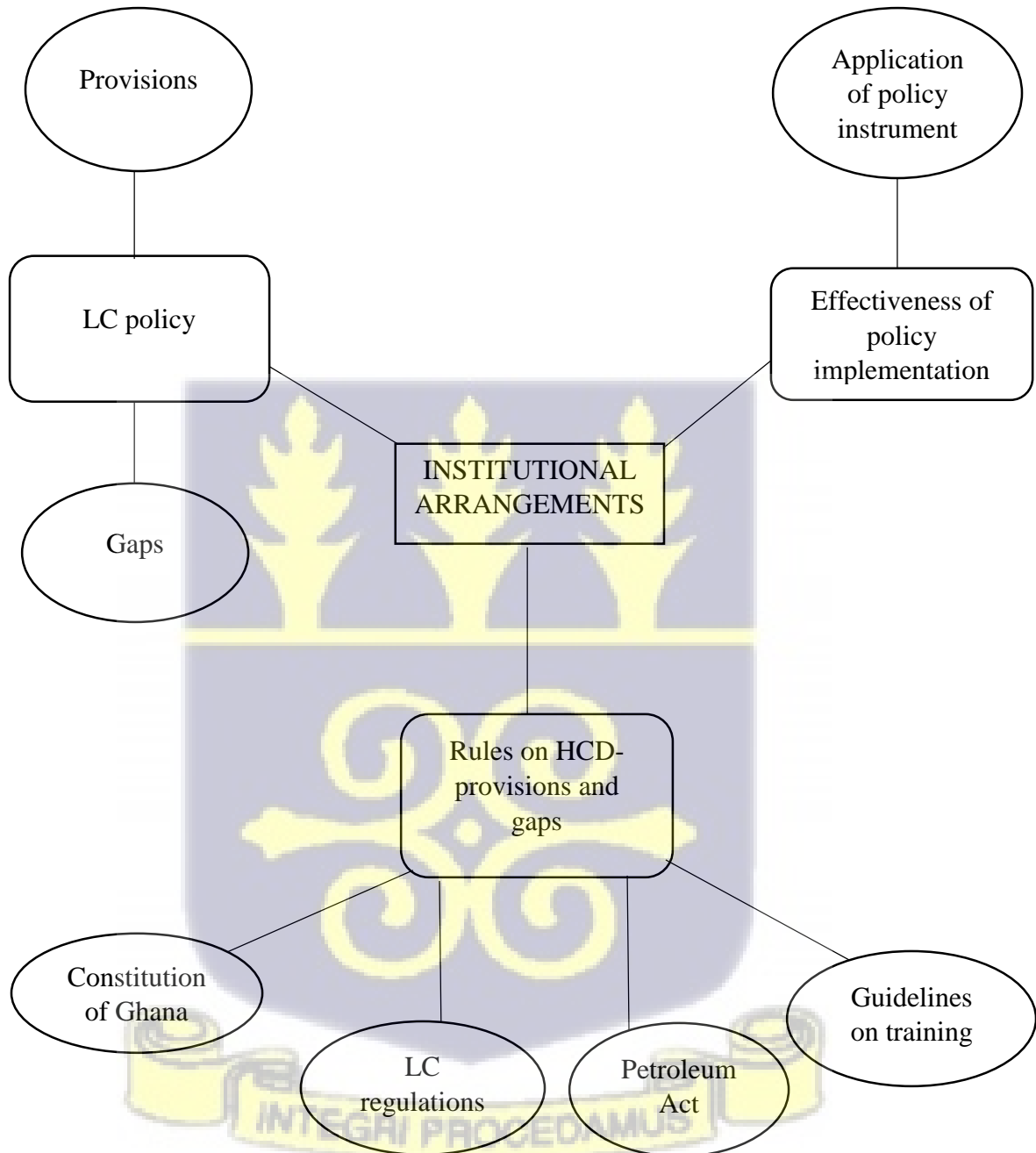
Thematic network analysis of the LC initiatives and programmes by upstream firms in facilitating HCD.



Source: Researcher's thematic network analysis, 2020

**Appendix III**

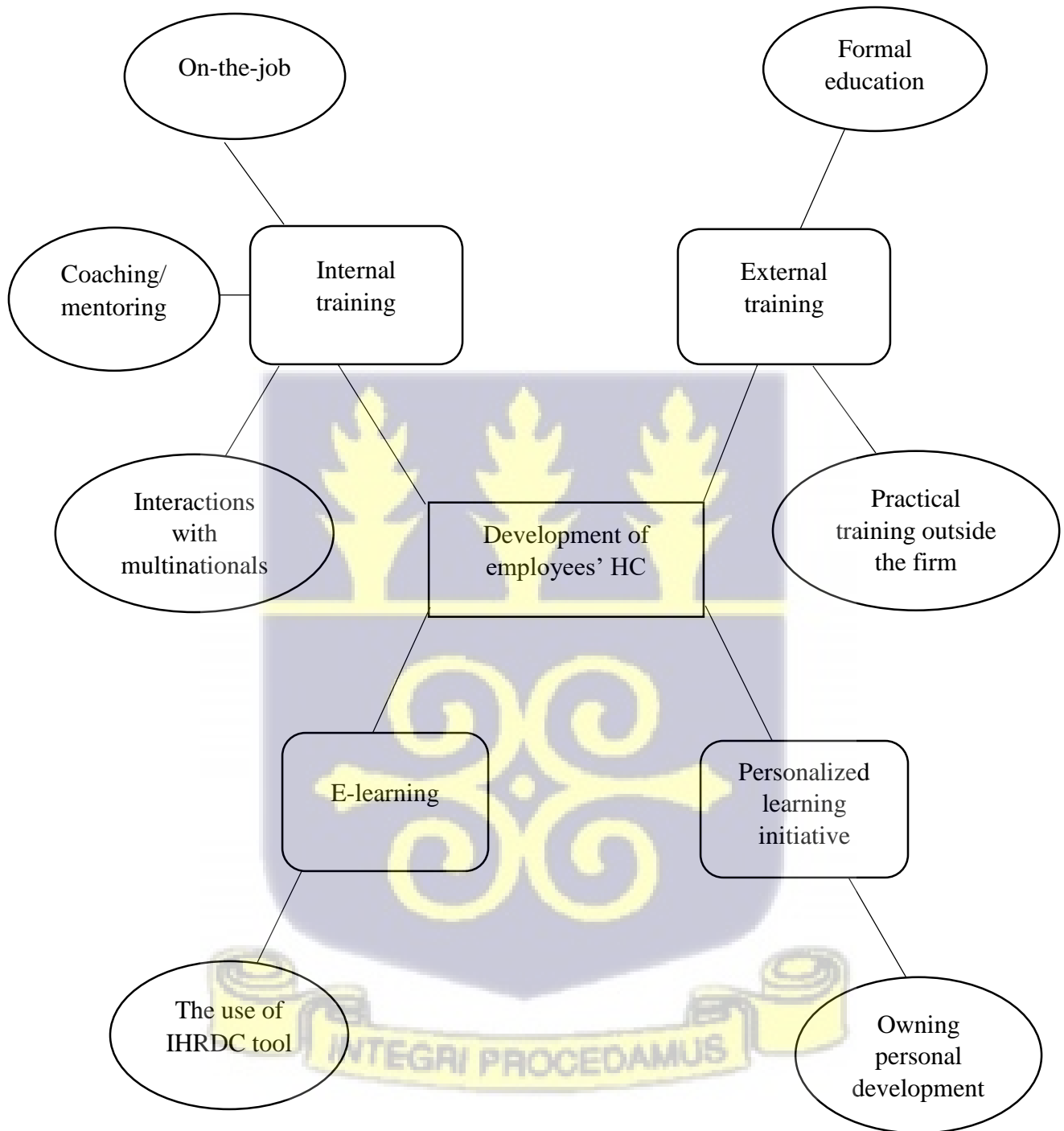
Thematic network analysis of institutional arrangements on HCD in Ghana's upstream sector



Source: Researcher's thematic network analysis, 2020

**Appendix IV**

Thematic network analysis of employees' acquisition of HC in Ghana's upstream firms.



Source: Researchers thematic network analysis, 2020

