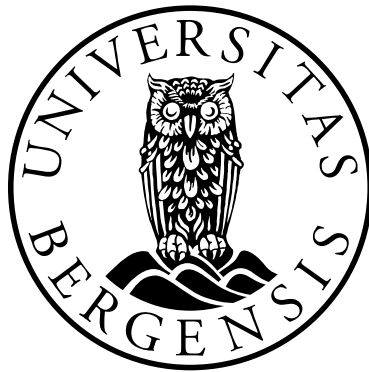


From local content to local participation?

Exploring entrepreneurship in Ghana's oil and gas industry

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DEDICATION

To my parents Rebecca Dutenya and Geoffrey Worlanyo Ablo (late).

You are my inspiration. Thank you.

To my lovely wife, Soteria and our amazing daughter Delali,

your sacrifices, support, and understanding

made it possible for me to complete this work.

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ABSTRACT

Ghana started commercial oil production in 2010 and as part of strategies to facilitate linkages between the oil and gas industry and the Ghanaian economy, a local content law was passed in 2013. This PhD thesis examines whether and how Ghana's local content law enhances the opportunities for local participation in the petroleum sector. With a focus on Ghanaian SMEs' and drawing on relational perspectives in geography that emphasise the embeddedness of economic action, the thesis highlights the complex social processes that shape the impacts of natural resources extraction on society.

The thesis examines Ghanaian entrepreneurs' strategies of drawing on networks to acquire information, build trust and mobilise financial capital in their attempt to gain entry and participate in the oil and gas industry. The study argues that the social and economic capitals relevant for local entrepreneurial activities in the oil industry are relatively inaccessible for SMEs. The thesis also explores the ways in which a state-led Enterprise Development Centre (EDC) enhances the opportunities for SMEs' participation in the oil industry. While the EDC enhances the capacities of SMEs through training, this study contends that the benefits of the EDC in terms of promoting SMEs' participation in the oil industry are limited. With emphasis on the micro-mechanisms of power embedded in the techniques and practices of MNCs, the state and local companies, the thesis examines the emerging relations of power between actors and highlights how these influence the opportunities for SMEs participation in the oil and gas sector.

Through extensive fieldwork conducted in Ghana's oil industry over a period of three years, the study concludes that Ghana's local content law is largely beneficial to local elites and does not stimulate broad-based social and economic benefits. The case studies of Ghana entrepreneurial activities show how embedded resources and practices of actors shape local SMEs participation in the oil and gas industry.

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ACRONYMS

ABS	American Bureau of Shipping
AMA	Accra Metropolitan Assembly
BOPD	Barrels of oil per day
CBD	Central Business District
CSO	Civil society Organisations
EDC	Enterprise Development Centre
FPSO	Floating, production, storage and offloading vessel
GNPC	Ghana National Petroleum Corporation

HSE	Health, safety and environment
IOC	International oil company
ISO	International Organisation for Standardization
JTTC	Jubilee Technical Training Center
KIA	Kotoka International Airport
LCP	Local content policy
LI	Legislative Instrument
MNC	Multinational corporation
MPA	Model Petroleum Agreement
NDC	National Democratic Congress
NORAD	Norwegian Agency for Development Cooperation
NPP	New Patriotic Party
PC	Petroleum Commission
PSA	Production-Sharing Agreement
RWA	Rig Workers Association
SMEs	Small and Mediums scale enterprises
STMA	Sekondi-Takoradi Metropolitan Assembly
TMA	Tema Metropolitan Area
TMC	Takoradi Market Circle
TOR	Tema Oil Refinery
VALCO	Volta Aluminum Company

CHAPTER ONE

Introduction

1.1. Introduction

Oil and gas extraction, however modest, has significant social, political, economic and environmental implications for society. Hydrocarbon extraction has become integral to every aspect of life in the modern world (Bridge and Le Billon, 2013). In 2007, Ghana announced the discovery of commercial quantities of oil and gas and started production in 2010. Although the country's oil and gas discovery has been greeted with high expectations, there is also a growing fear of the potential for the country being plagued by the so-called 'resource curse'. The World Bank (2009) and Gyampo (2011) for instance concludes that if necessary mechanisms are not put in place, Ghana could indeed be plagued by the resource curse. But beyond the 'fear' of the resource curse, various policies are instituted to capture more gains from Ghana's oil and gas sector and this includes the *Petroleum (Local Content and Local Participation) Regulations 2013*, L. I. 2204. The local content policy (LCP) aims to enhance Ghanaians' participation at every level of the oil and gas industry value chain. This PhD project examines the ways in which Ghana's LCP enhances the opportunities for Ghanaian entrepreneurial activities in the oil and gas sector (paper #1 and #2) and how these opportunities are shaped by emerging relations of power between foreign companies, state institutions and local firms (paper #3). Although Ghanaian entrepreneurial activities in the oil and gas industry are essential for the trickling down of the oil wealth and the fostering of links between the oil and gas sector and the broader Ghanaian economy, this study finds that, embedded resources and strategies of Ghanaian entrepreneurs are problematic when deployed in the oil and gas industry. Current stat-led enterprise development initiative is also limited in scope in terms of enhancing the capacity of SMEs to promote their participation in the oil industry. The techniques and practices of actors in the oil industry creates a condition for

bifurcated local participation between the segment of the Ghanaian society embedded in political and ethnic relations that are relevant for engagement in the oil industry and those that are not.

1.2. Global oil and gas outlook and interests in Africa

Over the past 150 years, an estimated 1.3 trillion barrels of oil have been extracted globally. Between 1990 and 2010, global oil reserves grew by about 38 percent, standing at 1.4 trillion barrels (Bridge and Le Billon, 2013). The increase in global oil reserves can be attributed to the enhancement of society’s geological knowledge, technological advancement, various political factors as well as the economics of production (Bridge and Le Billon, 2013; De Oliveira, 2007; Ovadia, 2015).

Table 1: Crude Oil Proved Reserves (Billion Barrels)

Regions	2011	2012	2013	2014	2015
North America	210,815	212,9343	216,7721	219,793	NA
Central & South America	237,1121	238,8172	325,9296	328,257	329,43
Europe	12,08376	11,8778	12,01863	12,28141	11,71944
Middle East	752,9175	799,6074	802,1571	803,6038	808,1345
Africa	123,6091	124,2091	127,7391	126,7291	126,5031
Asia & Oceania	40,2515	42,03109	45,35564	46,01102	46,04645
World	1475,675	1528,363	1648,858	1655,561	NA

Source: US Energy Information Administration (<http://www.eia.gov/>)

Three significant changes underlie current trends in the global oil and gas outlook. Firstly, ‘conventional oil¹’ reserves, which were essential in driving economic growth in the twentieth century, are becoming increasingly limited. Secondly, there has been a change in the quality of reserves, with light crudes now being heavily depleted. Finally, the ‘frontier’ of extraction has also changed in response to the search for new reserves. This change has taken

¹ Conventional oil reserves here refer to the broader geographical context of oil extraction.

exploratory activities to the arctic and ultra-deepwater environments offshore. Oil and gas exploration in offshore environments has increased in the last decade, with the Gulf of Mexico, Brazil, and the Gulf of Guinea all seeing the most activity (Bridge and Le Billon, 2013).

Since the 1990s, multinational corporations (MNCs) have invested over US\$20 billion in petroleum exploration and production activities in Africa (Ghazvinian, 2008). Companies such as Shell, Total, and Chevron have spent an estimated 15%, 30%, and 35% respectively of their global exploration and production budgets in Africa (ibid.). This trend is increasing although Africa accounts for less than 10% of the world's proven oil reserves, shadowed by the Persian Gulf (Bridge and Le Billon, 2013; Ghazvinian, 2008; KPMG, 2013). The 2001 September 11th terrorist attacks in the US and the protracted Middle Eastern conflicts have made the need to diversify America's oil imports much more urgent (De Oliveira, 2007; McCaskie, 2008).

In terms of quality, crude oil from Africa, is considered 'light' and 'sweet', and is easier and cheaper to refine (Bridge and Le Billon, 2013; Ghazvinian, 2008; McCaskie, 2008). The quality of crude oil from Nigeria, for instance, is especially adapted for use in US refineries making Nigeria the fifth-largest exporter of crude oil to the US (Ellis, 2003). Africa's geography, being surrounded by water, offers a cheaper means of transporting crude oil to major international markets from the Gulf of Guinea (Bridge and Le Billon, 2013; Ghazvinian, 2008).

Additionally, African states offer a favourable contractual environment compared to the Persian Gulf. In Saudi Arabia, for instance, the state-owned Saudi Aramco has a monopoly

over the exploration, production and distribution of oil (Bridge and Le Billon, 2013; Ghazvinian, 2008). Most African countries, including Ghana, operate under the so-called Production-Sharing Agreement (PSAs²), according to which MNCs assume the up-front costs of exploration and production. This is particularly beneficial to MNCs, considering the advancement in technology which has developed oil and gas exploration from a ‘hit or miss’ scenario into a much more precise activity (De Oliveira, 2007).

Finally, apart from Nigeria and Angola, who joined OPEC in 1971 and 2007 respectively, none of the oil-producing countries of sub-Saharan Africa belong to OPEC. Since the 1970s, OPEC put strict limits on output to artificially maintain high oil prices. However, the current fall in oil prices, with Brent crude selling as low as US\$30.14 on 11th January 2016³ casts doubt on the price controlling ‘powers’ of OPEC. The fact that the majority of the recent oil discoveries in sub-Saharan Africa have been offshore also makes the continent a favourable environment for oil exploration and production. This is particularly true for MNCs and western governments who have had to contend with violent conflicts in the Middle East and insurgency in the Niger Delta Region, for instance. With their oil and gas installations offshore, production can continue with limited interruptions and little likelihood of sabotage in conflict situations (Ghazvinian, 2008). Indeed, almost every African country is prospecting for oil, with the Gulf of Guinea being described as one of ‘the world’s fastest-growing sources of energy’ (De Oliveira, 2007, p. 2).

1.3. Overview of Ghana’s oil and gas sector

Oil and gas exploration in Ghana’s sedimentary basins first started in 1896, in the onshore Tano Basin on a very limited scale (Chitor, 2012). Between 1978 and 1980, Philips Petroleum

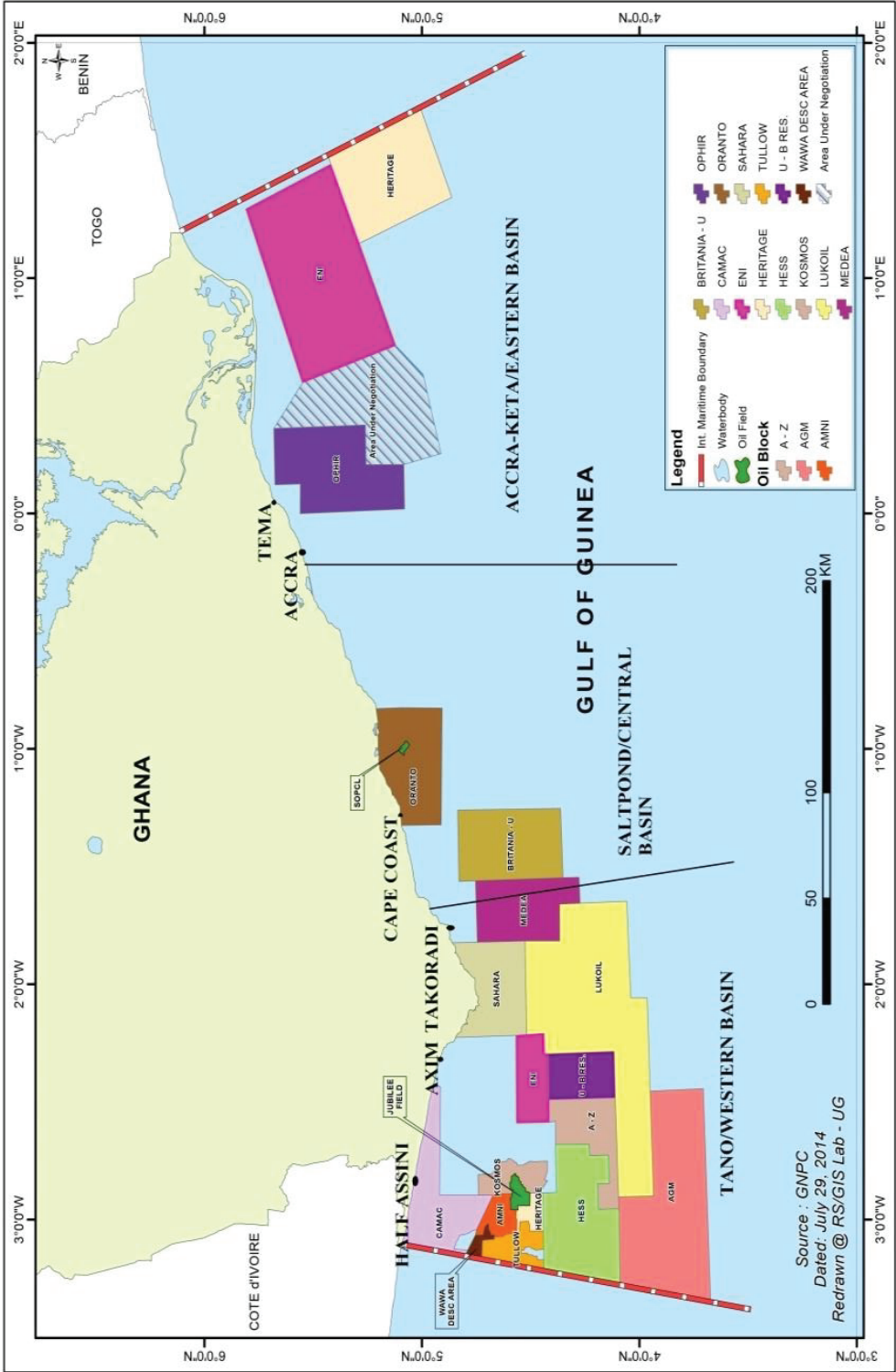
² For a critical review of PSA, see Bridge and Le Billon (2013, p.59)

³ <http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RB RTE&f=D> Accessed 15th January 2016.

discovered oil in the Tano Basin, but later discontinued operations due to major technological problems in deepwater extraction, which made offshore drilling in Ghana unviable at the time (McCaskie, 2008). The first offshore wells in Ghana were drilled in the Saltpond Basin between 1970 and 1984 (Donyiyah, 2013). In the late 1990s, Hunt Oil was also licensed to reassess the Tano Basin (what is now the Deep Water Tano Block). Although some ‘promising oil column’ was available, they also did not drill, citing technological and commercial reasons (McCaskie, 2008).

On the 18th of June 2007, Kosmos Energy announced the discovery of oil and gas in commercial quantities off the coast of Ghana (McCaskie, 2008). The discoveries were made in two deepwater blocks: West Cape Three Points and Deepwater Tano, which are currently operated as the unitised ‘Jubilee Field’. In December 2010, Ghana lifted its first oil from the Jubilee Phase I field, with an initial output of 50,000 barrels of oil per day (bopd) and an estimated 120,000 bopd at the peak of production. Since then, several other discoveries have been made including the Owo field by Tullow, Dzata field by Lukoil, Banda-1 by Kosmos and Akasa-1 by Anadarko (see Asafu-Adjaye, 2012). These commercial oil discoveries in Ghana and many of the recent discoveries in the Gulf of Guinea can be attributed to the advancement in technology that has enabled petroleum exploration in ultra-deepwater environments.

Map 1: Ghana's offshore activity map



Source: GNPC, 2015.

(<http://www.gnpgghana.com/SitePages/ContentPage.aspx?ItemID=40&ItemTitle=Discoveries>)

Ghana's long history of natural resource extraction with mineral extraction (i.e. gold mining) dating as far back as the last quarter of the 19th century (Hilson, 2002), has however not promoted any significant transformation of the country. This failure of natural resource wealth to transform the Ghanaian economy was heightened by the 2007 oil and gas discovery. One of the principal questions arising since the oil discovery relates to whether and how Ghana's resource wealth, including the new-found oil, can promote social and economic wellbeing in Ghanaian society. Increasing emphasis is being placed on rule of law, transparency and accountability and revenue management, as well as several other strategies designed to ensure that the natural resource wealth benefits society. This study focuses on the local content law, one of the strategies to promote linkages between extractive sectors and national economies through local participation.

1.4. Local content and participation in the oil and gas sector

Local content policies (LCPs) are deployed by governments to generate benefits from a particular sector in order to benefit local economies beyond simply the financial advantages from the resource revenue. The use of LCPs to promote broad-based economic development first emerged in the North Sea in the 1970s (Tordo et al., 2013). According to Dobbs et al. (2013), over 90 percent of resource-driven economies now have some form of local content regulation in place. The two leading oil producers in Africa, Angola and Nigeria, implemented LCPs in their oil industries in 2002 and 2010 respectively, although both countries have been producing oil since the mid-1950s (Ovadia, 2014). Ghana in comparison implemented the LCP in 2013, three years after the start of oil production. The pace with which Ghana's LCP was passed signals the urgency attached to LCPs as a measure to ensure the trickling-down of the country's oil wealth. LCPs are aimed at facilitating forward, backward or consumption linkages as a means of stimulating economic development (Ovadia, 2015). LCPs are useful in several sectors but have gained prominence in the extractive

industries due to their tendency to operate as enclaves that are in many ways separate from national economies (Ackah-Baidoo, 2012; Ferguson, 2005, 2006).

In a series of works, in which he explores the disconnect between the extractive sector and African societies, James Ferguson concludes that ‘capital “hops” over “unusable Africa,” alighting only in mineral-rich enclaves that are starkly disconnected from their national societies’ (Ferguson, 2005, p. 380). LCPs are essential in addressing this enclavity of the extractive sectors by encouraging the use of local personnel, goods and services in the extractive industries value chain beyond the direct contribution of resource extraction in terms of revenue received by governments (Klueh et al., 2007; Ovadia, 2015; Ramdoo, 2015; Tordo et al., 2013). In 2013, Ghana passed the *Petroleum (Local Content and Local Participation) Regulations 2013*, L. I. 2204 aimed at promoting Ghanaians participation at each level of the oil and gas industry value chain.

Although LCPs have gained prominence both in academia and policy spheres, there is no single accepted definition of ‘local content’ in LCPs. This can be attributed to the multi-dimensional nature of LCPs, with varied scope and depth as well as its application in varied sectors (Ramdoo, 2015). Regardless of the sector, one of the most critical questions that policy makers have to address with regards to LCPs is exactly what constitutes ‘local’ (Ramdoo, 2015). In Ghana’s mining sector, for instance, Newmont Mining Corporation priorities ‘local local’ companies in their LCP (Ramdoo, 2015, p. 2). This means priority is given to those Ghanaian businesses that are situated within the vicinity of their mining operation. Due to the ambiguous nature of the word ‘local’, Nigeria’s⁴ LCP is referred to as

⁴ This assertion was made by Dr. Ernest Nwapa, the pioneer Executive Secretary of Nigerian Content Development and Monitoring Board (NCDMB) during a workshop at the Africa Research Institute (ARI), London, 2015.

The Nigerian Oil and Gas Industry Content Development Act. This approach thus avoids the complex definitions of the word (International Finance Corporation, 2011).⁵

In Ghana, local content is interpreted as ‘the quantum or percentage of locally produced materials, personnel, financing, goods and services rendered in the petroleum industry value chain and which can be measured in monetary terms’ (Regulation 49 of L.I. 2204) (Ministry of Energy, 2013, p. 27). The framing of LCPs are guided by five common targets, namely employment creation, technology transfer, local ownership, processing of raw materials and maximisation of local procurement (Ramdoo, 2015). These are discussed in relation to Ghana’s L.I. 2204.

With regards to local ownership in Ghana’s oil and gas sector, Regulation 4 (L.I. 2204) requires foreign companies to enter into joint ventures with local firms and to open equity to local partners in order to obtain a license. The Ghana National Petroleum Corporation (GNPC) is by law a party to all upstream petroleum agreements in Ghana. Further, the promotion of joint ventures between local and foreign companies aims to provide opportunities for technology transfer to indigenous Ghanaian companies, as outlined in Regulation 24 and 25 (L.I. 2204). Fundamentally, Ghana’s local content law aims to promote the employment of Ghanaians at each level of the oil and gas industry value chain. Regulation 9 (L.I. 2204) stipulates that first consideration should be given to qualified Ghanaians with respect to employment. The minimum number of Ghanaians to be employed at each stage of a foreign company’s operation is outlined in the first schedule of the L.I 2204.

⁵ For an overview of different criteria for defining ‘local’ see IFC 2011

In Regulation 20 and 21 (L.I. 2204), foreign companies are required to submit a research and development plan before commencing their activities in Ghana. In order to localise the oil and gas industry sector supply chain through the maximisation of local procurement, Regulation 11 (L.I. 2204) requires that preference should be given to indigenous Ghanaian firms in the bidding process. The local content law, however, has no provision on the processing of petroleum products for export, which is a reflection of the low level of the manufacturing sector of the Ghanaian economy.

LCPs have been viewed by critics as protectionist measures that give preferential treatment to natives (Hufbauer and Schott, 2013). In African economies however, most local firms do not have the same capacity as MNCs. Hence LCPs in countries such as Ghana cannot be considered protectionist. An often-cited challenge to local participation in the petroleum sector is the lack of domestic capacity in terms skilled labour, capital and technology (Karl, 2007). The capital intensity of the oil and gas sector means that it can be rare or even impossible for individuals or small-scale firms to engage in extractive activities. This contrasts with mineral extraction, such as gold mining, where small-scale artisanal operators are much more common (see Banchirigah, 2008 on small scale mining in Ghana). These limitations form the justification of why LCPs backed by capacity development programs are needed in order to foster extensive local participation in the petroleum sector. Localising the petroleum sector supply chain can produce varied and sometimes counterproductive outcomes, such as reduced operational cost for MNCs, increased value capture by local firms or legitimising elites' capture of resource rent (see Ovadia, 2012). This study contributes to knowledge by highlighting how Ghana's LCP works in practice, whether and how it fosters local participation in the petroleum sector as well as sheds light on which segments of society that benefit from such policies.

1.5. Justification of the study

Although the use of LCPs as a means of promoting links between extractive sectors and wider societies has existed since the 1970s, it has largely been ignored by academics (Ovadia, 2015). In what has become known as the ‘resource curse’ thesis, most studies on the extractive sectors in the global south have focused on explaining the inverse relationship between natural resource extraction and social development (see Auty, 1994; Auty, 1995; Frankel, 2010; Humphreys et al., 2007; Sachs and Warner, 1995, 2001).

The orthodox resource curse thesis is underpinned by three major factors, namely the Dutch Disease, price volatility, weak and corrupt institutions. It is argued that resource-rich developing countries are vulnerable to the Dutch Disease as a result of an over-reliance on the export of natural resources and the crowding out of manufacturing, agriculture and services sectors (Bacon and Tordo, 2006; Frankel, 2010; Humphreys et al., 2007; Sachs and Warner, 1995). In addition, the failure of developing countries to manage the volatility of the international commodities market and a lack of diversification in an oil-dependent economy expose a large share of governments’ budgets to fluctuations in oil prices. These factors also make such economies susceptible to acute boom-bust cycles (Humphreys et al., 2007; Karl, 2007). Proponents of the resource curse thesis argue that weak and corrupt institutions in developing countries also create environment that are conducive to enabling elites to capture natural resource rent from the resource sector. Lootable resources in weak institutional contexts have a tendency to result in civil conflict (Brown and Jensen, 2009; Humphreys, 2005). Critics of the resource curse thesis, however, view it as an ahistorical, uncritical and reductionist analysis of the so-called resource curse (Acemoglu, 2003; Ayelazuno, 2014; Bush and Graham, 2014; Campbell, 2003; Jerven, 2015; McNeish and Logan, 2012; Obeng-Odoom, 2014b; Ross, 2004; Rosser, 2006; Watts, 2004).

In an attempt to counter the bleak picture of development in Africa, there is an emerging discourse of *Africa Rising* (Africa Progress Panel, 2013; Chuhan-Pole and Angwafo, 2011; Heilbrunn, 2014; Mahajan, 2011) based on three factors. The first is the growth of GDP rates across Africa. Based on GDP, Africa was one of the best performing regions between 2000 and 2010. By 2008, Africa's collective GDP was roughly US\$1.6 trillion, roughly equal to those of Brazil and Russia (Roxburgh, 2010). Secondly, the emerging Africa discourse is predicated on the supposedly increasing purchasing power of Africans (Mahajan, 2011; Roxburgh, 2010). This in turn is attributed to the increasing number of 'dollar millionaires' and Africa's middle class (Mahajan, 2011; Roxburgh, 2010). According to Roxburgh (2010), Africa's combined consumer spending totaled US\$860 billion in 2008. Thirdly, new optimism regarding the future of Africa is being fueled by the potential of its resources. The youthful population of Africa also equates to an abundant labour force, which, in addition to the rapid rate of urbanisation in Africa, should stimulate infrastructural development and an increase in the provision of various services (Mahajan, 2011; Roxburgh, 2010). Currently, Africa has 60 percent of the world's total amount of uncultivated arable land. In addition to the abundance of diverse natural resources, this is a very important asset, and one that is expected to promote economic growth with African countries now described as 'lions on the move' (Roxburgh, 2010).

The so-called 'Africa rising' discourse has been critiqued for allegedly basing its arguments on a statistical illusion (Fioramonti, 2013, 2014; Henning, 2013; Jerven, 2015) that fails to take into consideration the growth dynamics being experienced across Africa (Obeng-Odoom, 2014a; Sylla, 2014). The 'Africa rising' narrative glosses over Africa's dependence on the West and the significant level of revenue transfer from Africa to the rest of the world (Bond, 2014). The rhetoric of an emerging Africa largely reinforces the export-led primary product-

dependent and extractive-oriented approaches that have characterised Africa's development agendas over the years (Bond, 2014; Taylor, 2015).

Crucially, both the orthodox resource curse and 'Africa rising' discourse present hegemonic views of Africa's extractive sectors that gloss over the complex social processes and power relations that underlie the outcome of natural resource extraction. In *Righteous oil? Human Rights, the Oil Complex and Corporate Social Responsibility*, Michael Watts (2005) shows how conflicts in the extractive sectors are shaped by the complex relations between MNCs, states and local actors. For Watts (2005, p. 378) paying attention to the 'oil complex' – the 'configuration of social, political and economic forces' at play, are essential for gaining insights into the outcomes of extractive sectors in societies. Based on a similar notion but with focus on Ghana's local content law, this PhD thesis highlights how the complex relations between MNCs, states and other local actors shape the outcome of natural resource extraction in developing economies. It explores the economic environment and embeddedness of actors, the realities on the ground that shapes the dynamics of resource extraction and development. I therefore view the practices of actors relating to Ghana's LCP as a 'window', through which we can gain an understanding of many relevant issues. These are often the types of processes and relations that mainstream neoclassical economic and political science discourses have overlooked, such as the embedded social processes and inherent power relations underlying the dynamics of the extractive sector in Africa's political economy.

The increasing emphasis on LCPs is a manifestation of the potential of state-led economic development (Ovadia, 2015) and 'reflects the changing focus in the policy debate regarding the way in which the extractive sector has traditionally contributed (or not) to a country's development' (Ramdoo, 2015, p. 1). LCPs are an essential part of the efforts by many states

to capture more gains from the extractive industries sector and to stimulate broad-based economic growth, both of which are necessary for the alleviation of poverty. The development of local capacity and the promotion of local content in the extractive sectors have for example been essential in the development of Norway (Larsen, 2006). In African economies, successful LCPs have the potential to facilitate the trickling down of resource wealth.

In this thesis, I focus on Ghanaian entrepreneurial activities as a means of understanding how the country's LCP promotes local participation in the oil industry. The contention is that Ghanaian entrepreneurial activities in the oil and gas industry have the potential to link the oil and gas sector to the broader Ghanaian economy. I focus on small and medium scale enterprises (SMEs) in the oil and gas industry because SMEs constitute the majority of businesses and employ a large number of people in Africa (Fafchamps, 2004; Herrington and Kelly, 2012; Langevang et al., 2015; Meagher, 2010). A comparative study conducted by Abor and Quartey (2010) on Ghana and South Africa showed that SMEs constitute 92 percent of the businesses in Ghana. These SMEs contribute approximately 70 percent of the country's GDP and provide about 85 percent of manufacturing employment. In South Africa, it is estimated that SMEs comprise 91 percent of formal business entities, contribute between 52 to 57 percent of GDP and provide approximately 61 percent of employment (*ibid.*). SMEs have been 'described as efficient and prolific job creators, the seeds of big businesses and the fuel of national economic engines' (Abor and Quartey, 2010, p. 218). In effect, fostering SMEs' activities in the oil and gas sector is essential if Ghana's LCP is to promote any positive synergy between the oil and gas sector and the wider economy.

1.6. Research Questions

Focusing on the implementation of Ghana's local content law, this thesis highlights how complex relations between MNCs, the state and local actors shape the outcome of petroleum extraction. The overarching question is:

How has Ghana's local content law enhanced the opportunities for SMEs' participation in the oil and gas industry?

I take a relational geography approach that emphasises how the embedded practices of actors' shape the outcomes of LCPs. This is explored through the following research questions:

- 1. Which resources and strategies are relevant for Ghanaian entrepreneurial activities and to what extent are these accessible for SMEs that aim to participate in the oil and gas industry?*
- 2. How and to what extent are state-led capacity-building projects facilitating local SMEs participation in the oil and gas sector?*
- 3. What are the emerging power relations between actors in the promotion of local content and how do these shape the opportunities for SMEs participation in the oil and gas sector?*

These questions are analysed in the three different papers with each paper addressing one of the three research questions.

Table 2: Overview of the three papers

Papers	Authorship	Key concepts
#1: Ablo, A. D. & Overå, R. (2015). Networks, trust and capital mobilisation: challenges of embedded local entrepreneurial strategies in Ghana's oil and gas industry. <i>The Journal of Modern African Studies</i> , 53: 391-413.	Main author	Embeddedness, capital and entrepreneurship
#2: Ablo, A. D. (2015). Local content and participation in Ghana's oil and gas industry: Can enterprise development make a difference? <i>The Extractive Industries and Society</i> , 2: 320-327.	Sole author	Capacity development, local content, participation, capital
#3: Ablo, D. A. (2015). The micro-mechanisms of power in local content requirements and their constraints on Ghanaian SMEs in the oil and gas sector. <i>Review of African Political Economy</i> (revised and resubmitted).	Sole author	Micro-mechanisms of power, local content and participation

Paper #1: This paper explores the resources and strategies employed by Ghanaian entrepreneurs in their attempt to secure their business in the oil and gas sector. Bourdieu's concept of capital (social, cultural, symbolic and economic) is employed to highlight the resources and strategies that are essential for local entrepreneurial activities in the oil and gas industry. The paper explores entrepreneurs' embedded strategies of mobilising networks in order to acquire information, build trust, raise financial capital and reduce risk, all with the aim of gaining entry, winning contracts and ultimately participating in the oil and gas industry. It is argued that the capital and technological intensity of the oil and gas sector limits the extent to which local firms can gain entry to and participate in this sector. The few SMEs that have managed to secure contracts rely on social networks, particularly political, ethnic and sometimes religious networks, in order to access information as well as secure contracts in the oil and gas sector.

Paper #2: As part of the government's strategy to promote local participation, an enterprise development centre (EDC) was established in Takoradi. This paper critically examines how

the centre facilitates Ghanaian businesses' entry and participation in the oil and gas sector. Drawing on Bourdieu's notion of capital the paper analyses whether and how the EDC project enhanced the social, cultural, economic and symbolic forms of capital of entrepreneurs. The main contention of this paper is that the EDC provides a networking platform (enhancing social capital) aimed towards enabling local firms to access information and improving their knowledge through training (in order to enhance cultural and symbolic capitals). However, the centre's activities are only beneficial to a few well-established medium to large-scale Ghanaian enterprises, while the majority of relatively new and small businesses are unable to gain entry.

Paper #3: Following up on paper #1 and #2, this paper explores why it remains difficult for local firms to secure contracts in the oil and gas industry in spite of the state-led and industry-sponsored capacity development programs. It thus examines the emerging relations of power between actors and how they shape the opportunities for SMEs activities in the oil industry. Most studies of power relations in natural resource extraction and development have emphasised the asymmetrical power relations between MNCs and states in developing economies, and how the implications of such power asymmetries can influence the developmental outcome of natural resource extraction. In this paper I draw on Foucault's notion of power as an embedded and miniscule aspect of everyday life as a means of examining the power relations that are embedded in the practice of actors involved, and how such power relations shape the opportunities for SMEs' activities in the oil and gas sector. It demonstrates how techniques and practices embedded in the so-called industry standards can limit the opportunities for local participation.

1.7. Organisation of the thesis

The rest of the thesis is organised into three chapters. Chapter two discusses the theoretical perspectives of the study. It outlines how relational thinking in geography has evolved, with an emphasis on the embeddedness of economic action in social, cultural, political and religious institutions. This is followed by a discussion of the evolution of entrepreneurship theories and perspective deployed in this study. The chapter ends with a discussion of power embedded in the practice of actors in a given context. In Chapter three, the methodology of the study is presented. I outline the justification for selecting the study areas, the data production process, strategies and challenges, as well as explaining how the data was analysed. Chapter four entails discussions of the findings of the studies and the conclusions drawn. This is followed by the three papers outlined in Table 2 above.

CHAPTER TWO

Theoretical framework

2.1. Introduction

In order to elucidate how Ghana's local content law promotes SMEs' participation in the oil and gas industry, this thesis draws on relational perspectives in geography that emphasise the embeddedness of economic action to understand actors' strategies to local participation. The first part of this chapter briefly discusses relational perspectives in geography and how they shape our understanding of the embeddedness of economic action. The second part outlines the contingency of economic actions, by drawing on the concept of embeddedness. In order to understand which resources and strategies enable SMEs' participation in the oil and gas industry, I examine entrepreneurship in the third section. A critical question addressed in this thesis is the way in which power relations between actors influence the opportunities for local participation in the oil and gas sector. In addressing this question, I explore a relational perspective that emphasises the micro-mechanisms of power embedded in the techniques and practices of actors in a given context.

2.2. Relational geography

Geographers have always been concerned with understanding complex social relations and the outcome of such interaction (Harvey, 1996; Massey, 1999; Murdoch, 2005). Although relationality is central in geography, the sub-disciplinary divisions between human and physical geography have limited the extent to which relational thinking has developed in geography (Murdoch, 2005). While human geographers focus on understanding social relations, physical geographers are interested in understanding natural relations (Lane, 2001). This sub-disciplinary divergence with regards to relationality in geography can be mediated by drawing on poststructuralist perspectives that emphasise heterogeneity in relations (Murdoch, 2005). Placing emphasis on heterogeneous relations enables the conceptualisation

of the relationship between spatial and social processes. Based on relational geography perspectives, Harvey (1996) in *Justice, Nature and the Geography of Difference*, argues that space should be conceived as the outcome of diverse physical, social, biological and cultural processes. The focus is on spatially situated interactions and relations that link social actors into a particular spatial domain (Murdoch, 2005).

By the mid-1990s, the bridging of the sub-disciplinary divide between physical and human geography with an emphasis on heterogeneous relations stimulated progress in relational thinking in geography (see Massey et al., 1999). In what has been described as the *relational turn* in geography, emphasis is placed on the spatial- and context-sensitive approaches (Fløysand and Jakobsen, 2011; Jones, 2009; Yeung, 2002) to understanding phenomena. The relational turn represents a shift from neoclassical economic thinking with atomised economic actors and a focus on self-regulating markets, ascribing abstract causal powers to spatial regularities in economic processes (Bathelt and Glückler, 2003; Boggs and Rantisi, 2003; Sunley, 2008; Yeung, 2002). The relational turn is ‘a theoretical orientation where actors and the dynamic process of change and development engendered by their relations are central units of analysis’ (Boggs and Rantisi, 2003, p. 109). The focus of attention is thus on the socio-spatial relations among actors such as firms, institutions and individuals (Boggs and Rantisi, 2003; Yeung, 2002).

2.3. Embeddedness

Relational approaches in geography that emphasise the spatial and contextual embeddedness of economic action have been influenced by several social science disciplines such as anthropology, sociology, new institutional economics (NIE) and development studies. The concept of embeddedness as a conceptual lens that enables the analysis of economic action situated in place, region or space was advanced in the works of Karl Polanyi. In *The Great*

Transformation, Polanyi (1944) explores social transformation by paying attention to the social and political upheavals that took place in England during the rise of the market economy. For Polanyi (1944), the economy is not autonomous as asserted in economic theories, but rather embedded in political, kinship and religious institutions. As Fløysand and Jakobsen (2011) observed, Polanyi's three systems of exchange (reciprocity, redistribution and market exchange) are echoed by arguments in the relational turn that economic actions are influenced by shared norms such as rules, conventions and discourses.

Mark Granovetter's 1985 article *Economic Action and Social Structure: the Problem of Embeddedness* further elaborated on the embeddedness concept by placing emphasis on the social entanglement of economic actors. He advocates a middle ground between undersocialised views of economic action in neoclassical economics and the oversocialised views in classical sociology (ibid.). Both extremes in the economic and social debate atomise people either as blindly obedient to their perfect knowledge in decision-making or social norms (Granovetter, 1985). The argument of embeddedness is that 'the behavior and institutions to be analysed are so constrained by ongoing social relations that to construe them as independent is a grievous misunderstanding' (Granovetter, 1985, p. 482).

The embeddedness concept by Granovetter (2005) also highlights how social networks are implicated in economic relations. This view differs from Polanyi's, which emphasises the institutional embeddedness of an economy. According to Granovetter (2005), social networks impact economic outcomes by influencing the quality and flow of information, providing a source of reward and punishment and trust-building in any economic relation. As shown in the papers, social networks are essential for Ghanaian entrepreneurs to access information that is important for their participation in the oil and gas sector. Drawing on Granovetter's notion

of embeddedness, in *Embedded Entrepreneurship: Market, Culture, and Micro-Business in Insular Southeast Asia*, Bråten (2013) demonstrates how micro-scale entrepreneurship is intertwined with prevailing conceptions, moralities and habituations in entrepreneurs' cultural context and social milieu. In *Bounded Entrepreneurial Vitality: the Mixed Embeddedness of Female Entrepreneurship*, Langevang et al. (2015) highlight the embeddedness of entrepreneurial activities in Ghana. Based on the Global Entrepreneurship Monitor (GEM) 2010 survey in Ghana, Langevang et al. (2015), show that, Ghanaian women have a high rate of participation in entrepreneurial activities. The female dominance in entrepreneurship, they argue, is due to women's embeddedness in diverse institutional contexts, for instance kin, religion and marriage (ibid.). As shown in papers #1, #2 and #3, the embeddedness of Ghanaian entrepreneurs in ethnic, political and religious institutions is crucial for their participation in the oil and gas sector.

The relational turn in geography has significant implications for analytical tensions such as the structure-agency debates, the macro versus micro unit of analysis and geographic scale (Boggs and Rantisi, 2003). Ontologically, the relation turn in geography ascribes a greater role to agency as opposed to structures in explaining economic behaviors (ibid). The emphasis is on the contextual embeddedness of actors (Aoyama et al., 2010; Bråten, 2013; Fløysand and Jakobsen, 2011; Granovetter, 1985, 2005; Overå, 2006). As Boggs and Rantisi (2003) argue, economic processes are path-dependent and constrained by history. This analytical framework thus pays attention to the contingency of economic agents whose strategies and actions are open-ended. Thus the system of inter-relation, contrary to the structure-oriented approaches is subject to randomness (Boggs and Rantisi, 2003). In effect, relations between actors are not fixed, and as such economic outcomes cannot be subsumed under the logic of capital. For instance, the award of a contract to a local firm in Ghana's oil industry is not

necessarily based on their competence and/or profitability, but could be based on political affinity. In 2010, for example, it emerged that Kosmos Energy and its local partner, the E.O. Group, used their access to officials of the NPP government in order to gain a hold on the offshore oil block and win more favourable terms for themselves (Africa Confidential, 2010).

Methodologically, a relational perspective requires a shift from macro-level to micro-level units of analysis. This shift in units of analysis does not mean that geographers engage in methodological individualism by viewing actors as atomistic units (Boggs and Rantisi, 2003). The micro-level analytical focus involves consideration of ‘actors as interdependent subjects whose identities and resource capabilities – i.e. the very assets that enable them to act – are co-constituted by their relations with other actors’ (Boggs and Rantisi, 2003: 112). Critics of embeddedness studies argue, for instance, that the lack of a clear, empirical relationship between embeddedness and economic outcome makes it difficult to study (MacKinnon et al., 2002). The contention is that since individuals are embedded in multiple and overlapping relations, collecting data on embeddedness through interviews could be difficult to accomplish (Ettlinger, 2003). This challenge, however, can be mitigated by triangulating various methods that complement one other through case studies (see Yin, 2013).

The debate regarding the unit of analysis on which geographers should focus also draws attention to another contested theme in geography: scale. Critical here is the need to clarify exactly what is meant by spatial scale and the ways in which relations are consolidated between scales (Murdoch, 2005). According to Haarstad (2014, p. 980) scales are ‘constructed arenas of activity that are highly interrelated’. Indeed, this study is a cross-scalar analysis of the state, local actors and MNCs’ approaches to local participation in Ghana’s oil and gas industry. As demonstrated with the various illustrative cases in papers #1, #2 and #3,

local entrepreneurial activities in Ghana's oil and gas sector are the outcome of multi-scalar interaction and of mobilisation and deployment of strategies by MNCs, SMEs and state institutions. In effect, scalar analysis is dynamic and not static and hierarchical (Amin, 2002; Haarstad, 2009; Herod, 2011).

2.4. Relational entrepreneurship

Entrepreneurship is one of the most studied and least understood phenomena (Aoyama et al., 2010; Yeung, 2009). The term 'entrepreneur' was attributed to Richard Cantillon, who in 1755 used it to describe 'someone who exercises business judgment in the face of uncertainty' (Bull and Willard, 1993, p. 185). Entrepreneurship, however, lacks a single definition and most definitions or classifications reflect a particular perspective or emphasis (Montanye, 2006).

The economist Joseph Schumpeter viewed the entrepreneur as a leader and a contributor to the process of creative destruction (process of business innovation) (Schumpeter, 1950). In *Capitalism, Socialism and Democracy*, Schumpeter (1950, p. 132) considered the function of an entrepreneur as:

to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on.

For Schumpeter, undertaking new things is resisted by the environment as they 'lie outside the routine tasks which everybody understands' (ibid.). Undertaking economic functions thus requires willpower to overcome resistance. However, Schumpeter (1950, p. 132) contends that performing such an economic 'function does not essentially consist in either inventing anything or otherwise creating the conditions which the enterprise exploits. It consists in

getting things done'. The entrepreneurial process is the novelty introduced by the entrepreneur which brings the instability that Schumpeter conceives as creative destruction (Aoyama et al., 2010).

A central thrust of the Schumpeterian notion of entrepreneurship is innovation, which he defined as 'the setting up of a new production function' (Schumpeter, 1939, p. 84). Innovation could also entail the combination of factors in a new way or 'carrying out new combinations' (ibid.). Drawing on this idea of innovation, Kirzner (1973) considers the entrepreneur as one who perceives profit opportunities and initiates action in order to fulfil currently unsatisfied needs or to improve inefficiencies. Early geography interest in innovation studies was mainly focused on the diffusion of innovation, most prominent in Torsten Hägerstrand (1970) time-geography, which examined how territorial time-space explains actions. The current focus in geography is on innovation systems that emphasise the flow of information and technology among people, institutions and enterprises (Morgan, 2004).

The notion of entrepreneurship adopted in this thesis is inspired by the anthropologists Fredrik Barth and Keith Hart. In *The Role of the Entrepreneur in Social Change in Northern Norway*, Barth (1963) contends that the concept of entrepreneurship at the time was mainly suited to the study of Western economies. This view is echoed by Keith Hart (1975, p. 6) who argues that 'the basic problem with a term like "entrepreneur" is that it is an "emic" category of western culture with implicit connotations of large-scale business leadership of a kind which is historically very specific indeed.' In *Swindler or Public Benefactor*, for example, Hart (1975) was studying entrepreneurs from northern Ghana in Nima, Accra and as such, entrepreneurship in 19th century Europe and America represents a peculiar kind of socio-economic formation which is not necessarily relevant in developing economies. As

Langevang et al. (2015, p. 451) point out, entrepreneurship research within economic geography, for instance, has focused on ‘formal large-scale technologically oriented enterprises.’

For Barth (1963, p. 5), ‘an entrepreneur is someone who takes the initiative in administering resources, and pursues an expansive economic policy.’ Taking a similar approach, Hart (1975, p. 6) considers entrepreneurs to be ‘self-employed accumulators of material surpluses.’ The crux of Barth and Hart’s argument is that entrepreneurial activities are part of a wider social process. As Barth (1963, p. 6) notes, ‘innovation and patterns which prove successful may be expected to become prototypes for the formation of further similar units. It is thus clear that this concept of *entrepreneur* leads us directly to highly seminal points of social change.’ Ghanaian entrepreneurial activities in the oil and gas industry have the potential to stimulate a trickle down of resource wealth through employment creation, and can thus promote the social and economic transformation of Ghanaian society. Drawing on Barth and Hart’s notions of entrepreneurs’ role in social change, Ghanaian entrepreneurial activities in the extractive sector could be conceived as part of a wider social process of promoting extractive sector-led development.

When entrepreneurial activities are seen as part of wider social processes, the entrepreneur should not be conceived in terms of status, class or a role in itself. But as Barth (1963, p. 6) observes, entrepreneurship should be seen as an aspect of a role as ‘it relates to actions and activities, and not rights and duties.’ Similarly, Hart (1975, p. 6) sees entrepreneurship as ‘an economic role which may be only an aspect of the behaviour of individuals whose primary position in society is not necessarily defined by the term [entrepreneurship].’ Thus by potentially creating employment of opportunities, Ghanaian entrepreneurs’ activities may

promote the trickling down of benefits from the oil and gas sector. Their activities then form part of an aggregate 'effort' to capture more benefits from the extractive sector. Conversely, there may be cases where Ghanaians front for foreign business and thus register foreign firms as local, which would bring only very limited benefits for Ghanaian society.

The emphasis of Barth and Hart's views on entrepreneurship is on the activities and actions of an entrepreneur. Barth's model of entrepreneurship, as Overå (1998) notes, relates to actions and activities in pursuit of profit through the combination of assets, or what Bourdieu (1986) calls 'capital.' The profit obtained from entrepreneurial activities, according to Barth (1963, p. 8), 'are clearly not restricted to purely monetary, or even material, forms, but may take the form of power, rank, or experience and skills.' The transitivity of immaterial profits makes them important for entrepreneurs as these can be converted into material or monetary forms. The immaterial profits thus constitute a store of value in a 'strictly economic sense' for the entrepreneur (Barth, 1963).

The notion of transitivity and noneconomic forms that capital and profit can assume is well advanced by Pierre Bourdieu. In his critique of economic theories of capital as money or anything with monetary value, Bourdieu (1986, p. 246) argues that economic notions reduce 'the universe of exchanges to mercantile exchange, which is objectively and subjectively oriented toward the maximization of profit, i.e., (economically) *self-interested*, [and] has implicitly defined the other forms of exchange as noneconomic, and therefore *disinterested*.' Effectively, classical economic views of capital fail to capture the transubstantial forms that material capital in a strictly economic sense can take (Bourdieu, 1986). The use of the term 'capital' now denotes resources available for people to use in attaining their objectives, but which cannot be strictly understood in monetary terms (Bourdieu, 1986; Crossley, 2004;

Shaw et al., 2008). Current notions of capital ‘categorize different sorts of resources that social agents can mobilize in pursuit of their projects, and which on account of their value, agents will tend to seek to pursue and accumulate’ (Crossley, 2004, p. 29).

In *The Forms of Capital*, Bourdieu (1986, p. 247) argues that depending on the context, function and cost of capital transmutation, capital can present itself in three fundamental guises: social, economic and cultural. Cultural capital for Bourdieu (1977) is the credentials and cultural assets embodied in individuals and provide a number of advantages. The value of cultural capital can only be realised within the specific cultural context. According to Bourdieu (1986, p. 247):

Cultural capital can exist in three forms: in the *embodied* state, i.e., in the form of long-lasting dispositions of the mind and body; in the *objectified* state, in the form of cultural goods (pictures, books, dictionaries, instruments, machines, etc.), which are the trace or realization of theories or critiques of these theories, problematics, etc.; and in the *institutionalized* state, a form of objectification which must be set apart because, as will be seen in the case of educational qualifications, it confers entirely original properties on the cultural capital which it is presumed to guarantee.

Social capital for Bourdieu (1986) is an attribute of an individual in a social context. It is ‘the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group – which provides each of its members with the backing of the collectivity-owned capital’ (Bourdieu, 1986, p. 251). Social capital thus constitutes the networked ties of favour, mutual support, shared language, shared norms, social trust and a sense of mutual obligation from which entrepreneurs can derive value to embark on their activities (Westermann et al., 2005). As Bourdieu (1986) observes, social capital may be socially instituted and guaranteed by the application of a common name such

as family or ethnicity. A Ghanaian entrepreneur, for example, who by virtue of being a member of the ruling NDC party can access information that leads to successful participation in the oil and gas sector, could be said to use social capital (see paper #1). As Granovetter (1985) notes, the structure of exchange relation has implications for economic outcomes.

Fuller and Tian (2006) proposed three conceptual dimensions for analysing social capital: structural, relational and cognitive dimensions. The structural dimension describes the functional basis of social capital. It focuses on how network ties provide access to resources and information, as in the example of the NDC party member. The relational dimension includes trust and cooperation and ‘concerns the kinds of personal relationships people have developed through a history of interaction’ (Fuller and Tian, 2006, p. 290). In the example above, the information is made available to the person based on the trust that they have in him as a member of the NDC party. It thus involves the direct relationships that the entrepreneur has to others and the assets rooted in such relationships. The cognitive dimension refers to the ‘resources providing shared representations, interpretations and systems of meaning among parties’ (Fuller and Tian, 2006, p. 290). Being a member of the NDC political party denotes acceptance of and belief in the morals of the party.

Economic capital, according to Bourdieu (1986), is directly convertible into money and can be institutionalised in terms of property rights. It may include shares, financial capital and factories (or other physical assets). The oil and gas industry is described as the most capital intensive sector (Karl, 2007). Offshore oil and gas operations require financial capital and technology that are currently not available for African states and most indigenous African firms. Indeed, the economic capital and cultural capital (skills and expertise) required for owning and operating offshore infrastructures such as oil rigs and Floating, Production,

Storage and Offloading vessels (FPSOs), as well as for establishing even small service firms, are largely beyond local capacity.

In *An Invitation to Reflexive Sociology*, Bourdieu notes that ‘capital presents itself under three fundamental species...[social, economic, cultural] to these we must add symbolic capital’ (Bourdieu and Wacquant, 1992, p. 119). Symbolic capital is understood as trust, prestige, honour or good faith and as the outcome of conversion of other forms of capital. For Bourdieu (1989, p. 17), symbolic capital is ‘the form that the various species of capital assume when they are perceived and recognized as legitimate.’ In reality, symbolic capital does not exist as an independent form of capital but rather as the recognition of social, cultural and economic capital as legitimate. Analytically, distinguishing symbolic capital enables us to analyse two aspects of Bourdieu’s capital concept: their overlapping nature and convertibility.

Convertibility of capital is a central thrust of Bourdieu’s notion of capital. In *Social Space and Symbolic Power*, Bourdieu (1989, p. 17) notes that ‘according to my empirical investigations, these fundamental powers are economic capital (in its different forms), cultural capital, social capital, and symbolic capital.’ Thus while entrepreneurs may possess various forms of capital, it may be difficult to isolate and separate the individual forms. Bourdieu (1983) argues that there are some goods and services to which economic capital does not give immediate access. In the example of the entrepreneur who is a member of the NDC government, the information that enabled him or her to secure contracts in the oil and gas sector may not be easily procured with money (economic capital) but party membership (social/cultural capital) provides an avenue for access.

Importantly, each form of capital can be converted from and into other forms of capital. For example a Ghanaian entrepreneur who has studied and worked in the oil industry in Norway has various capitals simultaneously that are relevant for the success of oil and gas-related business in Ghana as the cases in paper #1 show. Education and work experience are forms of cultural capital; colleagues from school and work could constitute social networks that enable access to social capital; the money accumulated from personal savings, on the other hand, is economic capital. These ‘species’ of capital (Bourdieu, 1989, p. 17) are symbolic capital in that they are recognised as valuable and legitimate forms of capital that are relevant for enabling the entrepreneur to successfully establish a businesses in Ghana’s oil industry and secure contracts with MNCs.

2.5. Relationality of power

As this PhD project explores the ways in which social interactions and power relations influence entrepreneurial activities in Ghana’s oil and gas sector, a focus on actor-specific practice (in papers #1, #2 and #3) is crucial for investigating the power relations inherent in the pursuit of local participation. Theorising about power and assessing power relations remains a major challenge in the social sciences. Although power has been central in the social sciences, as well as in everyday language and discussion, it lacks a clear-cut and all-encompassing meaning (Dean, 2013; Engelstad, 2009). In the following, I briefly present the evolution of various perspectives to conceptualising power, largely based on the approach used by Mitchel Dean (2013, pp. 4-7) in *The Signature of Power*. This is followed by a discussion of Foucault’s perspectives on power which I deploy in this study.

One of the earliest definitions of power in the social sciences is offered by Max Weber as the ability to achieve one’s aim amidst resistance. According to Weber (1968, p. 53), ‘Power (Macht) is the probability that one actor within a social relationship will be in a position to

carry out his own will despite resistance, regardless of the basis on which that probability rests.’ As Dean (2013) points out, this definition is taken up by Robert Dahl, who argues that ‘A has power over B to the extent that he can make B to do something B would not otherwise do’ (Dahl, 1957, pp. 202-203). Following a similar perspective, Steven Lukes states that ‘the absolutely basic common core to, or primitive notion lying behind, all talk of power is the notion that A in some way affects B’ (Lukes, 1974, p. 30). A central concept of these three notions of power is that in a situation with two or more actors, one realises its aim at the expense of others (Dean, 2013). This notion of power connotes an asymmetrical relationship between actors and thus an instance of ‘power over’ (see Dean, 2013; Göhler 2009).

A fundamental aspect of Weber’s notion of power is the recognition of the capacity of an actor to carry out his/her own will (Dean, 2013). The idea of power as capacity or ‘power to’ (Göhler 2009) is most evident in the work of Thomas Hobbes. In *Leviathan*, Hobbes (1991, p. 62) observes that ‘the POWER of a man (to take it universally,) is his present means, to obtain some future apparent Good.’ Hobbes’ notion of power thus shifts focus to power as a fundamental capacity to achieve some desired end (Dean, 2013) and not necessarily the power of an actor over another or others.

In *The History of Sexuality: An Introduction*, Michel Foucault questions the notion of power as something possessed. According to Foucault (1978, p. 94), ‘power is not something that is acquired, seized, or shared, something that one holds on to or allows to slip away.’ The contention is that not all relations of power entail the strengthening of an actor’s position while others’ position diminishes, and as such, power relations should not be analysed as a zero-sum game (Dean, 2013; Foucault, 1978; Göhler 2009). Rather, ‘power is exercised from innumerable points, in the interplay of nonegalitarian and mobile relations’ (Foucault, 1978,

p. 94). For Foucault, power is an immanent force that is embedded in relations between subjects. The crux of a Foucauldian perspective is that power is the ‘way in which certain actions modify others’ (Foucault, 1982, p. 788). Power then is the complexities involved in social relations (ibid.). It is an omnipresent aspect of every day social life (Cronin, 1996). The omnipresence of power is not down to the fact that it privileges a particular position in relations, but rather ‘it is produced from one moment to the next, at every point, or rather in every relation from one point to another’ (Foucault, 1978, p. 93).

The emphasis on practice rather than position of actors in a relation is relevant for framing how practices of actors shape the outcome of natural resource extraction in developing countries. The capillary-like quality of the Foucauldian perspective to power (Yeung, 2002) shifts the focus away from who possesses power and towards ‘the techniques of power which work as some kind of normalizing force’ (Allen, 2003, p. 65). Unlike earlier views of power as something possessed, for Foucault, power is not wielded by individuals, classes or institutions. Rather, power is dispersed and subject-less and as elements of broad strategies (Gaventa, 2003). Such diffuse forms of power are always present in all kinds of social interaction, for instance between MNCs, states and SMEs in pursuance of LCP in Ghana’s oil and gas sector (see paper #3).

The ubiquitous presence of power from Foucault’s perspective allows us to escape the epistemological trap of excessively focusing on cultural, discursive and scalar views of interaction (Yeung, 2002). It allows us to pay attention to the immanent and multidimensional attribute of power which could entail practices that are simultaneously cultural, economic, discursive and material (ibid.). This perspective is similar to Bourdieu’s notion of capital, as exemplified by the cases of embedded entrepreneurial activities in papers #1 and #2, in which

the entrepreneurs draw on political, religious and ethnic networks as a means of accessing information, but also require financial capital, expertise and sometimes international experience as well as understanding of 'Western' business ethics in order to succeed in the oil and gas sector.

The relationality of power is well articulated by Foucault's concept of *micro-physics of power*, which describes the strategies adopted by actors in a relation. In *Discipline and Punish, the Birth of the Prison*, Foucault (1977, p. 26) elaborates that micro-physics presuppose 'strategy, that its effects of domination are attributed not to "appropriation", but to dispositions, manoeuvres, tactics, techniques, functionings.' In paper #3, I highlight the techniques and manoeuvres of actors that limit the opportunities for SMEs' activities in the oil and gas sector. Similarly, Foucault's concept of *dispositif* or *apparatus* of power further sheds light on the relationality of power. In *The Confession of the Flesh*, Foucault (1980, p. 194) defines *dispositif* as:

a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions.

He argues that the *dispositif* is the system of relations that can be established between these elements. The apparatus of power, as Foucault (1980) conceives it, is the nature of connection that exists between heterogeneous elements. In effect, power is exercised and not possessed and as Foucault (1977) notes, it is the overall effect of an actor's strategic position in a relation. Such an effect is 'manifested and sometimes extended by the position of those who are dominated' (ibid. p. 27).

In Norway, for instance, the already advanced engineering expertise in marine, ship building and hydro dams enabled Norwegian firms to meet the new technological requirements of the

oil and gas industry when the country discovered oil in 1969. In Ghana, however, the low levels of technology and expertise limit the extent to which local companies can secure contracts in the oil industry. Larsen (2006) and Ryggvik (2010) demonstrate that effective macroeconomic policies, political and economic institutional arrangements, strong judicial and social norms and effective labour unions also enabled Norway to derive more gain from its oil and gas resource. The relation between these elements identified by Larsen and Ryggvik in terms of their effectiveness is critical also in the context of local participation in Ghana's oil and gas sector. Thus the success of Ghana's local content law is, among other factors, dependent on the extent to which the state institutions that are tasked with its enforcement have the administrative capacity to ensure compliance by MNCs.

In *The Subject and Power*, Foucault (1982, p. 789) uses the term *conduct*, which he considers as leading others or 'a way of behaving within a more or less open field of possibilities.' In any given context, the techniques and practices of actors, or what I have called the *micro-mechanisms* of power in paper #3, are aimed at eliciting desired outcomes, which works by structuring the field of action for others. The aim of Ghana's local content law is to promote Ghanaians' participation in the oil and gas sector. The law works by stipulating 'the rules of engagement', and thus setting out guidelines which MNCs must follow in order to engage Ghanaians in their operations. This perspective of power allows us to pay attention to the subtle exercise of power. As Allen (2003 p.67) aptly captures it, 'there are no direct constraints on behavior, no overt sanctions or prohibitions on what should and should not be done. There are only *indirect* techniques of regulation which work on self-experience.' In paper #3, this subtlety of power is evident in the deployment of so-called industry standards by MNCs that limit the activities of Ghanaian firms in the oil and gas sector.

The relational view of power as deep-rooted in social relations raises some methodological challenges. How do we analyse power relations? Foucault (1982) suggests five points that are essential. The first is to analyse the system of differentiation which permits actions upon actions. To Foucault (1982, p.792), 'every relationship of power puts into operation differentiations which are at the same time its conditions and its results.' The second is an examination of the types of objectives pursued by actors in any context. These objectives, according to Foucault (1982, p.792), could be 'the maintenance of privileges, the accumulation of profits, the bringing into operation of statutory authority, the exercise of a function or of a trade.' Thirdly, Foucault (1982) suggests paying attention to the means by which power relations are brought into being. In *Discipline and Punish*, Foucault (1977) demonstrates how a surveillance system is used as a means of bringing power relations into being. As illustrated with Betham's panopticon (Foucault, 1977), the layout of the prison is a means by which disciplinary power is enforced rather than the use of force. Power could also be exercised by the threat of arms, economic disparity and rules, among others.

The fourth point suggested by Foucault is to examine the forms of institutions that enable action upon action. According to Foucault (1982, p.792), institutions:

may mix traditional pre-dispositions, legal structures, phenomena relating to custom or to fashion (such as one sees in the institution of the family); they can also take the form of an apparatus closed in upon itself, with its specific loci, its own regulations, its hierarchical structures which are carefully defined, a relative autonomy in its functioning (such as scholastic or military institutions); they can also form very complex systems endowed with multiple apparatuses.

As Papers #1 and #3 highlight, Ghanaian entrepreneurs' embeddedness in kin and religion and the dis-functionality of Ghana's bureaucracy delimit the opportunities for local participation.

Finally, Foucault (1982) suggests exploration of the degree of rationalisation by actors in order to understand the power relations. In his view, the exercise of power is not a naked fact or an institutionalised right. Rather, power relations are processes which are adjusted in any given situation. According to Foucault (1982, p.792):

The degrees of rationalization: the bringing into play of power relations as action in a field of possibilities may be more or less elaborate in relation to the effectiveness of the instruments and the certainty of the results (greater or lesser technological refinements employed in the exercise of power) or again in proportion to the possible cost (be it the economic cost of the means brought into operation or the cost in terms of reaction constituted by the resistance which is encountered).

Indeed, an often-cited reason for limited local participation is the technological requirements of the oil industry, which are beyond local capacity (Karl, 2007). However, paper #3 shows how MNCs also deploy so-called industry standards, which they claim local companies lack, in order to rationalise their preference for foreign companies.

This relational perspective of power transcends politics and sees power as an everyday, socialised and embodied phenomenon. Gaventa (2003, p. 1) aptly summarises this relationality from a Foucauldian perspective of power as ‘diffuse rather than concentrated, embodied and enacted rather than possessed, discursive rather than purely coercive, and constitutes agents rather than being deployed by them.’ Foucault’s theories of power are relevant for analysing the complex relations in society and offer an entry point for analysing power that transcends the polarised actor- and structure-oriented perspectives that characterise much of the social sciences.

CHAPTER THREE

Study areas, fieldwork and methodology

3.1. Introduction

This chapter connects the research agenda outlined above to the research process. It entails a discussion of the methodological choices and procedures for the research and analysis. The research is the outcome of several decisions, many of which were confined by practical limitations. The methodological issues discussed in this section, however, go beyond such pragmatic matters. I first clarify my choice of qualitative research methodology for this study. Secondly, I present the study areas and the basis for choosing them as the study sites. Thirdly, the fieldwork process, challenges, my positionality in the field and ethical issues are clarified. In the fourth section, the methodological process of interviews, observations and case studies is discussed, with the section concluding with how the data was analysed.

3.2. Choosing a qualitative research approach

The study combines qualitative methods, including interviews, case studies and observations, in order to investigate entrepreneurial activities in Ghana's oil and gas industry. Researchers using qualitative, quantitative or mixed research methods, have the common interest of gaining insight into particular phenomena. These research paradigms, however, answer different questions (Barbour, 2008; Neuman, 1997). As Maxwell (2012) reminds us, qualitative and quantitative research methods are not simply different ways of doing the same thing.

The qualitative research paradigm is based on interpretivism and constructivism, while quantitative research is based on positivism (Neuman, 1997; Sale et al., 2002). In qualitative research, the emphasis is on people, situations, processes and meanings, which cannot necessarily be examined in terms of amount, intensity or frequency (Denzin and Lincoln,

2005; Maxwell, 2012; Winchester and Rofe, 2010). Quantitative research, on the other hand, seeks to understand the world in variable terms with emphasis on measurement and analysis of causal relationships and not on processes (Denzin and Lincoln, 2005).

Winchester and Rofe (2010, p. 6) notes that qualitative geographers ‘balance the fine line between the examination of structures and processes on one hand and of individuals and their experiences on the other.’ The research questions pursued in this PhD thesis aim to understand the meaning of local content in the context of Ghana’s oil and gas sector, with a particular emphasis on examining how people interpret it and the ways in which this (their interpretations) influences their behavior. As a result of these aims, the qualitative research method is the most appropriate. This study involved interviews and informal discussions with local entrepreneurs and their employees, state officials, foreign oil companies and civil society organisations in order to investigate the ways in which the local content law is promoting Ghanaian entrepreneurial activities in the oil and gas industry. As Barbour (2008) notes, qualitative researchers seeks to identify, examine and understand processes that lead to a particular outcome, which in this case is local SMEs’ participation in Ghana’s petroleum sector.

3.3. Field entry and the selection of study areas

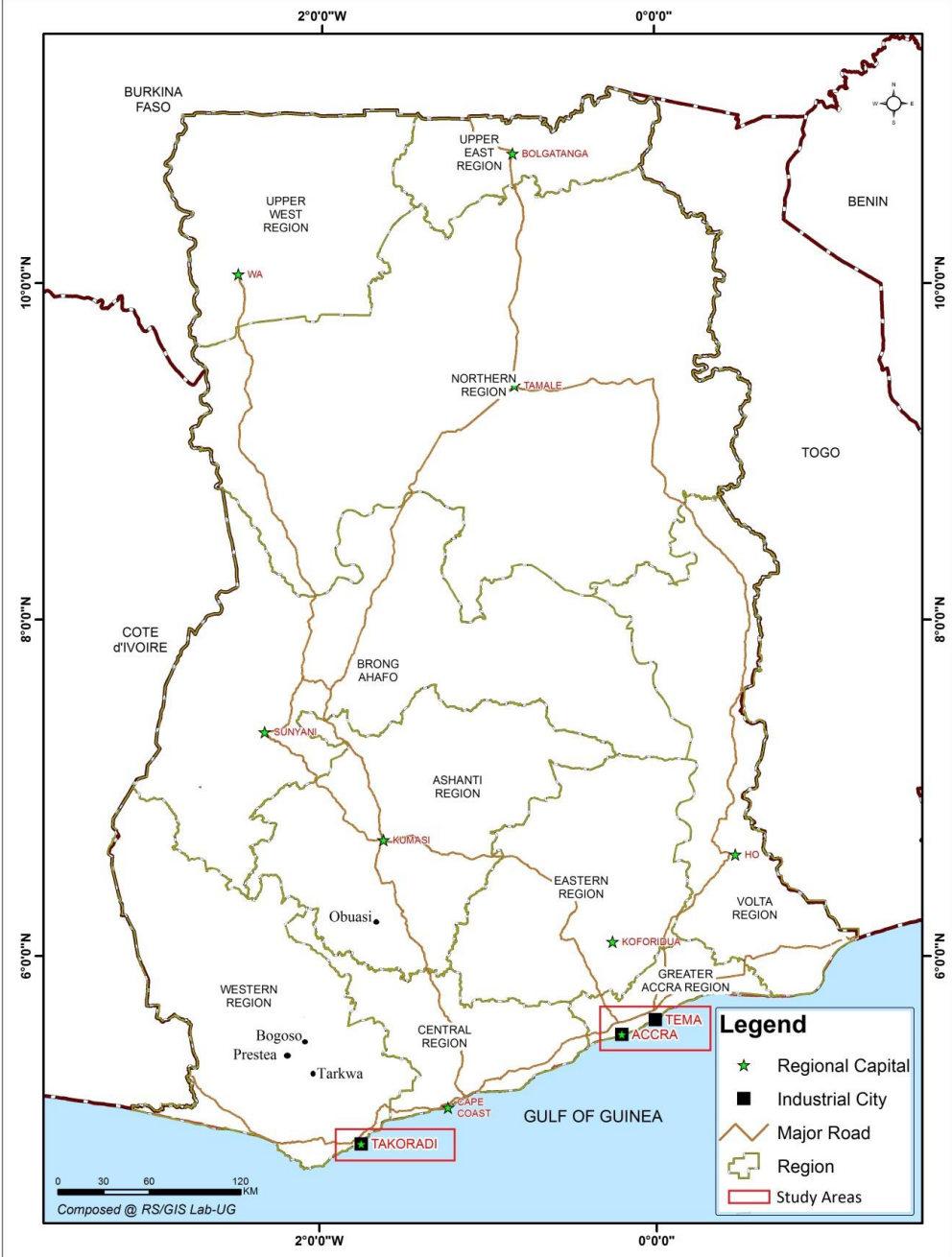
The idea of conducting research on entrepreneurship in Ghana’s oil and gas industry was first conceived in 2010, when I chose a topic for my master’s degree. In the midst of the euphoria about the country’s oil and gas discovery and its impacts on society, I was intrigued about how local entrepreneurs can and are taking advantage of opportunities in the oil and gas industry to expand their businesses. A research proposal was developed and in May 2011, I embarked on fieldwork in Takoradi to collect data for my master thesis.

Three weeks into the fieldwork period (which lasted for three months), it was still difficult to recruit potential interviewees. Ghanaian entrepreneurs were not forthcoming with relevant information on their operations and strategies, and it was almost impossible to gain access to foreign companies. I therefore decided to study Ghanaian rig workers, who were easier to access, with a focus on offshore employment opportunities, processes, challenges and outcomes for Ghanaians (see Ablo, 2012).

The fieldwork for the master thesis, conducted in 2011, provided insight into rig worker recruitment agencies and is the foundation for this PhD project. The lessons that I had learnt from my master's studies were valuable in shaping the overall approach to the field, the selection of the study areas and the data production strategies that I employed for this study. I discovered that the local SMEs that are seeking contracts in the oil and gas industry are not only located in Takoradi, but also in mining communities such as Tarkwa, Prestea, Bogoso and Obuasi. The rest are from coastal cities such as Accra, Tema, Cape Coast and Winneba (see Map 2). However, in this PhD thesis, I selected only SMEs that were located in Accra, Tema and Takoradi, primarily because of these cities' strategic location and their role as major centres of oil and gas industry-related activities in Ghana.

The owners of SMEs from Prestea, Bogoso, Tarkwa and Obuasi that provided services in the mining sector went to Takoradi to explore the prospects of expanding or moving their operations to the oil and gas sector. Those from Cape Coast and Winneba were not providing services directly related to the extractive sector, yet were nonetheless also exploring opportunities in the oil and gas sector. The decision to focus on the three selected cities is elaborated in more detail in the following section.

Map 2: A regional map of Ghana showing the study areas



Composed at RS/GIS Lab
 Department of Geography & Resource Dev't
 University of Ghana
 2015

3.3.1. Takoradi

Often proclaimed as Ghana's 'oil city' (Ablo, 2012; Obeng-Odoom, 2014c), Takoradi is located in the Sekondi-Takoradi Metropolis of the Western Region. The Western Region covers an area of 23,921 km² which is approximately 10 percent of the total land area of Ghana (GSS, 2012b). Located in the south-western part of Ghana, the Western Region is bordered by the Ivory Coast on the west, Central Region in the east, Ashanti and Brong-Ahafo Regions in the north and in the south by 192 km of the coastline of the Gulf of Guinea (STMA, 2015). It has an estimated population of 2,376,021 as at 2010 (GSS, 2012). The Western Region contains an estimated 44 percent of Ghana's closed forests (Baah-Nuakoh, 2003) and contributes significantly to Ghana's foreign exchange earnings through the export of timber, mineral resources and cash crops. The earliest hydrocarbon explorations in Ghana in 1896 were in fact carried out in the Western Region in the onshore Tano basin.

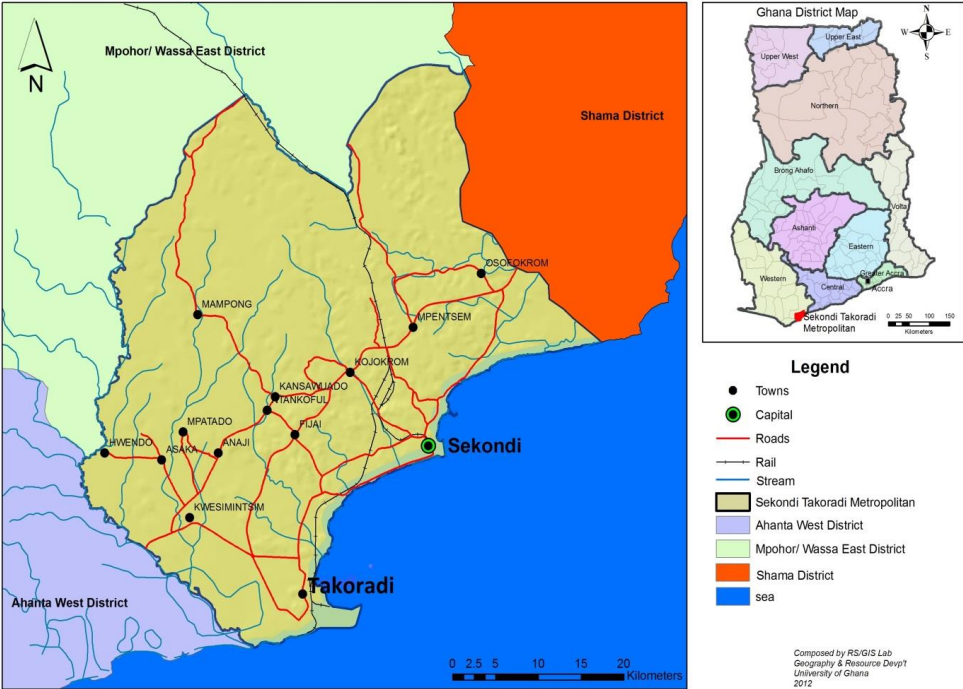
With an estimated population of 559, 548 (GSS, 2012a), the Sekondi-Takoradi Metropolitan Assembly (STMA) has a heterogeneous population, with Sekondi as the metropolitan capital and Takoradi as the regional capital. The twin city of Sekondi-Takoradi⁶ is the third largest urban centre in Ghana. The metropolis shares a border with Mpohor-Wassa East District to the north; to the east is Shama District; to the west lies the Ahanta West District and to the south is the Gulf of Guinea.

Sekondi and Takoradi were two fishing settlements of the Ahanta people, a sub-group of the Akan people (Obeng-Odoom, 2014c). The inhabitants have a long history of interaction with Europeans, dating back to the 14th century (ibid.). By 1650, the Ahantas of Sekondi-Takoradi

⁶ For a thorough discussion on the oil related influence on the twin city of Sekondi-Takoradi, see Obeng-Odoom (2014).

had had trade contacts with the Prussians and the Swedes, but it was the Dutch who first settled in the city around 1640.

Map 3: Sekondi-Takoradi Metropolitan Assembly



Source: Ablo, 2012.

Sekondi-Takoradi’s role as a trading post continued during the colonial period and according to Dumett (1983 in Obeng-Odoom, 2014), local merchant George Alfred ‘Paa’ Grant was exporting an estimated £2000-worth of timber annually between 1903 and 1904.

Sekondi emerged as a town as early as 1894, while Takroadi was recognised as such much later, in 1926 (Busia, 1950 in Obeng-Odoom, 2014). The Sekondi Town Council was formed in 1903, and by 1944 the decision was made to bring Takoradi under the administrative wing of the Council. In 1946, the Sekondi-Takoradi Town Council was established and has since

been elevated to the present-day STMA. In this study, I focused on Takoradi and not on its twin city for reasons outlined below.

Takoradi is the third most industrialised city in Ghana, although commerce remains the dominant sector of the local economy (STMA, 2015). Essential to the city's economy is the Takoradi Port, which was completed in 1928 by the British colonial administration (Plageman, 2013). The Takoradi Port serves as Ghana's main export port, handling approximately 75% of Ghana's export trade of cocoa, timber, bauxite and manganese (Obeng-Odoom, 2014c; STMA, 2015).

Plate 1: Aerial photo of the Takoradi harbour in 2011⁷



⁷ Unless otherwise stated, all photographs in the thesis were taken by the author.

Takoradi's strategic location makes it an important hub for Ghana's emergent oil and gas industry, as shown by the fact that it is the location of the oil tanker terminal for the country's offshore fields (Obeng-Odoom, 2014c).

The Takoradi airport is another significant piece of the city's infrastructure that plays a key role in Ghana's oil and gas industry. The airport was formerly a military base, but since the discovery and production of the offshore oil, it is now one of the busiest airports for domestic travel in Ghana. The airport currently handles daily domestic flights between Accra and Takoradi and has served to significantly reduce the travel time between the two cities; the flight between Accra and Takoradi takes just 30 minutes, while road travel takes between three to five hours. The airport hosts private jets belonging to foreign oil companies as well as helicopters owned by companies that transport oil rig workers offshore.

Key industrial activities in STMA include timber processing, metal fabrication and cottage industries, with businesses ranging from micro, small and medium to large-scale. The service sector is also important in Takoradi, with activities such as shipping, hotel and restaurant services, transport services, harbour and port services, banking and commerce, and retail trade. The famous Takoradi Market Circle (TMC) located in the Central Business District (CBD) of Takoradi is the main commercial centre in the city. As Amiteye (2015) observes, Takoradi's position as the regional capital gives it strategic value for the market traders. The TMC is the centre of both formal and informal economic activities, and is characterised by varying enterprises, commodity specialisation and various forms of social and economic relations.

Takoradi has several educational institutions, including the Takoradi Polytechnic, where the Jubilee Technical Training Centre (JTTC) is located. The Enterprise Development Center (EDC), along with several oil and gas-related training institutions, is also located in Takoradi.

Plate 2: Entrance of the EDC



The visible presence of various oil companies attests to the transformation that is taking place in the city as a result of the production of oil. There is an influx of people to Takoradi in search of jobs.

Several businesses have sprung up in anticipation of oil and gas-related opportunities. Plate 3 below is one such new business, training youths from farming communities in the western region in anticipation of increased employment opportunities in the oil and gas sector. In this picture, the CEO of the now defunct oil and gas training school gives a speech to optimistic youths about the ‘opportunities’ that the oil and gas sector brings. As noted earlier, existing businesses from Ghana’s mining sector were repositioning themselves to take advantage of

the opportunities in the oil and gas sector by expanding or relocating their operations to Takoradi.

Plate 3: Prospective job-seekers at an oil and gas training school in Takoradi



3.3.2. Tema

Tema is the administrative capital of the Tema Metropolitan Assembly (see Map 2 and 4). It is also Ghana’s main industrial city and a major centre of oil and gas activities. Tema is located in the Greater Accra Region of Ghana, 25 km to the east of Accra. Occupying a total land area of about 3,245 km², the Greater Accra Region is the smallest of the 10 administrative regions of Ghana and was created in 1982. It is the second most populated region in Ghana, with an estimated population of 4,010,054 according to census figures of the Ghana Statistical Service (GSS 2012). It has an estimated coastline of about 225km,

stretching from Kokrobite in the west to Ada in the east.⁸ The Greater Accra Region is the most urbanised region in Ghana, with approximately 87.4 percent of the population living in urban centres and with Accra and Tema serving as the main nuclei within the region (Songsore, 2009).

The Tema Metropolitan Area (TMA) has an estimated population of 402,637 (GSS, 2012). The metropolis shares its western boundaries with Ashaiman Municipal, Adentan Municipal and Ledzokuku Krowor Municipal; to the east lies the Kpone Katamanso District; to the north the Dangme West District and to the south sits the Gulf of Guinea.⁹ Tema became an Autonomous Council in 1974 and was elevated to the status of a Metropolitan Assembly in December 1990. Tema was still just a fishing village until 1952, when the construction of a sea port was commissioned by the government. The transformation of Tema since the 1950s is discussed by Chalfin (2014, p. 95), who describes it as ‘a defining element of an expansive, state-led modernising scheme.’

The completion of the Tema harbour in 1962 stimulated the growth of the city. It is Ghana’s main import port and serves several countries in the West Africa sub-region. Located on the Greenwich Meridian and 28.5 km to the east of Accra, the Tema port has a main harbour, a fishing harbour and shipyard and dry-dock, which is capable of docking both large and medium-sized fishing vessels.

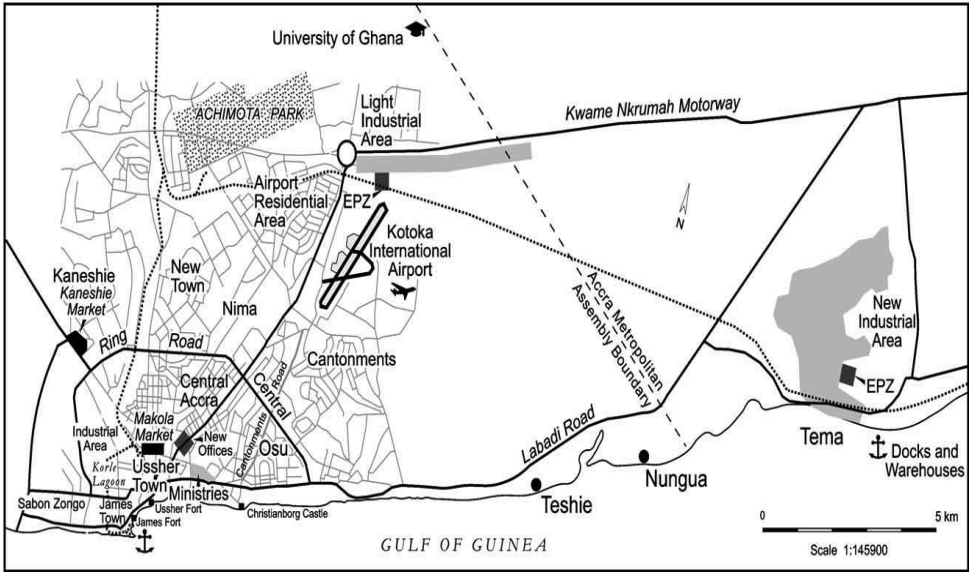
The economy of Tema is made up of agriculture, industry and a commerce/service sector. It is estimated that Tema has over 500 industries engaged in diverse activities (TMA, 2015). Some of the main industrial activities in Tema include chemical production, textile and clothing,

⁸ Information available at <http://www.ghanadistricts.com/region/?r=1&sa=7614>. Accessed on 10.11.2015

⁹ Unless otherwise stated, all information on Tema in this section was accessed from http://ghanadistricts.com/districts/?news&r=1&_=4 on 16.11.2015

consumer electronics, steel works and a petroleum refinery. The industries in Tema range from large-scale industries such as the Tema Oil Refinery (TOR) and the Volta Aluminum Company (VALCO) to small and medium scale ones. The city also has the Free Zones Area near the port for the production of goods, 70% of which are for export and 30% for the domestic market (TMA, 2015). The majority of the sampled firms from Tema engage in logistics, warehousing, freight forwarding, welding, fabrication and catering services, which is a reflection of the dominant activities in the port city.

Map 4: The cities of Accra and Tema



Source: Grant and Yankson (2003).

The decision to include Tema in the study area was influenced by observations from the first fieldwork in 2011. While on fieldwork in 2011, I discovered several Ghanaian oil rig workers who came from Tema, and the Rig Workers Association (RWA) was also headquartered in Tema. During a 2012 interview with the CEO of a local waste oil treatment company in

Takoradi, I discovered that the company had relocated from Tema to Takoradi as part of their strategic plan to take advantage of the opportunities in the oil and gas sector. At this point it became obvious to me that the city of Tema was crucial in the emergent oil and gas sector. This was further demonstrated by the GNPC head office building, named the ‘Petroleum House’, being located in Tema.

3.3.3. Accra

Accra is the administrative capital of the Accra Metropolis in the Greater Accra Region. The Accra Metropolitan Area has an estimated land area of 200 km² and an estimated population of about 1,848,614 (GSS, 2012a). The city of Accra is bordered by the Gulf of Guinea in the south, the University of Ghana in the north, Tema Township in the east and by Danso-man in the west (Grant, 2009) (see map 4).

It is believed that the city of Accra was founded at the end of the 16th century by a group of Ga fishermen who settled near the Korle Lagoon (Konadu-Agyemang, 2001). It became a centre for trade with the Portuguese, and by the 17th century it was the site of three European trading fortresses.¹⁰ In 1877, the colonial headquarters was relocated from Cape Coast to Accra, with the city remaining as Ghana’s capital ever since (Grant, 2009; Grant and Yankson, 2003; Konadu-Agyemang, 2001). The colonial administration was relocated to Accra for many reasons; Accra was a flourishing commercial town, offered a healthier environment for the colonialists and was also closer to Aburi, which was seen as a colonial health resort (Dickson, 1969 in Konadu-Agyemang, 2001).

After Ghana gained its independence in 1957, Accra became the growth engine of the country’s economy (Grant, 2009). The neoliberal reforms implemented from 1983 also led to

¹⁰ For a comprehensive analysis of the city profile, see Grant and Yankson, (2003); Yeboah et al. (2013) and Konadu-Agyemang (2001).

the liberalisation of the Ghanaian economy and further facilitated Accra's deeper and wider engagement with the global economy. Currently, the city has the most diversified economy of any area in Ghana (Grant, 2009; Grant and Yankson, 2003; Yeboah et al., 2013), and is the commercial, cultural and financial centre of the country (Quayson, 2014; Songsore, 2009). Estimates by the Accra Metropolitan Assembly (AMA, 2015) put the total number of industrial establishments in Accra at about 350.

When I started fieldwork on Ghana's oil and gas sector in 2011, my primary focus was on companies in Takoradi. But I soon realised that most of the foreign companies in the oil and gas sector have their main offices in Accra, and I was therefore often referred to Accra by most of the companies. The significance of the city is echoed by the fact that many local firms outside the city have either expanded or are in the process of expanding their operations to the city.

As the administrative capital of Ghana, Accra serves as the headquarters for most state institutions. The city is a centre of education and has several tertiary institutions, most notably the University of Ghana and Accra Polytechnic, as well as other private tertiary institutions. An important piece of the city's infrastructure is the Kotoka International Airport (KIA). The establishment of an airport in the then Gold Coast was first conceived in 1918, and by 1930 a regular airmail service was established between the Gold Coast and the UK (Chalfin, 2008). Today, KIA is the only international airport in Ghana, and handles both domestic and international flights as well as an important transit route for flights in the West Africa sub-region. The transformation of Accra 'from a fishing village to a millionaire city' (Konadu-Agyemang, 2001, p. 61), complete with corporate offices, gated residential communities and export processing zones, makes it a vitally important city in Ghana's oil and gas sector. In the

next section, the fieldwork process and the data production process for the studies are discussed.

3.4. The fieldwork process and methodology

With experience and background information about the study areas from 2011, the main fieldwork for the PhD project was preceded by a preliminary field visit between November and December 2012. Familiarity with the study areas is important to any qualitative research process, and this preliminary visit enabled me to test the feasibility of key issues explored in this thesis. It also afforded me the opportunity to identify current issues in the country's oil and gas sector relating to local participation, build relevant networks and identify relevant local firms to include in the study. It was an important stage of the research process as it bore a large influence on the strategies that were later adopted during the major fieldwork.

The main fieldwork was conducted over four periods, spanning April-July 2013, September-October 2013, May-July 2014 and January-May 2015. Conducting the fieldwork over this long period was important as a means of identifying and tracking over a prolonged period the progress of local firms in the oil and gas industry. Including the master thesis fieldwork in 2011, the activities of Ghanaian businesses in the oil and gas industry were studied prior to the passage of the local content law in 2013. Over the fieldwork period, the study was thus able to observe how this law, along with several other laws and programs, had an impact on local firms' participation in the oil and gas industry.

3.4.1. Situatedness and (re)positioning in the field

The research questions and goals pursued by qualitative researchers typically involve interpersonal relations and experiences, all of which bear implications for the research process and outcome (Dowling, 2010). Importantly, societal norms, expectations of individuals and power structures all influence the nature of interaction in a given context (*ibid.*). Societal

structures and behaviours are not separate from research interactions, and as social beings, researchers' experiences are brought to bear on the research process. To enhance the rigour and validity of the research, it is imperative that researchers are conscious of their 'situatedness' (Vannini, 2008) and continually (re)position themselves accordingly. Situatedness 'refers to the researchers physically being on-site and consequently to research shaped by personal relationships and by linguistic, biographical, historical, political, economic, cultural, ideological, material, and spatial dimensions' (Vannini, 2008, p. 816). The researcher's positionality (perspective shaped by sex, race, class, gender, nationality, ethnicity and other identifiers) relative to the phenomenon under study requires continuous reflection since it has an enormous influence on how they interpret the world (Herod, 1999). Importantly, the researcher must 'shift' accordingly, taking into consideration the research stage, context and power relation between themselves and their interviewees (ibid.). As we shall see, my positionality as a male Ghanaian, Ewe and a PhD researcher from Norway shaped my interaction with interviewees and access during the fieldwork.

The promotion of local content in Ghana's oil and gas industry involves interaction and negotiation between people who are differently situated in relation to social structures and knowledge. Investigating such a context requires consideration of the power dynamics between various actors, including myself, and how these can influence the knowledge that is produced. Dowling (2010) draws attention to the fact that the researcher and informant occupy different 'speaking positions', as well as having different intentions and capabilities. The resultant power relations between the two parties can be reciprocal where they are comparatively equal in terms of social position, as well as the cost and benefits accrued by each as a result of the research (Dowling, 2010). On the other hand, the positionality of researchers and their informants and the resulting power dynamic can be asymmetric,

whereby either the researcher or informant finds themselves in the more powerful position (Mullings, 1999). In the following, a reflection is made on my own positionality in relation to different informants and in different situations and areas, and on how this shaped various stages of the research process. As demonstrated below, the frequently applied binaries of insider/outsider positions in fieldwork are not helpful; as Mullings (1999) argues, such binaries imply that positions are fixed, which can have the result of freezing positionalities in place. She suggests the researcher aim for the creation of ‘positional spaces’ in the research process, meaning the ‘areas where the situated knowledge of both parties in the interview encounter, engender a level of trust and co-operation’ (Mullings, 1999).

This research has the aim of providing insight into the structures, processes, strategies and attitudes of local firms, multinational oil companies and the state institutions that promote local content in Ghana’s emergent oil and gas industry. It therefore involved interviews with CEOs, managers, bureaucrats, politicians and other members of elite oil and gas groups. Constant (re)positioning in the field was essential to discovering the periods during which my positionality and that of my informants met in an environment of mutual trust and understanding, which greatly enhanced the data production process.

Gaining access to different categories of elites members of the oil and gas sector was difficult, which was problematic considering that they are the main source of vital information for my research. The strict security, confidentiality and time constraints under which these informants operate presented me with very brief windows of opportunity in which to convince them and conduct the interviews. The first step was clarification of my position as a Ghanaian PhD researcher from Norway, as well as the purpose of my study. My relative lack of success in studying Ghanaian entrepreneurs in the oil industry in 2011 could be attributed to the

disparate position of my informants (Ghanaian business elites, bureaucrats, politicians and expatriates in the oil and gas sector) relative to my position as a master's level student. In the PhD project however, the clarity of the research project, the demonstration of my knowledge of the oil and gas industry and my position as a researcher from Norway have engendered some degree of a shared platform (i.e. a positional space) between my informants and me. All of my informants, especially the Ghanaians, consider Norway to be 'the model' of how local participation in the extractive sector can be fostered. My demonstration of some level of knowledge about the Norwegian context often served as an 'ice breaker' for conversations relating to local content and participation. For example, the Norwegian government's Oil for Development programme, which has led to close collaboration between NORAD and various stakeholder institutions in Ghana, proved to be an excellent conversation starter, particularly with state officials, some of whom had visited Norway through the programme.

Ghanaian entrepreneurs were often interested in conversations about Norway, and so it was often very helpful to emphasise my 'Norwegian researcher' position and my knowledge of the Norwegian context, as well as drawing attention to my Ghanaian nationality. When interacting with Ghanaian informants, an interesting conversation topic was often the fact that as fellow Ghanaians, we had a mutual interest in ensuring that the country's oil and gas wealth is harnessed in a way that will contribute to some sort of development, however it is defined. As a Ghanaian, my role was therefore presented as conducting research in order to throw light on the strategies and processes that are at play in the oil industry.

3.4.2. Trust building: going back and forth

Striking up a conversation with informants does not guarantee that a researcher gets the information that they seek. The challenge of gaining the trust of informants and conducting successful interviews persisted throughout the entire fieldwork. The challenge was gaining the

trust of informants to the extent that they would be willing to discuss topics that they considered sensitive to their institution. The role of one informant as a gatekeeper was invaluable in enhancing the trust between me and my research informants. According to Campbell et al. (2006) a gatekeeper is someone who provides direct or indirect access to key resources needed to carry out research. One of my gatekeepers was the CEO of a key stakeholder institution in the oil and gas industry. This institution interacts with a wide variety of important parties, such as state officials, local entrepreneurs, MNCs, the media, civil society organisations (CSOs) and traditional authorities.

In finding the positional space with informants, the role of my gatekeeper was instrumental in fostering trust. While I was making reasonable progress on my own, the reputation of my gatekeeper not only opened the doors to the walled 'enclaves' of the oil and gas sector, but the recommendations also boosted my credibility as a researcher. Having interacted with my gatekeeper several times over a three-year period, enhanced trust between us and I was willingly put in contact with other key informants. The level of trust between us was enhanced by our shared ethnicity; we are both Ewes from the Volta Region. Our discussions could therefore be conducted in both English and Ewe depending on the topic under discussion and the location. My gatekeeper's role included introducing me to other key informants either through phone calls, e-mails or, when possible, introducing me face-to-face. Typically, I was introduced to other informants as 'one of our sons.' The assistance provided by my gatekeeper greatly improved my chances of successfully interviewing informants, some of whom had previously denied me such access. According to Maxwell (2012), the amount and type of rapport one builds with research participants facilitates the rigour of the study.

The researcher and research participants constitute an important component of the research process, and the relationship between them has far-reaching implication for the study (Maxwell, 2012). Building a relationship is not a one-time event, but rather an ongoing process which requires conscious reflection by the researcher as an agent who influences the context under study. As Mullings (1999, p. 340) argues, ‘in interviews with business elites it may be better to seek shared spaces that are not informed by identity-based differences’. In my experience, and to some extent the Ghanaian context, identity-based attributes like ethnicity can be a helpful tool in building trust and successfully interviewing elites.

There are strict confidentiality and non-disclosure clauses in contracts and negotiations between actors in the oil industry. One implication was that even in situations where informants agreed to meet me for an interview, the contents of some of their contracts were not discussed. Over time and after several meetings with some informants, they agreed to broach some issues which they had hitherto refused to discuss with me. I had to assure them of strict confidentiality and anonymity in the publication of my research. Several informants spoke only on the condition of anonymity, and prohibited me from making any direct reference to them and/or their firm/institution. Some of these meetings took place during lunch in ‘first class’ restaurants in first class residential areas. Additionally, having developed cordial relations with some informants, I gained access to some exclusive locations, for instance ‘members only’ club houses. This was an important social setting for informal discussions, observations and networking.

3.4.3. Going beyond the walls

Prior to and at the preliminary stage of the fieldwork, I was often turned away at the security gates of both foreign and local oil companies. Normally the security personnel took my introductory letter and promised to forward it to the relevant people. When I did manage to

get past the security post, I ended up at the front desk, where the staff would take my letters and promise to get back to me, an eventuality which seldom materialised. Occasionally I was given phone numbers to call in order to schedule interview appointments, yet each time I called, I was asked to call back later. There were also instances when I was turned away because, as an official of a major foreign oil company noted, ‘we [the IOCs] don’t deal with researchers.’

In one instance, I had an interview appointment with the Human Resource (HR) manager of an oil service company and arrived at the company’s premises ahead of schedule. The security man would not allow me inside until my appointment time was due. While waiting at the gate, I engaged him in a casual conversation in Twi and mentioned that I was a researcher from Norway. Enthusiastically, he exclaimed ‘wow, you are from Norway? Oh come inside.’ He ushered me to my informant’s office ahead of schedule, without even first confirming with the HR officer. From this experience and several other instances, I began to emphasise my ‘researcher from Norway’ status. Dressing formally in a suit and tie (as opposed to as a student with a backpack) was also invaluable to my ability to get beyond the security post of most of the companies. Some of the companies and state institutions do not allow taxis into their premises. Arriving at such companies in a private car, dressed in suit and generally looking formal was an important element to being ‘taken seriously’ by the security personnel.

3.4.4 Ethical dilemmas

All research involves ethical considerations. Generally, research ethics is mainly concerned with the conduct of a researcher, their responsibilities to informants, sponsors and the public (Dowling, 2010; Ryen, 2007). In making decisions relating to any research process, including methodological choices, researchers have to consider several ethical issues, including codes, confidentiality, privacy and consent, among others (Dowling, 2010). In outlining some

challenges encountered on the field, I draw attention to secrecy in the oil and gas industry. In the data production and analysis for the studies, steps were taken to ensure the anonymity of informants. I explained to informants the purpose of the study and how the data would be presented. It was also made clear to informants that they could withdraw from the interview session at any stage. In presenting the research results, pseudonyms were used for both informants and institutions. In rare circumstances in which identification of informants or institutions will not cause any harm, and with the specific consent of informants, actual identities were used. The photographs were also taken with the consent of informants, however steps were taken to conceal the identity of informants, such as the blurring of faces. Throughout the period of research, several events and circumstances with ethical implications were encountered that could enhance or inhibit the research process and outcomes. The choice that a researcher makes has significant implications for the knowledge produced. The following is a reflection on one such circumstance encountered during the research process.

I was contacted by the Vice President in charge of Business Development of an international oil company. They were bidding for a contract in Ghana and asked for my services as a consultant. They had read my master's thesis and were interested in my knowledge regarding the Ghanaian business context. They wanted me to provide them with guidance on Ghana's local content requirements and how they could fulfil these requirements. Importantly, they wanted me to recommend to them Ghanaian companies with which to do business. What are the potential benefits of this job opportunity? This was an opportunity for me to earn some money and expand my network. With regards to my project, this was a rare opportunity to get an insight into the contract negotiation process between foreign companies and state institutions in Ghana. Suffice to mention that gaining access to contracts and importantly the negotiation process is extremely difficult.

There were, however, ethical implications that I had to consider. One critical question on which I reflected on was: at what stage am I a consultant and at what stage am I a researcher? Helping the company to decide which local company to engage in Ghana would be an unfair application of the knowledge of the local firms. All the local companies included in this study granted me access on the grounds that my research would not have any adverse impacts on their businesses. My knowledge of these local firms is a privilege. I thus considered providing any assistance to the foreign company in deciding which local firms to engage in Ghana's oil industry as an unethical application of my knowledge. Given that the PhD project was still ongoing at the time, providing my services to the foreign company would also constitute an undue interference on my research field. My contract with the University of Bergen also prohibited me from providing the service. Having considered these ethical and methodological issues, I decided not to provide my services to the company.

3.5. Case study methodology and generalisation

Qualitative case study methodology lacks a single, all-encompassing definition. The case study methodology as used in this study is defined as the in-depth investigation of contemporary phenomena (Creswell, 2013) within its real-world context, where the 'boundaries between the phenomenon and the context may not be clearly evident' (Yin, 2013, p. 16). This thesis addresses the complex issue of how Ghana's local content law enhances the opportunities for Ghanaian entrepreneurs in the oil and gas industry and how state-led projects facilitate these entrepreneurial endeavours. It was a two-level analysis of the *processes* (*what, how and why*) of local content and participation and the *outcomes* (*what, why*) in terms of entrepreneurial activities in the oil and gas industry. The qualitative case study was an appropriate methodology for exploring and describing the situation of actors, and how the Ghanaian and international context of the oil and gas industry influences their attitudes and strategies towards local content and participation.

Baxter and Jack (2008) and (Yin, 2013) draw attention to the suitability of the case study approach in situations in which the researcher cannot manipulate the behaviour of those involved in the study. Additionally, the case study methodology provides proximity to the people and processes studied (Flyvbjerg, 2006), which has been crucial for generating a nuanced view of the events, as well as enhancing the researcher's knowledge of the intricacies of the context under study.

An essential component of the case study methodology is determining the case's unit of analysis and putting in place boundaries around the case in order to ensure coherence (Baxter and Jack, 2008). Defining the boundaries of the case is important because of the tendency for researchers to attempt to answer questions that are too broad or tackling a topic that has too many objectives (ibid.). In this study, the boundaries are defined according to time, place, activity and context. The analyses in the study were based on events in Ghana's oil and gas industry at the time of the fieldwork and the past relating to petroleum prospecting in Ghana. In the oil and gas industry, focus is on local content and participation, with emphasis on entrepreneurial activities. Geographically, the firms included in this study were selected at the international scale (MNCs) and at a local scale (SMEs). The local firms were sampled from Accra, Tema and Takoradi, and the basis for selecting these cities as the sites of oil and gas-related activities is outlined in section 3.1. Finally, the study focused on activities of 32 local firms in the oil and gas industry, interviews with respondents from local SMEs, the state institutions and MNCs and a focus on local content and participation in the context of the oil and gas industry and Ghana's social, cultural and economic environment.

By focusing on the local content law and with illustrative cases of Ghanaian entrepreneurial activities, this research weighs in on the debate relating to the extractive sector and its role in

the development of economies. In paper #1, five (5) illustrative cases of Ghanaian entrepreneurial activities are presented, in order to highlight how the embeddedness of actors can shape the prospects of local businesses in the oil and gas industry. Paper #2 tests the view that enhancing the capacity of local firms serves to improve their prospects in the oil and gas industry with an in-depth study of the EDC project. The mechanisms by which local content requirements are negotiated are examined in paper #3, with the selected illustrative cases of Ghanaian firms showing the micro-mechanisms of power in the techniques and practices of MNCs and the ways in which this shapes the spaces for Ghanaian entrepreneurial activities.

Qualitative case study methodology is often criticised for being less rigorous and providing little basis for scientific generalisation (Flyvbjerg, 2006). These critiques are based on assumptions that qualitative case studies fail to meet the requirements for objective, context-neutral knowledge production as the data are based only on small samples, and in cases where large samples are involved, they are often based on non-probability sampling techniques (see Gobo, 2007; Moriceau, 2010). But the strategic selection of the cases (see Flyvbjerg, 2006) in this study was aimed at generalisation to theoretical propositions and not to generalise based on a sampled population or universe. The study tests the theoretical proposition that the institutional and regulatory environment of resource extracting countries in the global south shapes the development outcome of the sector. The case studies presented in the three papers not only test this proposition, but also question the binary curse and blessing dictum which dominates academic discourse and informs various policies. Importantly, the knowledge produced from this research may be transferable (see Gobo, 2007) to similar contexts such as emerging oil producers in sub-Saharan Africa. The careful selection of the illustrative cases, the argumentative logic and description provided improves the transferability of study findings (Baxter, 2010; Baxter and Jack, 2008; Flyvbjerg, 2006). In this thesis, the reflection

on my positionality, the detailed description of the data production process and analyses as well as the context of the study enhances the transferability of the study findings to similar contexts.

3.6. Data production instruments, strategies and processes

Data for this study was drawn from multiple sources, using largely qualitative data production tools. In the following section, I outline how I used interviews and observations in order to source information.

3.6.1. Interviews

According to Longhurst (2010), talking to people is an excellent way of filling gaps in one's knowledge of meanings, complex behaviours and motivations. Interviews are useful ways of accessing various stories and narratives through which people describe their world (Creswell, 2012). Interviews were conducted in order to acquire knowledge of the experiences, interpretations and narratives about the local content law and whether and how it facilitates local entrepreneurial activities in Ghana's oil and gas industry. The interviews vary with regards to time, depending on whether they were scheduled or improvised. The informants were purposely selected in an attempt to seek out specific knowledge about the subject matter.

In total, 132 interviews were conducted. The informants have been made anonymous, and included 20 key informants (14 men and six women) (see table 3). The remaining 112 interviews were conducted with Ghanaian entrepreneurs and their employees (see table 4) to gain insight into the strategies, resources, and barriers encountered when they attempt to take advantage of businesses opportunities in the oil and gas sector. The interviews range from prescheduled interviews in offices and chats over meals to discussions during tours on firm premises as well as social gatherings. Interviews with Ghanaian entrepreneurs and their

employees were semi-structured with a pre-defined list of topical issues to discuss, while allowing for flexibility in timing and follow-ups.

Table 3: Key institutional informants interviewed and issues discussed

Institution	No.	Issues discussed
EDC	7	Project focus, strategies, challenges
IOCs & Service Companies	7	Processes and standards required of local businesses
Ministry of Energy and Petroleum	3	Monitoring, evaluation & implementation of the LCP
Petroleum Commission	1	Implementation of local content law
GNPC	1	Contracts negotiations
Civil Society Organisation	1	Local content and participation
Total	20	

Table 4: Categories and number of informants interviewed in Ghanaian SMEs

Categories of SME informants	Men	Women	Total
CEOs & management level officials	26	19	45
Employees	40	27	67
			112

Due to the secrecy and confidentiality issues pertinent to the oil and gas sector, all interviews were recorded through field notes and not by audio recorder. Depending on the place and nature of the interview process, data was recorded in a field notebook while the interview was still ongoing. However in order to allow for a free flow of the interview, very few notes were taken during the interview process. The main recordings of field notes were done immediately after the interview session. Since some of the interviews took place while informants were working, engaging in free-flowing conversation often proved to be more suitable.

3.6.2. Group interviews

During the field work, seven group interviews were conducted. The group interviews were organised at the premises of the EDC and mostly at the end of training programs. The location and timing of the group interviews were due to the fact that it was the only place and time where participants (i.e. local entrepreneurs, officials of state institutions and IOCs) in the

group interviews were present. The number of participants in the group interviews ranged from four to six. Apart from two planned group interviews, the rest were simply informal discussions starting with one or two informants during a lunch break or at the end of an EDC training session. Other participants in the EDC training sessions also took interest in the issues discussed and joined the interview session. For example, on one occasion when I was having a discussion with an official of an IOC, four Ghanaian entrepreneurs joined in the discussion.

Though participants in the group interviews were not purposefully selected, there were advantages of the group interviews, for instance interaction between group members and their ability to correct each other. Participants in the group interviews misunderstood, disagreed with and questioned one another while discussing issues such as why local enterprises do not win contracts. For instance, during one such session, the CEO of a local firm queried the IOC official on the relevance of ISO certification in contract execution. The Ghanaian CEO argued that local companies can execute most of the contracts without these certifications. In response, the IOC official claimed that the ISO certification gives foreign companies an idea about a local firm's competence.

3.6.3. Participant observation

Observation, whether seeing, smelling, touching or hearing the environment is an integral part of geography, but has not been given the necessary degree of attention that it requires (Kearns, 2010). It entails positioning ourselves at a vantage point, in a place, either social or geographical, to observe and be part of the world. 'Observation is the outcome of active choice rather than mere exposure. Our choice – whether conscious or unconscious – of first *what* to see and second *how* to see it means that we always have an active role in the observation process' (Kearns, 2010, p. 242). The observations carried out for this study were

aimed at providing complementary evidence and contextualising our understanding of the emergent oil and gas industry in Ghana. In order to contextualise our understanding, researchers immerse themselves in the socio-temporal context, thereby themselves becoming participants (Kearns, 2010).

Participant observation is the engagement of the observers (researchers) in the social setting that they want to observe (Bryman, 2012). For a geographer, participant observation entails the strategic placement of oneself in a specific context in order to elicit systematic understanding of the situation. In order to develop a geography of everyday experience, researchers ought to move beyond formalised interactions such as interviews (Kearns, 2010). The following is a reflection on my own field participation.

The official start of training at the EDC was preceded by public sensitisation programs in Tamale, Kumasi and Takoradi. I joined in these programs to get an impression of how Ghanaians across the country view their prospects in the oil and gas industry. One key observation during these public programs was that participants in southern Ghana (Kumasi and Takoradi) were quite positive about the potential opportunities that their firms could tap into in the emergent oil and gas industry. On the other hand, participants in Tamale often wondered how their businesses could benefit from the oil industry, with most of the activities taking place along the coast (see paper#2:323). Some participants interviewed in Tamale viewed the public forum as simply a political gimmick and of little relevance to them. In Takoradi on the other hand, participants considered these public forums and the EDC project as a necessary tool for equipping local firms with the right information and skills to take advantage of the opportunities in the oil and gas sector.

Between 2013 and 2015, I attended various training sessions and events organised by the EDC. I sat through training sessions facilitated by various stakeholder institutions for local SMEs, covering a range of topics (see paper # 2). At the early stages of the EDC program, I was introduced to participants by an official of the EDC as a researcher from Norway. Subsequently, I introduced myself and clarified the purpose of my study. Participants were informed that I would be taking photographs and of how they would be used. At the start of the training sessions, each participant introduced themselves, as well as detailing their company's location, core products and services. These introductory sessions gave me a general impression of the types of firms participating in the program.

Plate 4: EDC training sessions



In addition to taking notes during the training sessions, I often took photographs of the slides that were presented, which allowed me to listen to the various issues discussed, rather than having to take notes from the slides. I had access to various instructional materials that were used in training the businesses. These were analysed in order to gain an impression of what

various institutional actors consider to be relevant to improving the capacity of local companies.

Due to the diversity of actors interacting at the EDC, I had the opportunity to identify and map out the issues that various actors consider important when it comes to the participation of Ghanaian businesses in the oil and gas industry. Sitting through such training sessions that were facilitated by IOCs and other service companies was crucial to gaining an insight into their procurement policies and programs, as well as to what they consider essential in deciding which local firms to engage. Indeed, the EDC training sessions were an arena of contestations, accusations and counter-accusations, which proved very useful for mapping out the issues to follow up on in the individual interviews.

Plate 5: The CEO of a Ghanaian engineering company (yellow arrow) explaining safety rules during a field visit. Also present is a Ghanaian official of an IOC (red arrow). Also present is a Safety Officer of the local company (in orange reflector).



An important component of the EDC training was field visits to local firms. The idea was to visit the participating firms in order to ascertain the extent to which they implemented the new knowledge that they had acquired. During the visits, participants commended and critiqued each other’s operational strategies, organisational set ups, HSE policies and other relevant issues. Since several of the firms visited during the field visits were studied in detail, photographs were shown to informants for further elaboration and clarification. I also joined informants in social gatherings in club houses in Takoradi, where I participated in their discussions.

3.6.4. Secondary data

Secondary data sources included various policy and regulatory documents such as the local content law, the petroleum revenue management Act, Exploration and Production Law, Petroleum Income Tax Law and Model Petroleum Agreements (MPAs) etc. News items from various sources also provided useful data for this study, such as newspapers, magazines, online news publications and other electronic news on the oil and gas industry between 2007 and 2015.

Plate 6: Newspaper and magazine publications on Ghana’s local content law.



Available documents from IOCs, subcontractors, local businesses, various local and international reports on Ghana's extractive sector were also analysed. However, most of the contracts between parties in the oil and gas industry are subject to confidentiality clauses which prohibited informants from making most of these documents available to me. In general, the secondary data therefore provided contextual, comparative and case-specific information relevant for this study.

3.7. Data Analysis

Qualitative research is an interactive activity and analysing data produced through qualitative methods is an ongoing process. Since the fieldwork was carried out in stages, the data analysis was done concurrently taking into consideration my research questions, theoretical perspectives and the dynamic relations between actors in Ghana's oil and gas industry.

3.7.1. Coding and identifying capital forms

One of the objectives of this project is to examine local entrepreneurs' resources and strategies in the oil and gas industry. In order to identify entrepreneurs' capitals, data produced through interviews and observations were coded based on my research questions and the theoretical perspectives. Coding is a process of organising and evaluating data so as to gain an understanding of text (Cope, 2010). During and after the fieldwork period, I documented stories of Ghanaian informants' motivation to start a business, why they ventured into the oil and gas industry and the strategies they adopt to win contracts and the challenges they face. The coding process involved reading through the field notes several times, to identify recurrent issues and important topics relating to motivation to start an enterprise and the resources and strategies entrepreneurs draw upon to access information about opportunities in the oil and gas industry.

Through the coding process, I identified informants' motivation to start a business and for venturing into the oil and gas industry. The various motivations were categorised as driven by necessity, education, and previous experience among others. For example, previous experience in the oil industry (for instance in the North Sea and the Persian Gulf) and the desire to explore opportunities in Ghana after the country discovered oil in 2007 was clearly an important motivation for entrepreneurs.

Based on the definition of data as categorised observations (Aase and Fossåskaret, 2007), and drawing on Bourdieu's (1986) notion of capital, I categorised entrepreneurs' resources into social, economic, cultural and symbolic forms of capital. For example, a recurrent phrase used by informants is that 'whom you know is important in the oil industry'. This led me to pay attention to informants' social relations for instance the categories of people they play golf with and their participation in party politics as a means to establish networks that are relevant for accessing information regarding available opportunities. The embeddedness of entrepreneurs in social networks which could be political, ethnic or religious and are important for their participation in the petroleum sector were thus categorised as social capital. The significance of social capital is highlighted by local entrepreneurs' participation in the EDC program as shown in paper #2. Entrepreneurs' physical assets and money were categorised as economic capital. Education, work experience and entrepreneurs' knowledge of the cultural codes in the oil and gas sector were categorised as cultural capital. Factors that signify a good or bad reputation, for instance the organisational layout and reputation of a firm relating to delivery of goods and services were categorised as symbolic capital.

3.7.2. The methodology of discourse analysis

Discourse analysis was relevant for revealing the underlying assumptions inherent in statements and understanding how discourses enable conditions for action (Ball, 1993) in Ghana's oil and gas industry. Discursive methods were used particularly in analysing the data presented in paper #3, which examines the micro-mechanisms of power in shaping Ghanaian firms' participation in the oil and gas industry. The purpose of discourse analysis in this study is to uncover the embeddedness of language in practices, and to examine why and how their usage legitimises or undermines (Fairclough, 1995; Jørgensen and Phillips, 2002) Ghanaian SMEs participation in the oil and gas industry.

A discourse is a particular way of talking about and understanding the world, or aspects of it (Jørgensen and Phillips, 2002, p. 1). According to Fairclough (1995), discourse could be a language text, either written or spoken, a discursive practice, and text production interpretation or indeed as a socio-cultural practice. By reviewing media discussions, academic publications and participating in conferences and workshops I identified how different groups of actors speak about local participation in Ghana's oil industry.

Discourses can be conceptualised within a framework that investigates knowledge production, social practices and the link between knowledge and power (Fairclough, 2001; Foucault, 1981; Waitt, 2010). The discourse analysis introduced by Fairclough (1995), deconstructs language and language use, to reveal the manifestation of power and unequal relations of power. Thus language use in speech and writing is a form of 'social practice' – 'dialectical relationship between a particular discursive event and all the diverse elements of the situation(s), institutions(s), and social structure(s) which frame it' (Fairclough et al., 2011, p. 357). Various pieces of legislation, constitutional provisions, reports on the extractive sector in Ghana, annual reports of various stakeholder institutions, documents from both local and

foreign companies as well as data produced through interviews were rigorously reviewed. The choice of terminologies by various actors were analysed in order to highlight how issues of local content and participation are framed by different actors, and how different interests shape these frames. For example, Regulation 9a (i) of L.I.2204 requires preference be given to ‘qualified’ Ghanaian firms. A critical examination of the term ‘qualified’ and what MNCs term ‘pre-qualification’ in practice revealed what these industry standards entail, the different discursive positions of actors and how they are enforced (see paper #3). In L.I. 2204 ‘qualified’ Ghanaian firms must have the ‘technical competence and financial capability to fulfil all obligations under a petroleum agreement or petroleum licence’ (Ministry of Energy, 2013, p.28). The technical and financial capability of a local firm is determined by the MNCs awarding the contract. For MNCs, most Ghanaian SMEs are not competent and as shown in paper #3, the ways in which the requirements for qualification are deployed shapes the opportunities for SMEs’ participation.

3.8. Validity and Reliability

During the design of a study, analysis and interpretation of results, there were threats to the validity and reliability of the research (Golafshani, 2003; Onwuegbuzie and Leech, 2007). According to Creswell and Miller (2000) validity is the accuracy of researchers’ representation of informants’ experience of the social phenomena. Reliability on the other hand relates to the dependability and confidence in the data (Long and Johnson, 2000). Trustworthiness of qualitative studies is central in the discussion of validity and reliability. Thus; is our informant representing events accurately? Have we asked the relevant questions to elicit appropriate response from our informants? Is our analysis accurate representation of informants’ interpretation of events? Essential to improving such credibility is to cross check information from informants through other data sources or use multiple and varied data sources (Yin, 2013). In this study, data produced through interviews and observations of

various kinds were combined with secondary sources to produce the findings. This was relevant in revealing the various facets of the strategies and approaches that are adopted by actors regarding local content and participation.

CHAPTER FOUR

Discussion of findings

4.1. Introduction

In the introduction, I posed a question on how Ghana's local content law enhances the opportunities for SMEs participation in the oil and gas sector. The individual papers relate to this question from different perspectives. As the arguments and conclusions in the papers are self-contained, this section will not reiterate them. Rather, it will outline some theoretical implications to be drawn from these conclusions. To briefly recap, paper #1 discusses the resources and strategies of Ghanaian SMEs and their relevance for a more or less successful participation in the oil and gas sector; paper #2 explores state-led strategies and their relevance in fostering local participation in the oil and gas industry; in paper #3, power relations articulated through practice and their impacts on the opportunities for local SMEs in the petroleum sector were examined. According to the transitional provision of L.I. 2204, Regulation 48, within three months of the commencement of the LCP, contractors, subcontractors, licensees and other allied entities engaged in a petroleum activity in Ghana must comply with the regulation. How, then, has Ghanaian SMEs' participation been enhanced through the implementation of the LCP?

4.2. From local content to local participation?

To recapitulate, the need to foster positive synergy between natural resource extraction and the social and economic development of societies are the driving forces behind LCPs. The increasing emphasis on LCPs is a manifestation of the changing focus in the policy debate on the role of extractive sectors in the development of resource-rich countries (Ramdoo, 2015). Crucially, successful LCPs illustrate the potential of state-led economic development (Ovadia, 2015) and an effective LCP can also assist MNCs to meet regulatory requirements as well as protect their commercial interests (IPIECA, 2011). In effect, successful LCPs could help

‘mitigate and manage social and political risks due to rising expectations domestically for a better and more equitable distribution of wealth’ (Ramdoo, 2015, p. 1). But in order to get beyond these theoretical benefits of LCPs and begin to shed more light on how they work in practice, this PhD thesis set out to examine whether and how Ghana’s LCP for the oil and gas sector enhances the opportunities for Ghanaian SMEs.

4.2.1 Embeddedness and bifurcated local participation

Papers #1, #2 and #3 show that Ghana’s LCP has the potential to promote SMEs’ activities in the oil and gas sector. While there is a lack of statistics on the total number of SMEs participating in the oil industry, the successful participation of some firms, as I have shown in these three papers, does indeed indicate that there is a potential for local participation. It is argued that economic actions, including entrepreneurship, are socially and culturally embedded (Bråten, 2013; Granovetter, 1983, 1985, 2005; Polanyi, 1944). Scott (2013) argues that the embeddedness of economic action can be at normative, regulatory or cognitive levels. I argue that the embeddedness of actors in informal institutions, or what Scott (2013) refers to as the normative form of institutions (values and norms), serves to create a condition for bifurcated local participation in Ghana’s oil and gas industry. The LCP enhances the opportunities for only very few well-established, politically and ethnically connected medium-to-large-scale firms in the oil and gas sector. The majority of the largely small-scale firms are unable to take advantage of the available opportunities in the oil and gas sector. This creates a condition for bifurcated participation between segments of the Ghanaian population that are embedded in advantageous political, ethnic and religious networks and those segments that are without access to such benefits.

The embeddedness of Ghanaian entrepreneurs to various degrees grants them access to various ‘species’ of capital (Bourdieu, 1986) which are critical for their participation in the

petroleum sector. The oil industry is considered one of the most capital intensive sectors (Karl, 2007). As discussed in the papers, SMEs are required to have annual turn-overs twice the value of the contract they wish to execute in order to even be considered. But in practice, although financial capital is indeed relevant for SMEs' participation in the oil industry, it is not the most decisive factor when it comes to winning contracts. This study finds social capital to be the most critical for SMEs' access to information on available business opportunities. When it comes to successfully winning and executing contracts, entrepreneurs require cultural capital in addition to social capital. Local entrepreneurial activities in Ghana's oil and gas sector therefore cannot be clearly understood without emphasising contextual embeddedness. As seen in the strategies of the entrepreneurs, social relations in state institutions and MNCs are essential to accessing information that are relevant for successful participation in the oil and gas sector. Case 5 in paper #1 and Case 1 in paper #3 are examples of how expertise and experience are necessary but still not the decisive factor for SMEs successfully winning contracts in the oil and gas sector. These two cases discuss how SMEs could have the relevant experience but lack the social networks and capital required to win the contracts. In Case 5 in paper #1, the company has the finances and expertise through their international collaboration, but yet struggles to secure contracts. Indeed as Bourdieu (1986) points out, the relevance of the various types of capital is limited to particular contexts. The success of an entrepreneurial endeavour thus requires the entrepreneur's ability to convert and combine the various forms of capital (Bourdieu, 1986) in ways that can lead to their participation in the international oil industry, and not only in the local (semi-)informal Ghanaian economic context as shown in Case 1 in paper# 1. Though efforts are made through the EDC and petroleum commission (see paper #2) to communicate available business opportunities to local SMEs, they are yet to reach a scale that will be beneficial and introduce some level of equity in the contracting process.

In a context where social relations are the decisive factors to access information and eventual participation, some of the SMEs that actually succeed in winning contracts lack the expertise to execute them. In Case 1 of paper #1, the company won their first contract with the help of their relations in the government, but some of the first people they recruited to the oil rig lacked the skills and expertise needed for the work. In an oil and gas context where HSE is essential, such situations of recruiting unqualified people can bring huge risks for both personnel and the environment as their activities could cause accidents. In Case 4 of paper #1, the caterer was awarded a contract with the help of her church member, but she lacked the expertise and the economic capital to successfully deliver the food on schedule. Such cases of SMEs winning contracts but lacking the capacity to execute them could lead to MNCs mistrusting local capabilities. It also provides the basis for MNCs to justify and maintain their global supply chains. The current situation in Ghana's oil industry, in which local companies without the requisite capacity are able to win contracts, also creates a platform for corruption as well as fronting. Business fronting describes a situation in which a local firm operates as a cover for foreign companies that, within the local content law, should not be awarded contracts.

4.2.2 Institutional context of local participation

The institutional context is crucial for determining whether and how local participation can be promoted in the extractive sector. This is due to the fact that the institutions set the rules of the game and the conditions for action (see Hodgson, 2006; Langevang et al., 2015; North, 1990; Scott, 2013). Indeed as Foucault (1982) notes, in order to understand relations of power, it is necessary to examine the institutional context. The three papers previously mentioned show the embeddedness of actors in Ghana's oil and gas industry at various levels of institutions, which shapes how local participation is pursued. Case 2 in paper #1 presents the difficulty

faced by Ghanaian firms in dealing with state institutions. This case typifies the general inefficiencies of the state institutions which negatively affect the pursuit of local content in the oil and gas sector. The laxity in public institutions not only affects local companies but also foreign companies as well. In section 3.4.4 of chapter 3, I presented an event in which I was contacted by a foreign company to help them select local firms to work with when they start operation in Ghana. This incident also highlights the challenges that MNCs must contend with when dealing with state institutions regarding information management. In a context where the official source of information is either ineffective or non-existent, actors resort to informal sources of information, which creates a propensity for corruption and what I have described as bifurcated participation.

4.2.3 Enterprise development or ‘formalising the informal’
SMEs’ participation in the oil industry is an important conduit for ensuring a trickling down of the benefits of Ghana’s oil and gas industry. Given SMEs’ significance in African economies (Abor and Quartey, 2010; Fafchamps, 2004), it is necessary for states to take action to promote the activities of SMEs in the oil industry beyond the simple passage of a LCP. The establishment of the EDC to enhance the capacity of SMEs in Ghana’s oil and gas industry is one such step designed to enhance the capacity of local firms.

Throughout the EDC training, emphasis has been placed on the need for Ghanaian entrepreneurs not to engage in bribery and corruption (see paper #2). But in a context where political and ethnic affiliations are the decisive factors in the participation of local firms in the oil industry, the whole notion of the need for local firms to behave ethically misses the point, especially since local SMEs are not the most influential actors in the oil and gas industry. Rather, the MNCs and state institutions are the most influential actors in terms of control over resources and critical decisions. The emphasis on the need for local firms to behave ethically

could be seen as the exercise of disciplinary power (Foucault, 1977). The training at the EDC from a Foucauldian perspective is thus an attempt by actors (the state and MNCs) to shape the conduct (Foucault, 1982) of local entrepreneurs. The training focus at the EDC is what SMEs must do in order to meet the targets of MNCs. But most of the local companies that succeeded in securing contracts did not secure them solely on the basis that they meet requirements of MNCs. Rather; they secured them because they had the networks that matter. Indeed, informal interference at the state level plays a critical role in awarding contracts to local companies, and it is no accident that some of the most successful local firms in the oil industry have strong political affiliations.

Additionally, most of the requirements emphasised at the EDC largely leads to what can be described as the formalisation of SMEs that hitherto are informal as outlined in paper #2. The formalisation process entails SMEs' registration, paying tax, and securing other statutory requirements and international certification (see paper #3). These are important processes for the mostly unregistered SMEs to get their operations formalised, keep proper records and employ qualified staff. While this process is a necessary condition for their participation in the oil and gas sector, it is also a burden for generally too small and the largely unsuccessful SMEs. When SMEs formalise but still fail in securing contracts, this formalisation process then becomes an unsurmountable barrier against participation in the oil and gas industry. SMEs that are registered with the PC have to renew their registration annually at high costs but have consistently failed to secure contracts in the oil and gas sector simply because they are not embedded in the networks that matter. In effect, formalisation for local participation stifles SMEs and could potentially put them out of businesses.

4.2.4 The industry standards and local participation

The oil and gas industry, apart from being capital intensive, also requires high health, safety and environmental (HSE) standards. The significance of HSE in offshore oil and gas operation is most apparent in light of the 2010 Deepwater Horizon oil spill in the Gulf of Mexico. This accident led to great loss of life and caused extensive damage to marine and wildlife habitats, as well as the local fishing and tourism industries (Cutler, 2011). An important benefit of the EDC project is enhancing Ghanaian SMEs' knowledge of HSE requirements in the oil industry. All of the IOCs that facilitated the training of SMEs focuses on company-specific HSE requirements. This is essential for most of these SMEs given the fact that there is limited enforcement of HSE requirements in the Ghanaian context in general.

Beyond HSE, other requirements in the oil industry are international certificates and financial capital. The international certificates are used by MNCs as a means of determining the competence of SMEs. Generally, however, most of the SMEs lack certificates such as those issued by the ISO and ABS. The implication is that in cases where businesses have the finance and expertise to execute contracts but lack these requirements, they are not given the opportunities. As Foucault (1982) argues, the system of differentiation that actors adopt in any given relation can indicate the dynamics of power in the relation. Indeed some MNCs in practice, award contracts to Ghanaian firms even if they lack these required certificates while other MNCs did not award contracts, citing the lack of these certificates as the basis. The use of these so-called industry standards in ways that could limit the extent of local entrepreneurial activities in the oil industry is what Foucault (1977) termed the micro-physics of power. This situation also reinforces the earlier arguments that social relations are perhaps the most crucial factor in the success or failure of SMEs in the oil industry.

Similarly, the PC is tasked with regulating Ghana's upstream petroleum sector. Registration with the PC is a mandatory requirement for SMEs to secure contracts with MNCs. In practice, however, several SMEs without registration with the PC have been awarded contracts by MNCs, whilst others have also been disqualified for not being registered with the PC. The double standards employed by actors in relation to these requirements create an atmosphere of mistrust. These practices also shows the micro-mechanisms of power (see paper #3) in the practice of actors and how they limit SMEs' activities in the oil and gas industry.

4.3. Conclusion

LCPs have become integral to strategies that are aimed at ensuring that natural resource extraction leads to the social and economic development of society. LCPs are essential for the trickling down of natural resource wealth to the vast majority of society. Through its three papers with a focus on SMEs, this thesis examines whether and how Ghana's local content law fosters Ghanaians' participation in the oil and gas industry value chain. I first examine the resources and strategies that are essential for Ghanaian entrepreneurial activities in the oil and gas industry, and the extent to which they are accessible to SMEs. It is argued that embedded resources and strategies that are essential for local participation are not accessible to the majority of Ghanaian SMEs. In effect, the implementation of Ghana's LCP can systematically lead to the exclusion from the country's oil and gas industry of large segments of the population. The thesis also examines how state-led capacity-building projects facilitate SMEs participation in the oil and gas sector. As discussed, state-led initiatives such as the EDC are primarily beneficial to well-established, medium-to-large-scale local firms and not to the majority of small-scale firms. The EDC is the Government of Ghana's flagship project that was established in order to enhance the capacity of local firms. The Jubilee Partners play a major role in choosing the management of the EDC, as well as in influencing the scope of the training provided to SMEs. This highlights the influence of MNCs as key actors in the

planning and pursuit of development agendas in African economies. The power to define the terms and content of key issues such as HSE standards and certifications is largely enacted by MNCs and other actors in the global petroleum industry, thereby allowing them to apply these requirements in ways that systematically lead to the exclusion of local firms or certain categories of firms. In effect, relations of power between actors in Ghana's oil industry are not only evident through the practices of MNCs but are also legitimised by Ghana's local content law.

Although Ghana's local content law to some extent enhances the opportunities for local participation, this thesis shows that the LCP has a dual effect. On the one hand, it fosters the participation of a few local firms in the oil and gas industry, but on the other hand it also largely legitimises the local elite's capture of oil rent. LCPs are important and have the potential to promote development of local firms and foster local participation. But as demonstrated in this thesis, Ghana's LCP has not substantially enhanced the opportunities for SMEs participation and requires MNCs and the state do more so as to foster local SMEs participation in the petroleum sector. It is concluded that Ghana's local content law primarily benefit local elites but generate limited spin-off effects such as employment creation to the benefit of larger segments of the Ghanaian society. Finally the ways in which Ghana's LCP is implemented could potentially further inequality. By shedding light on the complex relations that underlie the outcome of natural resource extraction in developing economies, this thesis demonstrates that, to ask whether natural resources are a curse or a blessing misses the point and glosses over complexities pertaining to how natural resource extraction impacts society. Through its focus on LCPs, this thesis shows that in order for us to gain a better insight into the role of the extractive sector in Africa's political economy, it is essential for attention to be paid to complex social processes and relations that underlie the practices of actors.

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Appendices

Appendix I: Interview guide: Ghanaian companies

1. Background of the company
2. Motivation for venturing into the oil and gas industry
3. Which companies do you provide products/services to?
 - a. What difficulties do you encounter in the provision of your products/services?
 - b. How do your clients (IOCs) get to know about your product and services?
 - c. What are your main sources of business information?
 - d. What is the basis of your relationship with the IOCs you do business with?
 - e. What processes do you go through to secure contracts from the IOCs?
4. What are the main sources of operational bottlenecks in doing business in the oil and gas industry? Example:
 - i. Bureaucracy in public services
 - ii. Difficulty in securing contracts
 - iii. Unreliable public utility
5. What do you think made it possible for your business to secure contracts in the oil and gas industry?
6. In what ways is the government promoting your operation in the oil and gas industry?
 - a. How relevant is the local content law in enhancing your business opportunities in the oil and gas industry?

Appendix II: Interview guide: Foreign companies

1. Background of the company
2. Categories of Ghanaian companies engaged
3. Pre-qualification requirements and procedure

4. Tender process
5. Do you have projects specifically reserved for Ghanaian firms or they compete with other international companies?
6. Information availability
7. Local content law

Appendix III: Interview guide: EDC officials

1. Training need and focus
2. Challenges of Ghanaian companies in the oil and gas industry
3. Role of IOCs in training of local entrepreneurs
4. The role of the EDC in Ghanaian companies' entry into the oil and gas industry

THE THREE PAPERS