

**The Challenge of Governing Natural Resources**  
—  
**A Social Network Analysis of Actors' Collaboration  
in Ghana's Petroleum Sector**

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## Abstract

This PhD thesis sets out to investigate the extent of collaboration among actors in Ghana's petroleum sector. Previous research has either focused on the socio-economic changes enforced upon local communities in close proximity to the offshore petroleum fields, or on the institutional framework that aims to govern the petroleum industry. While the first strand of literature criticizes the negative impacts on local communities, analyses of the second strand overwhelmingly praise Ghana as a role model for "good" petroleum governance as the government aims to include non-state actors as advisory and controlling bodies in resource governance. In development literature and international development collaboration, such multi-actor approaches are argued to increase the effectiveness in governing natural resources and to better address communities' interests considering the role of non-state actors as citizens' representatives beyond the state.

Yet, so far, a conceptual argument *why* state and non-state actors should collaborate and an empirical investigation *how* they collaborate are outstanding. At the same time, it remains unclear which actors involved in petroleum governance are perceived as representatives by affected communities. This thesis is a first attempt to address these gaps. Based on exchange theory, the thesis scrutinizes (1) which actors in Ghana's petroleum sector (aim to) steer petroleum resources and deriving revenues, (2) which of these actors affected communities perceive as representatives of their interests and (3) to what extent these actors attain their proclaimed goal to collaboratively govern the petroleum sector.

The analysis of two novel data sets tackle these questions. Primary survey data compiled with 333 expropriated land owners and farmers are used to investigate the abilities of petroleum actors to represent affected communities' interests. The extent of collaboration among petroleum actors is methodically appropriated with Social Network Analysis (SNA). The necessary network data were generated by the means of a structured questionnaire testing six different means of collaboration among 29 actors from the public, private, donor, traditional, civil society and media sector.

Based on the triangulation of qualitative and quantitative data analysis, I argue that effective representation and collaboration is constrained by an executive dominance, a deviation between communities' interests and actors' goals in petroleum governance, contestation rather than collaboration among non-state actors, and a lack of long-term, collaborative strategies among all actors. Hence, while Ghana is far from experiencing the devastating consequences of the so-called 'resource curse', actors so far fall short of their objective to jointly govern the petroleum sector.



## Kurzfassung

Die vorliegende Dissertation untersucht ob und, wenn ja, wie Akteure im ghanaischen Ölsektor miteinander kollaborieren. Bisherige Forschung konzentriert sich vor allem auf die sozio-ökonomischen Auswirkungen der Ölindustrie auf die Bewohner entlang der Küste und den institutionellen Rahmen, der im Zuge des Ölfundes 2007 aufgespannt wurde. Während die Auswirkungen auf die Lokalbevölkerung vorrangig kritisch diskutiert werden, wird Ghana zusehends als Paradebeispiel für “gutes” Ölmanagement auf der institutionellen Ebene genannt, vor allem da die Regierung versucht, nicht-staatliche Akteure als Beratungs- und Kontrollorgane in das Management der Ölressourcen mit einzubeziehen. Dieses Ziel wird nicht nur verfolgt, um den Ölsektor möglichst demokratisch zu gestalten, sondern auch unter der Annahme, dass nicht-staatliche Akteure die Interessen der Lokalbevölkerung vertreten.

Bisher ungeprüft ist jedoch, inwiefern diese Zusammenarbeit nur hehres Ziel oder tatsächliches Kennzeichen des ghanaischen Ölmanagements ist. Gleichzeitig ist unbeantwortet, welche Akteure das Vertrauen betroffener Gemeinden genießen. Die vorliegende Arbeit möchte diese Forschungslücken schließen. Basierend auf austauschtheoretischen Argumenten untersucht die Dissertation welche Akteure die Steuerung der Ölressourcen und -einnahmen beeinflussen, welche Akteure die Interessen der Lokalbevölkerung repräsentieren und wie stark staatliche und nicht-staatliche Akteure miteinander kollaborieren.

Die Analysen zweier neu generierter Datensets beantworten diese Fragen. Umfragedaten mit 333 enteigneten Landbesitzern und Farmer prüfen die Fähigkeiten der Petroleumakteure, die Interessen betroffener Gemeinden zu repräsentieren. Das Ausmaß von Kollaboration wird anhand Methoden der Sozialen Netzwerkanalyse untersucht. Die erforderlichen Daten wurden durch Interviews mit 29 Akteuren aus dem staatlichen, privaten, entwicklungspolitischen, traditionellen, zivilgesellschaftlichen und medialen Sektor gewonnen.

Basierend auf den Analyseergebnissen argumentiert die Arbeit, dass Akteure im Ölsektor bislang fast ausschließlich interagieren statt zu kollaborieren: Tatsächliche Kollaboration wird marginalisiert durch die Dominanz der Exekutive, dem Auseinanderdriften von Interessen der Lokalbevölkerung auf der einen und Akteuren auf der anderen Seite, Konkurrenz statt Zusammenarbeit zwischen nicht-staatlichen Akteuren, sowie dem Fehlen langfristiger Strategien zur Umsetzung kollaborativer Ansätze bei allen Akteuren. Während Ghana somit weit davon entfernt ist, die häufig angeführte These des ‘Ressourcenfluchs’ zu bestätigen, können die Akteure ihr Ziel der Kollaboration bislang nicht erfüllen.





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## Glossary of Terms

<b>ABFA</b>	Annual Budget Funding Amount
<b>ACEP</b>	African Centre for Energy Policy
<b>ACET</b>	African Center for Economic Transformation
<b>ANT</b>	Actor-Network Theory
<b>BMZ</b>	Federal Ministry for Economic Cooperation and Development
<b>CEPIL</b>	Centre for Public Interest Law
<b>COLANDEF</b>	Community Land and Development Foundation
<b>CPP</b>	Convention People's Party
<b>CSOs</b>	Civil Society Organizations
<b>CSPOG</b>	Civil Society Platform on Oil and Gas
<b>DA</b>	District Assembly
<b>DCEs</b>	District Chief Executives
<b>ECG</b>	Electricity Company of Ghana
<b>EITI</b>	Extractive Industries Transparency Initiative
<b>EPA</b>	Environmental Protection Agency
<b>EPA-ACC</b>	Environmental Protection Agency Accra
<b>EPA-WR</b>	Environmental Protection Agency Western Region
<b>FES</b>	Friedrich-Ebert-Stiftung
<b>FoN</b>	Friends of the Nation
<b>GHEITI</b>	Ghana Extractive Industry Transparency Initiative
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit
<b>GNCFC</b>	Ghana National Canoe Fishermen Council
<b>GNGC</b>	Ghana National Gas Company
<b>GNPC</b>	Ghana National Petroleum Company
<b>GREL</b>	Ghana Rubber Estates Limited
<b>GWS</b>	Ghana Wildlife Society
<b>IMF</b>	International Monetary Fund

<b>KITE</b>	Kumasi Institute for Technology and Environment
<b>LVD</b>	Land Valuation Division
<b>MoE</b>	Ministry of Energy and Petroleum
<b>MMDAs</b>	Metropolitan, Municipal and District Assemblies
<b>MoF</b>	Ministry of Finance
<b>MPs</b>	Members of Parliament
<b>NDC</b>	National Democratic Congress
<b>NGOs</b>	Non Governmental Organizations
<b>NPP</b>	National Patriotic Party
<b>NYA</b>	Nzema Youth Association
<b>OECD</b>	Organisation for Economic Co-Operation and Development
<b>OfD</b>	Norwegian Oil for Development Program
<b>PC</b>	Petroleum Commission
<b>PCC</b>	Platform of Coastal Communities
<b>PPB</b>	PenPlusBytes
<b>PNDC</b>	Provisional National Defense Council
<b>PNDCL 64</b>	Ghana National Petroleum Corporation Law, 1983
<b>PNDCL 84</b>	Petroleum (Exploration and Production) Bill, 1984
<b>PIAC</b>	Public Interest Accountability Committee
<b>PRMA</b>	Petroleum Revenue Management Act, Act 815
<b>RCCs</b>	Regional Coordinating Councils
<b>ROAA</b>	Rubber Outgrowers and Agents Association
<b>SDGs</b>	Sustainable Development Goals
<b>SNA</b>	Social Network Analysis
<b>STAR-Ghana</b>	Strengthening Transparency, Accountability and Responsiveness in Ghana
<b>STMA</b>	Sekondi-Takoradi Metropolitan Assembly
<b>UCSOND</b>	United Civil Society Organisations for National Development
<b>VRA</b>	Volta River Authority
<b>WERENGO</b>	Western Region Network of NGOs
<b>WRCF</b>	Western Region Coastal Foundation
<b>WR-HoC</b>	Western Region House of Chiefs

# 1 Introduction

*“Natural resources are neither a curse nor a blessing.  
They are simply a source of opportunity.”*  
– Kofi Annan (2013)

The discovery of oil and gas in commercial quantities offshore Ghana’s west coast in 2007 affords Ghana the opportunity to accelerate development. The Ghanaian government has taken this chance through the inclusion and engagement of non-state actors. The kickoff for the articulated goal to steer petroleum resources ‘collaboratively’ was the “National Forum on Oil and Gas” held in Accra in February 2008. The Forum gathered public institutions on the national, regional and district level, private companies, donor agencies, traditional authorities, civil society, media representatives, and citizens to solicit views on how to govern the recently discovered petroleum resources and to discuss the way forward. What unifies all these actors is the shared belief that the petroleum wealth has to benefit the Ghanaian people and that the so-called ‘resource curse’<sup>1</sup> has to be averted by all means. Due to this joint belief, the odds are not bad that Ghana succeeds in collaboratively governing the petroleum sector.

With the aim of jointly steering the petroleum sector, Ghana follows scholars who argue that collaborative, horizontal steering of natural resources by a diverse set of political and societal actors (i. e., ‘natural resource governance’) exceeds unilateral, vertical steering by government authorities. This argument arises from the (largely normative) assumption that natural resource governance is more inclusive, more participatory and, hence, a more effective way of governing natural resources.

From this perspective, natural resource governance is a seductive idea not only for natural resource-rich countries but also for development practitioners who often tend to imagine how processes in developing countries ought to look like. Yet, it remains unclear whether the idea is able to deliver its capacity in practice. Other open questions are how actors can implement ‘collaborative steering’ in light of diverse agendas, mistrust and the complexity of governing natural resources, what forms of exchange determine ‘collaborative steering’, and to what extent actors use these forms as a means to collaborate. The present thesis answers these questions in the example of Ghana’s petroleum sector.

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<sup>1</sup> The ‘resource curse’ refers to the paradox that resource-rich countries’ economies tend to grow more slowly than countries with fewer natural resources (Auty 1993, 2001; Sachs and Warner 1995).

In sum, the study argues that Ghanaian actors, so far, lack effective coalition formation, dedication to multi-actor initiatives, systematic exchanges, and long-term strategies to collaboratively govern the petroleum sector. While the country is far from experiencing the devastating consequences of the ‘resource curse’ and is deservedly praised for its petroleum management on the institutional level, actors fall short of their objective to jointly govern the sector.

Unlike many other publications in the field of natural resources, this research does not aim to normatively or morally evaluate the significance of collaboration in natural resource governance. Rather, the thesis sets out to empirically scrutinize how actors collaborate through the exchange of tangible and intangible resources. By focusing on what *is* rather than what *ought to be*, the present study critically questions the practicability of collaborative approaches in regard to natural resources and cautions against the euphoria these approaches receive both in development research and international development cooperation.

## 1.1 Overview of the Petroleum Sector

Ghana’s petroleum industry dates back to the late 19<sup>th</sup> century with the ‘West African Oil and Fuel Company’ drilling the first wells between 1896-1903. Until the late 1990s, an estimated hundred exploration wells were drilled with no significant discovery.<sup>2</sup> Finally in 2007, the Cape Three Points and Tano Fields, commonly referred to as ‘Jubilee Field’, became the long-desired game changer. The field is located approximately 65 km offshore Ghana’s west coast and has estimated reserves of 490 million barrels high quality oil which put Ghana at par with Cameroon (400 million barrels) but much below Nigeria (43,200 million barrels). Despite the comparably low amount of petroleum, the discovery threw the country into a “state of ecstasy” (Osei-Tutu 2012: 2) as an interviewee reports:

“[...] politically there were some very strong, powerful statements by the then President, in the sense of “We are doing so well without oil and now that we found oil, we are going to fly” [...] And most of our problems were blamed on oil so, as we found our own oil, people had all sorts of expectations. They thought that with the oil, all our problems will come to an end” (Interview Transcript V, page 1).

Indeed, then President John Atta Mills explained during his 2008 electoral campaign: “Oil is money, and we need money to do the schools, the roads, the hospitals. If you find oil, you manage it well, can you complain about that?” (BBC News 2007). Citizens immediately took up this euphoria:

“Initially, everyone thought that when the oil comes, the economy will be alright. And everybody will get money. You wake up in the morning and your pockets are

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<sup>2</sup> Except for the small Saltpond Fields in 1978 (Annan and Edu-Afful 2015: 7).

full of money. That is what everyone thought” (Interview Transcript II, page 9).

However, the petroleum sector has, so far, not met these expectations. On the macro level, symptoms of the Dutch disease<sup>3</sup> increase with a growing non-agricultural sector and the country’s dependence on gold exports, remittances and development assistance. A ballooning wage bill,<sup>4</sup> a total debt stock of 70.90% of the country’s GDP, high inflation, and a significant depreciation of the local currency have slowed down economic growth. Since 2012, a serious energy crisis is troubling the country and up to date, an International Monetary Fund (IMF) bailout credit, equivalent to over \$900 million, has failed to boost the economy. Moreover, the government embarked on a spending spree after the oil discovery: According to newspaper reports, government officials’ salaries almost doubled since the beginning of oil production and terminated in Ministers’ monthly salaries over US \$10,000 (Lary 2016; Sarpong 2014).

On the micro level, the petroleum poses serious challenges to communities in the Western Region neighboring to the Jubilee Field. The Western Region is the country’s largest producer of cocoa, rubber, coconut, palm oil and timber, and often tendered as Ghana’s ‘food basket’. But despite its relevance for the national economy, the region has been neglected over the years which gives inhabitants the feeling of not being ‘state priority’ (personal conversations).

The deep and rapid changes currently taking place as a consequence of the oil discovery are also not in favor of the general public: The rush for land along the coast by foreign investors and rich Ghanaians increased land and housing prices and crowds out the local population.<sup>5</sup> The area along the road between the regional capital Sekondi-Takoradi in the east and Atuabo in the west (see Map 4.1, page 51) – which was untouched some years ago or only used for subsistence farming from neighboring villages –, continuously has to give way to transportation infrastructure, storage halls and housing. These changes cause a loss of homes and farmlands and deprive local people of their incomes, socio-economic opportunities and personal networks. An interviewee at the Western Region’s Regional Planning Coordinating Unit explains:

“With the advent of the oil exploration, there was a perception nationwide about people coming to the city [Takoradi] to seek for oil-related jobs. And that influx put

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<sup>3</sup> The Dutch disease is a situation in which the excessive reliance on trade in natural resources leads to a neglect of other economical sectors (e. g. manufacture or agriculture) and a value increase of the local currency that renders other sectors in the country uncompetitive (Andrews 2013: 57). The name traces back to the occurrences in the Netherlands in the 1970s when the booming North Sea gas exports jacked up the Dutch currency, exposed Dutch manufacturers to higher foreign competition and raised the unemployment rate tremendously (Le Billon 2001; Watts 2004).

<sup>4</sup> The National Patriotic Party (NPP) government (2008–2012) left behind the highest budget deficit (24.2%) in Ghana’s history. Financing this deficit was the major challenge for the new National Democratic Congress (NDC) government under John Atta Mills (2009–2012) and John D. Mahama (2012–2016).

<sup>5</sup> In some cases the prices for land increased by 500% (Business Day Ghana 2014).

pressure on the few resources that maintain the city [...] For the past five years there has been an increase in search, a rush for offices and residential accommodation, to the extent that people who were previously in the city centre and who could not bare the increase in rent, had to move to the periphery, making way for the big time players in the oil sector” (Interview Transcript IX, page 2).

The influx of Ghanaians from the north, neighboring countries and international expats changes the social fabric of the region and brings along new challenges such as an increase in crime rates and prostitution (Norad Evaluation Department 2012). The growing population also challenges the water supply of Sekondi-Takoradi. As nearby water bodies decreasingly provide fresh water, it is projected that the additional demand for water will soon outstrip the supply. While international expats and wealthy Ghanaians already have their own water tanks, this will, again, burden the lives of less affluent Ghanaians.

Due to the high yet unmet expectations, the rapid changes and attached challenges, it comes as no surprise that the petroleum sector sparks the interest of a diverse set of actors: government authorities, private investors, donor agencies, traditional authorities, civil society, media representatives, and, last but not least, citizens themselves. Whereas some of these actors may hope for easy and fast money, others view the petroleum discovery as Ghana’s final stepping stone to becoming a middle income country. Still others fear dangers for the environment, the social peace or Ghana’s democracy overall.

Accordingly, the developing petroleum sector provides actors with diverse starting points to realize their goal of governing the petroleum industry for the ‘benefit of the people’ through collaboration. In order to test whether petroleum governance is really as collaborative as various actors in Ghana’s petroleum governance aim and claim it to be, this thesis scrutinizes the framework of institutions and policies related to petroleum governance, actors’ relations among each other and in regard to affected communities, as well as their collaboration networks. The emphasis on networks originates from the thesis’ central argument that in order to understand natural resource governance sufficiently, the focus needs to lie on the *relations* between those actors who aim to govern natural resources, their incentives to engage in exchanges and their different means to collaborate.

## 1.2 Relevance

Understanding natural resource governance is pivotal as natural resources embark a paradoxical situation to states all over the world: On the one hand, they can play a crucial role in alleviating poverty, sparking innovations and promoting socio-economic development (Boserup 1965; Barbier 2003; Sanginga, Ochola, and Bekalo 2010). On the other hand, if mismanaged, natural resources can undermine development efforts, fuel conflicts and deprive people of their own means (Collier and Hoeffler 2004; Le Billon 2001; Obi 2009; Ross 2004; Sachs and Warner 1995; Watts 2004). In this paradoxical situation, institu-

tions, policies and actors are argued to play a critical role (Bhattacharyya and Hodler 2010; Ostrom 1990; Lockwood 2010; Robinson, Torvik, and Verdier 2006). For example, most literature argues that democratic regimes are more likely to manage natural resources for the good of the country if compared to autocratic regimes (Cabral and Hauk 2007; Ross 2001). A new generation of scholars maintains that beyond the analysis of institutions, policies and actors, it is necessary to focus on the relations between institutions, policies and actors (Davies and White 2012; Paletto, Hamunen, and De Meo 2015). They appraise horizontal, multi-actor steering as a means to turn natural resources into a country's blessing. This thesis makes an empirical, methodological and conceptual contribution to this novel approach to natural resource governance.

Empirically, the thesis is relevant for both development researchers and practitioners as it infuses multi-actor analysis with citizens' feeling of being represented. It offers the first attempt of mapping and evaluating actors' interactions in Ghana's petroleum sector beyond a purely institutional analysis by moving the focus from actors to relations, from unilateral actions and reactions to reciprocal interactions, and from bounded groups to boundless networks. Moreover, it provides the first systematic insights in how citizens who are directly affected by the developing petroleum sector evaluate petroleum governance in general and the performance of state and non-state actors in particular. Due to this focus on relations, the thesis moves the attention away from the socio-economic and ecological changes taking place in communities along the coast in the Western Region (Boohene and Peprah 2011; Eduful and Hooper 2015; Osei-Tutu 2012; Sakyi et al. 2012) and provides a link between communities' perceptions and actors' agendas through the mechanism of representation. The deriving results hereby challenge the inversion of the argument that actors who are generally well accepted as representatives in Ghanaian politics are also legitimized as representatives in petroleum governance (see, for example, Gyampo 2010).

With its mixed-method approach and its aim to use Social Network Analysis (SNA) in a novel environment like the petroleum sector in Ghana, the study also makes several methodological contributions. The novel primary network data capture the interactions of 29 actors in Ghana's petroleum sector across six variants of collaboration and, hence, adds to the limited literature of generating, preparing and applying primary social network data. As the collected data set includes both incoming and outgoing network ties, the thesis is able to show strong deviations in respondents' answering behaviors during network interviews. The result that, on average, only 30% of claimed relations are confirmed by both sender and addressee of a tie, adds to research that critically questions the accuracy of SNA studies. Besides the network data, the thesis provides insights into the political attitudes of communities directly affected by the developing oil and gas sector. These insights originate from a survey conducted with 333 farmers and landowners who have been expropriated due to the construction of a gas pipeline in the Western Region. Due to its random cluster sampling approach, the survey aims to provide a representative

sample of citizens' attitudes towards the petroleum sector in the Western Region.

In using arguments put forward by exchange theory, the thesis also adds to the limited conceptual reasoning behind natural resource governance on the one hand and SNA on the other hand. While natural resource governance literature uses networks predominantly as metaphors, SNA research focuses on application and methodical advancement rather than theory building. Though the conceptual arguments in this thesis are not without their weaknesses, they are a genuine attempt to conceptually understand potential collaboration in natural resource governance.

### 1.3 Synopsis of the Thesis

The thesis makes these contributions based on the following synopsis: Chapter 2, "*Framing Natural Resource Governance*", defines natural resource governance as interactions between interdependent and power-asymmetric actors who aim to steer natural resources as well as the institutions and policies that embed these interactions. This definition highlights both the complexity of governing natural resources and the multi-actor constellations arising from this complexity. Apart from that, the chapter contextualizes natural resource governance by discussing recent literature and it criticizes scholars' normative reasoning about how natural resource governance *should* look like. Contrary to this reasoning, the present study aims to abstain from romanticizing about natural resource governance in conveying a relational perspective. Such a relational approach moves the focus from actors to relations, from unilateral actions to interactions, and from bounded groups to boundless networks.

The point of departure of Chapter 3, "*Conceptual Approach: Steering Through Exchange*", is the argument that both natural resource governance and SNA research overwhelmingly lack theoretical arguments as to why actors should collaborate in natural resource governance. In order to fill this gap, the study uses arguments put forward by exchange theory which maintains that exchanges forge relations, maintain social bonds and are the core element of collaboration. Based on the rather simplistic mechanism of exchange, the thesis builds a conceptual framework that structures the empirical analyses (see Figure 3.1, page 24). Hereby, the framework emphasizes that even though exchanges are the core element of collaboration, collaborative steering is by no means an automatic outcome of exchanges. Rather, exchanges are also actors' means to exploit and contest each other.

Chapter 4, "*Research Design: Case Study, Methods and Triangulation*", discusses the data collection process. The data were mainly gained by semi-structured interviews, a survey questionnaire and network interviews during a field research stay in Ghana between May 2014 and March 2015. The semi-structured interviews are used to support the interpretation of quantitative data. The survey targets the anticipation of representation



among those individuals who are directly affected by the petroleum industry. ‘Direct affectedness’ is hereby defined as having lost lands or crops due to the construction of a petroleum infrastructure. The investigation of representation is mainly motivated by the recurrent claim of most petroleum actors to ‘speak with the voice of the people’. Yet, empirical insights into feelings of representation do, so far, not exist. To investigate the kind and amount of collaboration, the study uses primary social network data as Social Network Analysis (SNA) is the most suitable research technique to scrutinize relations and interactions between social entities. To obtain the network data, 29 actors active in petroleum governance were interviewed with a structured network questionnaire that includes both relational and attributional network questions. In sum, the chapter summarizes the rationale behind these different data collection methods, highlights the challenges in gaining the data and discusses ethical requirements necessary to meet. It further gives reasons for the strengths of triangulation, that is mixing different methods of data collection and analysis under the assumption that different methodical strategies are complementary rather than mutually exclusive.

The empirical analysis starts with Chapter 5, *“The Structural Embedding of Petroleum Governance in Ghana”*. It first investigates how previous experiences in the mining sector shape actors’ interdependencies in the petroleum sector. Subsequently, the chapter discusses the institutional framework in petroleum governance and gives insights into how affected communities perceive those actors that are institutionally entitled to play a role in petroleum governance. Moreover, the chapter examines the policy environment that embeds actors’ interactions. Together, past experiences, institutions and policies are argued to enable and constrain actors’ abilities to exchange resources. The diversity of actors aiming to influence petroleum governance identified in this chapter further reveals the need to go beyond a purely institutional analysis in order to understand petroleum governance in Ghana.

Based on this judgement, Chapter 6, *“The Network Embedding of Actors in Petroleum Governance”*, focuses on the network structures that embed actors’ relations, actors’ legitimacy to claim to ‘speak with the voice of affected communities’ and the goals the individual actors pursue with their engagement in the petroleum sector. On the one hand, the chapter highlights the interconnectivity and density of network structures which provide the necessary relations to collaboratively steer the sector. On the other hand, the aspiration to represent or, at least, to acknowledge communities’ interests, is identified as a core similarity that glues the 29 investigated network actors together. However, the chapter concludes that actors have, so far, not been able to realize these citizen-related goals. This failure might explain the gap between communities’ general feelings of being represented and the feeling of being represented in the oil and gas sector.

Chapter 7, *“Resource Exchanges in Petroleum Governance”*, scrutinizes the extent of actors’ collaboration through exchanges. The different networks investigated in this chap-

ter suggest that collaborative steering is hampered by a divide of civil society in Accra-based and Western Region-based NGOs, the lack of advice exchanges which could help to fill knowledge gaps, the lack of reciprocal relations which could foster trust, the lack of subgroups that would promote efficient collaboration, and low network centralization which could help to efficiently coordinate joint strategies.

The subsequent Chapter 8, “*Network Practices and Exchange Outcomes in Petroleum Governance*” investigates potential causes for the limited amount of exchanges in shape of dominant network practices and the mismatch of relational and attributional network data in regard to power and trust. By applying the discussed practices – ‘knocking’, ‘othering’ and ‘eye services’ –, petroleum actors are argued to perpetuate superficial relating rather than effective collaborating. Furthermore, the attributional network data suggest a divergence in actors’ exchanges and actors’ perceptions: For example, actors that are particularly active in handing out advice to others are not seen as useful partners to consult over oil and gas matters. Equally, high degree centralities across all networks do not replicate in assignments as influential actor.

The last Chapter 9, “*Concluding Remarks*”, summarizes the study’s key results, its limitations and its contribution to current research about Ghana’s petroleum industry. The chapter further evaluates whether SNA is a useful tool for development research. Based on these conclusive remarks, the thesis closes with an impetus for future research.

## 2 Framing Natural Resource Governance

Development researchers and practitioners increasingly hail natural resource governance as more inclusive, more participatory, and, hence, as a more effective, successful or sustainable<sup>6</sup> way to govern natural resource wealth. This appraisal fundamentally rests upon the assumption that spatially and temporally unbounded phenomena like natural resources necessitate collaborative governance arrangements among actors beyond the state. Further, it is argued that through the inclusion of a diverse set of actors, natural resource governance is better able to represent the interest of those who are often most directly affected by natural resources extractions (i. e., nearby communities).

This chapter reviews key publications that support and oppose the thesis' central argument that in order to elaborate and understand natural resource governance sufficiently, the focus needs to be on the relations between those actors that aim to govern the petroleum resources. The first two sections conceptualize and contextualize natural resource governance. Thereinafter, the chapter identifies several weaknesses of the concept before it summarizes how a relational perspective helps to address these critical aspects. It ends with insights into Social Network Analysis (SNA) as the most suitable methodical tool-kit to approach the relational perspective on natural resource governance.

### 2.1 Governing Complex Systems

For centuries, scientists discuss the paradoxical relationship between natural resources and human beings. Starting with Malthus (1798)<sup>7</sup> over Hardin (1968)<sup>8</sup> and Karl (1997),<sup>9</sup> literature broaches the destructive power of human beings on natural resources. Then again, scholars observe how resource discoveries curse countries and their citizens. The landmark study of Sachs and Warner (1995) set the ball rolling for those researchers who proclaim an inverse relationship between natural resource wealth and socio-economic development. Under the broad scope of the so-called 'resource curse', different perspectives

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<sup>6</sup> Natural resource governance is 'sustainable' if resources are governed to meet the needs of present generations without compromising the needs of future generations. This understanding is adopted from the concept of 'sustainable development' as defined by the UN Brundtland Commission in 1987.

<sup>7</sup> Malthus (1798) warns against natural depletion due to population growth ('the principles of population').

<sup>8</sup> Building on Malthus' argument, Hardin (1968) maintains that resource depletion is the self-acting consequence of a prisoner's dilemma constellation in which actors play a non-cooperative game under minimal institutional control ('tragedy of the commons').

<sup>9</sup> Karl (1997) argues that fiscal reliance on petroleum revenues weakens state institutions and creates political instability and economic decline ('paradox of plenty').

evolved. For example, the ‘rentier state’<sup>10</sup> literature stipulates two major arguments: that oil wealth makes states less democratic and that it leads governments to fail in promoting economic development (Collier and Hoeffler 2004; Humphreys, Sachs, and Stiglitz 2007; Ross 1999, 2001; Ulfelder 2007; Van der Ploeg and Poelhekke 2009). Other researchers focus on the struggles over controlling natural resources and on how these struggles led to devastating conflicts in resource-rich countries such as Sierra Leone, Liberia or the Democratic Republic of Congo. Hereby, they maintain that the unilateral allocation of resource rents by elites often makes it rational for local actors to resist natural resource regimes (Auty 1993, 2001; Bannon and Collier 2003; Bates 1981; Collier and Hoeffler 2005; Eguavoen and Laube 2010; Le Billon 2001; Scott 1976).<sup>11</sup>

In social sciences, one research area focuses on institutions, policies and actors as intervening variables between natural resource wealth and its country-specific appearances. Here, the aim is to unravel institutions and policy-making bodies, often treated as ‘black boxes’, through the identification of institutional failures and policy-making weaknesses (Bhattacharyya and Hodler 2010; Cabrales and Hauk 2007; Robinson, Torvik, and Verdier 2006; Ross 1999, 2001; Tadjoeeddin 2007). Yet, Ascher (1999) illustrates how governments as *actors* simply waste resources due to failed policies and not because of “[...] greed, power, stupidity or ignorance [...]” (Ascher 1999: ix) as the ‘resource curse’ literature stipulates. He argues that instead of failing to plan, institutions often plan to fail: Ignorance and weak capacity are the deliberate outcomes of policies that enable governments to evade criticism.

Despite different foci, all these scholars share the belief that natural resources are complex to govern. This complexity arises from the “wickedness” of natural resources (Rittel and Webber 1973). They are wicked in the sense that their management relies on elusive political judgments which are hardly ‘true’ or ‘false’ but – if anything – ‘better’ or ‘worse’ (see also Mollinga 2010). Based on this complexity, the concept of *natural resource governance* emerged as a new concept.

### 2.1.1 Conceptualizing Natural Resource Governance

According to Gerring (1999: 357-358), the formulation of a concept necessitates a *definiendum* (the event to defined), a *definiens* (attributes defining the event) and a *label* (the term). A ‘good’ concept is, among other things, parsimonious, internally coherent and externally differentiated.<sup>12</sup> A concept is coherent and parsimonious if it defines the core

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<sup>10</sup> A ‘rentier state’ is characterized by its high dependence on external rents, typically generated from natural resource exploitation and not from production (labor), investments (interest) or risk management (profit) (Jensen and Wantchekon 2004: 814).

<sup>11</sup> Scott (1976) argues that confrontational forms of ‘class struggle’ are not viable due to the repressive forces of modern agrarian classes and the states supporting them. Rather, peasants violently attack the state when it is perceived as disorganized or weak.

<sup>12</sup> The other criteria are familiarity (the concept does not clash with established usages), resonance (it includes a “cognitive click”), depth (it bundles a number of properties), theoretical utility (it aids

meaning of an event by identifying a limited number of attributes, and it is externally differentiated if it is bonded to certain phenomena only (and, by that, different from other concepts). These remarks are considered while conceptualizing natural resource governance in the following.

*Natural resources* are here understood as non-artificial products found in nature that possess value to mankind (Alao 2007). This value is situational, temporal and changes over time which accelerates the complexity of governing natural resources. *Governance* describes collective steering by interdependent and power-asymmetric actors and “[...] encompasses the institutions, systems, “rules of the game” and other factors that determine how political and economic interactions are structured and how decisions are made and resources allocated” (Grindle 2008: 2). Whereas the concept was used to refer to ‘government in process’ in the past, a scholarly and paradigmatic switch enforced the rethinking towards steering (du Preez 2015: 26).<sup>13</sup> Steering is central, “[...] with the basic idea being that there must be some mechanism for making and implementing collective goals for society” (Peters 2002: 3).

This processual understanding of governance emphasizes the horizontal interdependencies among actors and, hence, their need to interact in order to govern complex systems. Moreover, the need to interact is perpetuated by the institutions and policies that characterize a society. Following these two definitions, *natural resource governance* means the

*interactions between interdependent and power-asymmetric actors that (aim to) steer natural resources (i. e., non-artificial products found in nature) and deriving revenues, as well as the institutions and policies that embed these interactions.*<sup>14</sup>

In practical terms, natural resource governance involves the configuration and organization of natural resource sectors, actors’ communication and decision-making as well as the institutions and policies that shape actors’ steering (or are a result thereof). It differs from two neighboring concepts – government and natural resource management: If in

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theoretical formulations), and field utility (it enhances the utility of neighboring concepts, Gerring 1999: 367-384).

<sup>13</sup> The concept of ‘governance’ is contested as it became a panacea for explaining outstanding social and political development in various developing countries. This is particularly the case in regard to the concept of ‘good governance’ which “[...] has far outpaced its capacity to deliver” (Grindle 2008: 1). Kofi Annan, while serving as UN Secretary General, called good governance the single most important factor in eradicating poverty and promoting development. Yet, many scholars argue that the term has become an empty shell, an additive rather than analytical concept, due to its infinite number of ‘defining’ variables (Grindle 2004). For further reading see Aguilera and Cuervo-Cazurra (2009), Chibba (2009), Grindle (2004, 2007, 2008), and du Preez (2015).

<sup>14</sup> This definition is in line with the understanding of Bodin and Crona (2009), two of the currently most influential researchers in the field, who understand natural resource governance as “[...] the management of natural resources, as well as the structures and processes that provide the social and institutional environment in which the management can take place” (Bodin and Crona 2009: 366). Others refer to natural resource governance as ‘co-management’ or extend it to ‘adaptive co-management’ (Armitage 2009; Carlsson and Berkes 2005).

*government* one designated actor (the state and its different representatives) is at play, in governance a multitude of actors tackles problems with the authority to do so (Hall and Biersteker 2002). This authority originates from legal entitlement, public commission (representation) or *de facto* influence (e.g., through historical heritage or (ascribed) power). Contrary to the vertical view as in government, governance therefore pressurizes a horizontal and less institutionalized view of power distribution, rule-making and resolution finding (Bodin et al. 2011: 6; Lockwood 2010: 987-989).<sup>15</sup> It hereby highlights the “[...] continuous problem-solving process, rather than a fixed state, involving extensive deliberation, negotiation and joint learning within problem-solving networks” (Carlsson and Berkes 2005: 65).

Natural resource governance also differs from natural resource *management*. Some scholars argue that natural resource management is broader than natural resource governance as it includes the biophysical perspective on natural resources (Bodin et al. 2011; Davies and White 2012). Other authors use the concept of natural resource management to describe specific actions related to natural resources, such as agricultural experiments to increase crop yield. Contrary to this, governance is conceptualized to cover the institutions which embed such management actions (Crona 2011: 45).

The concept of natural resource governance as it is understood here opposes constructs of ‘network governance of natural resources’. According to researchers such as Christopoulos (2008) and Grant et al. (2015), network governance of natural resources is a product of actors’ relations. Yet, the very idea of natural resource governance is about and only starts with steering through interacting. Methodologically, involved actors can be understood as a network but as a concept, ‘network governance’, to the present understanding, does not carry additional benefit. Rather, the thesis understands ‘network governance’ as part of the ‘binary metaphorical approach’ in which “[...] networks are often treated as a metaphor [...] [and] as a quite unspecified binary variable; either there is a network or not, and the internal structural characteristics of these networks [...] are not explicitly addressed” (Bodin et al. 2011: 17). The fallacy of networks as metaphors particularly dominates African studies where networks are currently rarely mapped or even modelled (Walther 2015: 2). This gap motivates the thesis’ approach to map and investigate different networks among those actors that aim to steer resources and revenues in Ghana’s developing petroleum sector.

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<sup>15</sup> Hereby, the demand for controllability through governance instruments occurs on all five stages of the value chain in natural resource extraction: Award of contracts and licenses, regulation and monitoring of operations, collection of taxes and royalties, revenue management and allocation, and the implementation of sustainable development policies (Alba 2009). The present thesis tackles patterns of interactions – and problems within these interactions – on the last two stages of this value chain.

### 2.1.2 Contextualizing Natural Resource Governance

Most scholars praise natural resource governance as having several advantages over hierarchical management: It is said to better identify challenges and appropriate ways to invest resource rents due to the inclusion of divergent actors and their respective knowledge; reduce conflict among stakeholders;<sup>16</sup> build social capital;<sup>17</sup> decrease environmental hazards and make benefits more inclusive for society as a whole (Innes 1996; Bernard and Young 1997; Brick, Snow, and Bates 2000; Weber 2000; Bodin and Crona 2008; Davies and White 2012). Hence, governance as horizontal steering is a normative term that is argued to exceed vertical steering.

Supporters of horizontal steering implemented the idea across countries and resource sectors, for example among the Menominee Indians in Wisconsin (Bernard and Young 1997), in sustainable park management in the UK (Prell, Hubacek, and Reed 2009) or Vietnam (Polet 2003), in wetland management in Tanzania (Mahonge 2010), coastal management in postwar Sri Lanka (Siriwardane 2015) or in fisheries co-management in South Africa and Ghana (Hauck and Sowman 2003). Hauck (2010) investigates the resilience of the ‘rural poor’ against environmental disturbances in the Upper East Region of Ghana by scrutinizing the potentials of collaborative fisheries in small reservoirs. Therein, she emphasizes that the horizontal exchange of information and knowledge about fishing methods and trainings flows easily across ethnic and communal borders, even between conflictual ethnicities (Hauck 2010: 195). However, the free spread of knowledge does not extend to technologies externally introduced to the communities such as the use of hapas.<sup>18</sup> Additionally, she looks beyond SNA results in the case of trust and social capital. Although her network analysis reveals strong support networks among fishermen, deep distrust nevertheless characterizes the communities. She suggests that in order to identify causes for this mistrust, it is necessary to look beyond networks and focus on the roles and characteristics of actors as well as their past experiences (Hauck 2010: 196).

Among the various proclaimed benefits, this thesis ties up four distinct features: the acknowledgement of complexities in natural resource, the concept’s pliant fit to decentralization literature, the sensitization for redistributive justice questions, and its topicality in international development cooperation. Firstly, natural resource governance acknowledges the complexity and contestation in the context of natural resources. Complexity and contestation arise from the multiple problems attached to natural resources, the divergent

<sup>16</sup> The term ‘stakeholder’ originates from business research and describes “[...] any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman 1984: 46). Applied to petroleum governance, stakeholders are those actors that affect or are affected by problems, rule-settings or policy-implementations within the context of petroleum resources. The term is synonymously used for ‘actors’.

<sup>17</sup> In principle, ‘social capital’ are resources arising from social relations. See Section 3.1 for further details.

<sup>18</sup> ‘Hapas’ are net enclosure in which broodfish are kept to protect them from older fishes and to monitor their sprawling.

perspectives on how to solve these problems, different strategies to implement solutions to these problem, the need for institutional arrangements to coordinate these strategies across spatial and jurisdictional domains, and divergent views on how to invest resulting revenues (Lockwood 2010: 986-989). The concept further stresses the intertwined character of collective action problems (e.g., non-excludability and free-riding but also the reduction of transaction costs) and the need to tackle these problems by multi-layered solutions (Olson 1975). Governance, hence, can provide the arena for collaboration that is necessary for conflict resolution (Prell 2012: 32).

The concept is secondly fruitful as it inherently connects to discussions about decentralization which became a major topic in development research and, thereafter, in natural resource governance literature.<sup>19</sup> Decentralization is the transfer of (decision-making) power from a higher to a lower level.<sup>20</sup> As centralized, top-down approaches are often perceived to have failed in governing natural resources (Berkes and Folke 1998; Holling and Meffe 1996; Ostrom 1990; Pretty and Ward 2001), proponents of decentralized policies argue that decentralization improves resource allocation, accountability, transparency, efficiency and sustainability in natural resource sectors (Andersson, Gibson, and Lehoucq 2004; Hobley 1996; Larson and Soto 2008). Therein, two strands of literature dominate:

The first strand of literature argues that decentralizing natural resource policies contributes to poverty alleviation, development, ‘good governance’, and, hence, favorable changes on society level (Andersson, Gibson, and Lehoucq 2004; Larson and Soto 2008; Hirons 2013). Scholz and Wang (2006: 92) even argue that local governance can be more important for rule enforcement and compliance within natural resource governance than central institutions if local structures complement state regulations and “[...] enhanc[e] bureaucratic outputs and compliance outcomes [...] that otherwise tend to undermine enforcement efforts”. The second strand of literature maintains that decentralization promotes the inclusion of local rights and knowledge, and is better able to mobilize citizens (Agrawal and Ostrom 2001; Blaikie 2006; Toulmin 2009). Natural resource governance and decentralization, hence, intersect at the conviction that disseminating (decision-making) power and promoting horizontal rather than vertical steering benefits society overall.

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<sup>19</sup> This literature strand particularly evolves around forestry. As Larson and Soto (2008: 231) argue “[h]igh-value nonrenewable subsoil resources, such as important minerals and petroleum, are almost always centrally owned and managed and are rarely even considered for decentralization, although local communities may receive compensation for exploration or exploitation on their lands”. Nevertheless, this thesis aims to provide complete insights to current discussions around natural resource governance and, thus, cannot ignore decentralization.

<sup>20</sup> Decentralization may take different forms: ‘Deconcentration’ transfers responsibilities to local entities to implement directives of the central authority while the latter still has the decision-making power. Contrary to this, the central authority legally confers some power to lower entities in ‘devolution’ systems. Finally, ‘delegation’ fully enables sub-national authorities to independent decision-making (Ahwoi 2010b; Töttemeyer 2010 ). In Ghana, local governance is largely *deconcentrated* but also knows elements of deconcentration and devolution. See Section 5.2.1 for more information.



Related to decentralization, proponents of collaborative governance approaches thirdly argue that multi-actor interactions are better able to solve struggles over material redistribution and social justice (Hickey and Mohan 2005; Larson and Soto 2008). In the context of natural resources, material redistribution and social justice is disputed in all domains, for example regarding communities in close proximity to resource extraction, local vs. national government agencies or resource-rich vs. resource-poor regions. While for example, the Government of Ghana perceives the petroleum resources as *national* wealth and consequently invests petroleum revenues into projects across the country, traditional authorities in the Western Region perceive it as a *local* wealth of their region and, thus, strive for exclusive regional benefits. The redistributive and social tensions arising from these different perspectives and strategies need to be solved based on interactions and, potentially, collaborative steering among conflicting parties.<sup>21</sup> In consequence, it is necessary to scrutinize how petroleum actors in Ghana appropriate struggles of material redistribution and social justice together or in opposition to each other (see Chapter 6 and 7).

Finally, natural resource governance is a fruitful concept for investigation as development practitioners increasingly implement its logic in the framework of so-called ‘multi-stakeholder platforms’. Such initiatives bring together representatives of different sectors (government, civil society, private companies, media etc.) to broaden discussions, to gather and disseminate knowledge and information, or to overcome stalemates between conflicting parties (Chibba 2009; North, Wallis, and Weingast 2009; Sreide and Truex 2013; Warner 2005, 2007).<sup>22</sup> Yet, even though multi-actor platforms are increasingly viewed as panacea against the resource curse in development discourses (both in research and practice), this appraisal is largely done without first understanding the internal mechanisms and potential drawbacks. This concerns, for example, questions of legitimate representation, power asymmetries, lack of transparency, and the danger of discharging governments or companies from their responsibilities. These fallacies are mostly ignored in a literature that is highly normative and tends to argue what *ought* to be rather than what *is*. This argument, together with the unchallenged questioning of legitimate representation and power, suggest that natural resource governance as a concept requires a critical evaluation. This is what the next section will explore.

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<sup>21</sup> This is more a problem in offshore petroleum extraction which affects communities only indirectly and raises distributional tensions concerning the question who is ‘the most affected’ (Thorp 2012: 8).

<sup>22</sup> One of the most prominent multi-actor initiatives is the Kimberley Process to make diamonds and other minerals conflict-free. Since recently, the Organisation for Economic Co-Operation and Development (OECD) and the German Federal Ministry for Economic Cooperation and Development (BMZ) plan to realize the Sustainable Development Goals (SDGs) with the help of multi-actor platforms.

### 2.1.3 Criticizing Natural Resource Governance

The first critical remark – out of four – concerns the lack of debate and, henceforth, definition of ‘successful’ natural resource governance. The majority of researchers and practitioners rather focuses on favorable variables assumed to benefit ‘successful’ resource governance. For example, Lockwood (2010: 991-997) itemizes eight dimensions as a “guidance” for natural resource governance: Legitimacy, transparency, accountability, inclusiveness, fairness, integration, capability, and adaptability.<sup>23</sup> Though these dimensions might be the means to achieve successful resource governance, I argue that they do not define its success per se. Admittedly, successful natural resource governance *is* hard to define because of its complexity, wickedness and context-dependency. From a developmental<sup>24</sup> perspective, the present thesis suggests to consider natural resource governance as ‘successful’ if interactions between the interdependent and power-asymmetric actors who aim to (collectively) steer natural resources prevent the overexploitation of natural resources, the waste of deriving revenues, and contribute to the socio-economic development of the country. Moreover, the success hinges on meeting the objectives set by the respective country.

Secondly, scholars and practitioners tend to overlook potential vagaries and to romanticize governance as automatically better than centralized management. Conley and Moote (2003: 382) get to the heart of this over-optimism by stating that they are “[...] unnerved by the ways in which these processes [collaborative approaches] have been portrayed as a cure-all”. Indeed, only few authors – and no actor in Ghana’s petroleum sector interviewed for this thesis – discuss the several weaknesses inherent to natural resource governance: the normative foundation, the erosion of democratic processes, the entrenchment of local power elites, the potential necessity of government rather than governance to solve question of material redistribution and social justice, or the inducement of irreconcilable values which may fuel conflicts instead of preventing or solving them (Andersson, Gibson, and Lehoucq 2004; Coggins 1999; Davies and White 2012; McClosky 1999; Lockwood 2010). For example, based on their study of environmental politics in the Brazilian Amazon, Brown and Purcell (2005) argue that literature and practice of natural resource governance provide a “[...] “local trap” that leads researchers to assume that the key to environmental sustainability, social justice, and democracy [...] is devolution of power to local-scale actors and organizations” (Brown and Purcell 2005: 608). Lacking the hierarchical structure of government instruments and, in democratic regimes, a public mandate for non-state actors, horizontal steering faces challenges of legitimacy, transparency and

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<sup>23</sup> These dimensions are replicated in other facets of the governance concept such as good governance, see for example Grindle (2007, 2008).

<sup>24</sup> ‘Development’ provides an ideological frame to describe and explain economic, social and cultural differences on a global scale since World War II (Yarrow 2011: 3). On an abstract level it can be understood as “[...] a bundle of interconnected and normatively positive processes which took place in some parts of the earth but not in others” (Ziai 2012: 4).

accountability (Carlsson and Berkes 2005; Larson and Soto 2008) and might, thus, miss the outcomes it is imagined to bring in the first place.

Thirdly, Hickey and Mohan (2005) and Larson and Soto (2008: 231) confirm the “largely disappointing” results of decentralizing natural resource policies, arguing that decentralization barely leads to a greater participation of and social justice for marginalized groups. They conclude that the transfer of power has little meaning and promotes confusion rather than inclusion.<sup>25</sup> Power differences are particularly critical as the concept’s supporters often naively overestimate the ability of *all* stakeholders to effectively participate in the steering (Eguavoen and Laube 2010: 6). While some actors are designed to participate in resource governance by law, others seek influence independently and, hence, it severely hinges on the agencies of actors whether or not they can steer resource governance. Standard literature about natural resource governance largely ignores all these factors. The inherent problem is that academic and practical discussions mostly focus on arguing *why* natural resource governance is preferable but do not scrutinize *if* and *how* it is implemented (see, for example, Appiah-Adu 2013).

Finally, the present study argues that studies on natural resource governance often lack the appropriate conceptual framework and research design. This criticism relates back to the dominance of using networks as metaphors or heuristic devices rather than a methodical tool-kit. If the concept’s core idea is joint steering by interdependent and power-imbalanced actors through interaction, using theories and methods capable of scrutinizing these interactions is pivotal. However, the primacy in natural resource governance still lies with *actors* rather than *relations* and, subsequently, with actor-centered approaches rather than relational approaches. Without neglecting the importance of such research,<sup>26</sup> if we seek to study the core idea of natural resource governance (i. e., collective steering), we need to rethink our conceptual approaches and methodical procedures. A *relational* perspective on natural resource governance comprises theoretical arguments as to why actors should (not) interact and methodological arguments as to how they do (not) interact.

## 2.2 The Relational Perspective on Natural Resource Governance

The *relational* perspective on natural resource governance evolves naturally from the definition of natural resource governance as the attempt to collectively steer natural resources. It is argued that different actors have an interest in collaboration as they possess different resources and, hence, depend on each other: For example, research maintains that state authorities have legal decision-making power, private companies economic capital,

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<sup>25</sup> Collaborative approaches are also said to terminate in the lowest common denominator solution rather than in the most appropriate one (Coglianese 1999). In other cases, they might involve a trade-off, for example between environmental sustainability on the one hand and households’ empowerment and income generation on the other (Larson and Soto 2008).

<sup>26</sup> In its broader conceptualization, the thesis’ conceptual argument is located in actor-centered institutionalism (Scharpf 1997) as well.

traditional authorities cultural capital,<sup>27</sup> and Non Governmental Organizations (NGOs) popular legitimacy through representation. Moreover, actors' necessity to relate arises from the 'wickedness' of natural resources and the fact that "[...] dealing with wicked problems is – to a large extent – a problem of interaction" (Van Bueren, Klijn, and Koppenjan 2003: 193). In fact, many of the goals actors pursue with their engagement in natural resource governance may only be achieved through collaboration (Ostrom 1990).

### 2.2.1 Rethinking Natural Resource Governance

The focus on "problem[s] of interaction" (Van Bueren, Klijn, and Koppenjan 2003: 193) advances the concept of natural resource governance in three ways: On the one hand, the relational perspective goes beyond the static or atomistic understanding of human life and acknowledges the boundless nature of human interactions across individuals, groups and places (Desmond 2014: 551). It helps to focus on actors' interdependencies and inequalities rather than the actors themselves.

On the other hand, the dominating substantialism in natural resource governance which concentrates on "[...] internally homogeneous and externally distinctive and bounded objects" (Wolf 1982: 6) often only *presumes* the existence of groups instead of acknowledging networks which cross 'group' boundaries (Desmond 2014: 551). As this work will show, the social construction of groups fails to adequately describe actors' interactions in Ghana's petroleum sector. For example, NGOs do interact with the public and private sector as much as they interact within 'their' civil society 'group'. The relational perspective on natural resource governance forces researchers to focus on relations between actors and groups and concerns the habits and interactions across group boundaries (Castells 2010; Wellman 1997).<sup>28</sup>

The relational perspective thirdly offers the framework to move beyond a purely institutional analysis of actors and their roles in natural resource governance. While examining the institutional setting in natural resource governance is necessary to understand the structural embedding of actors' relations, it is insufficient to understand what is really going on in natural resource governance. Consequently, this thesis argues that in order

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<sup>27</sup> The designation 'traditional authorities', in this thesis, refers to all those forms of social and political authorities that have their historical origin in the pre-colonial society and that were incorporated by the British colonialists into what is today Ghana. It includes chiefs, queen mothers, and *tindaana* ('land priests'). The Constitution defines *chiefs* as "[...] a person, who, hailing from the appropriate family and lineage, has been validly nominated, elected, or selected and [...] installed as a chief or queen mother in accordance with the relevant customary law and usage" (Art. 277). Queen mothers' main function is to select a new chief after his / her predecessor has died or has been en-stooled. Rivalries between the 'legitimate' successor for a vacant stool are recurring: For example, the stool of the Sekondi Traditional Area is vacant since 2003 (see Interview Transcript II, page 4). For further information on this case see Pichillo (2008).

<sup>28</sup> Radcliffe-Brown (1940) made this argument regarding 'culture' and 'class': "We do not observe a "culture", since that word denotes not any concrete reality, but an abstraction, and as it is commonly used as a vague abstraction. But direct observation does reveal to us that these *human beings are connected by a complex network of social relations*" (Radcliffe-Brown 1940: 2, emphasis in original).

to understand natural resource governance, it is necessary to move the focus from *actors* to *relations*, from *actions and re-actions* to *interactions* and from *bounded groups* to *boundless networks*.

### 2.2.2 Social Network Analysis as a Tool in Development Research

Methodically, this study maintains that the relational perspective on natural resource governance is best approached by Social Network Analysis (SNA). SNA traces back to the 1940s when attention shifted from concepts of social structure and relatively static cultural patterns to concepts of social organization, adaptation and adaptability (Whitten Jr. and Wolfe 1973: 717). The psychiatrist Jacob Moreno is said to be the first to draw what he called a ‘sociogram’ (among babies in a nursery) in the 1930s, giving birth to graph theory. In parallel, anthropologists promoted the importance of relations and reciprocity in kinship studies (Barnes 1954; Firth 1951; Fortes 1949; Lévi-Strauss 1969; Radcliffe-Brown 1952). John A. Barnes is esteemed as the godfather of the *network* term:

Each person is [...] in touch with a number of other people, some of whom are directly in touch with each other and some of whom are not [...] I find it convenient to talk of a social field of this kind as a *network*. The image I have is of a set of points some of which are joined by lines. The points [...] are people, or sometimes groups, and the lines indicate which people interact with each other [...] A network of this kind has no external boundary, nor has it any clear-cut internal divisions.” (Barnes 1954: 43-44, emphasis in original).

Barnes (1954) identifies the core characteristics of networks: individual or collective actors (“groups”) as “points” (*nodes*) connected by “lines” (*ties*). With this understanding, he inspired the so-called “Manchester School” around Mitchell (1974) and Wellman (1997) who used the network toolkit to object against structural functionalism (Parsons 1968). They argue that social institutions derive from interpersonal relations and not from individually internalized values. Simultaneously, sociologists coined the field by developing the most important concepts in SNA: homophily (Blau 1977),<sup>29</sup> structural holes (Burt 1992, 2004, 2005),<sup>30</sup> structural equivalence (White 1970; White, Boorman, and Breiger

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<sup>29</sup> ‘Homophily’ describes the tendency of similar actors to connect with each other.

<sup>30</sup> ‘Structural holes’ denote a gap in a network that would, if present, create a bridge between two or more unconnected alters. The structural hole argument builds upon Granovetter’s (1973) concept of the ‘strength of weak ties’, Freeman’s (1979) ‘betweenness centrality’ and Cook’s and Emersons’ (1978) ‘benefits of exclusive exchange partners’. Simmel (1908) termed this effect as ‘tertius gaudens’, the third who benefits.

1976),<sup>31</sup> and small worlds (Watts 1999, 2003).<sup>32</sup> Diffusion<sup>33</sup> is another “master idea” (Kadushin 2012: 209) of social networks, particularly in combination with Granovetter’s (1973) concept of the strength of weak ties. Granovetter (1973) argues that weak ties, i. e., relations to acquaintances, are strong as they have a higher probability to provide new and non-redundant information. Moreover, sociologists interlink the study of social relations with ideas of trust (Cheshire, Gerbasi, and Cook 2010; Molm, Takahashi, and Peterson 2000; Molm, Collett, and Schaefer 2007), social inequality (DiMaggio and Garip 2012), social capital (Lin 1999; Burt 2005; Putnam 2000), and social action (Coleman 1990).

Metaphorically (and partly theoretically), political scientists promote the idea of policy networks since the 1970s as a decentralized concept of social organization on which actors rely to reduce the costs of establishing new or maintaining existing social contacts (Knoke 1990, 2011; Leifeld and Schneider 2012).<sup>34</sup> Taking the network perspective, political scientists aim to explain and predict collective policy decisions, to explore how networks form, persist, and change over time, and to include complex and ‘informal’ relationships beyond the analysis of ‘formal’ institutional arrangements (Kenis and Schneider 1991; Knoke 1990).<sup>35</sup>

Most importantly for this work, the intersection between natural resource governance and social network analysis has drawn increasing scholarly attention since Tompkins and Adger (2004) argued that networks can build community resilience and increase the adaptive capacity for environmental change. Subsequently, other scholars established links between chances and challenges of governing natural resources and social network structures (Prell, Hubacek, and Reed 2007, 2009; Bodin and Crona 2008, 2009; Bodin et al. 2011; Crona and Hubacek 2010; Crona 2011; Ramirez-Sanchez and Pinkerton 2009).

For example, Bodin and Crona (2009) show how networks’ reachability and density affects actors’ ability to collaborate. In a study about fishermen’s information-sharing networks in Mexico, Ramirez-Sanchez and Pinkerton (2009) conclude that fishermen share information following a ‘friendship - kinship - acquaintance’ order of importance. Here-with, they contradict social capital literature which generally assumes that actors have a preference order of ‘kinship (bonding capital) - friendship (bridging capital) - acquaint-

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<sup>31</sup> Actors are ‘structurally equivalent’ if they have exactly the same ties to the same alters. Such network actors occupy similar network positions and roles (Lorrain and White 1971).

<sup>32</sup> ‘Small worlds’ describe the phenomenon that heterogenous actors are connected through a small number of intermediaries. An early experiment using chain letters to reach a designated target person found the famous ‘six degrees of separation’ (Milgram 1967).

<sup>33</sup> ‘Diffusion’ is a process in which strategies or policies are interdependent whereas ‘convergence’ is the outcome of increased similarities in strategies or policies. Diffusion can cause convergence but convergence can also be induced by other processes (Fink 2013: 630).

<sup>34</sup> ‘Policy networks’ are “[...] integrated hybrid structures of political governance. Their *integrative logic* cannot be reduced to any single logic such as bureaucracy, market, community or corporatist association, but is characterized by the capacity for mixing different combinations of them” (Kenis and Schneider 1991: 42, emphasis in original).

<sup>35</sup> The artificial dichotomy between ‘formal’ and ‘informal’ institutions is discussed in Section 3.2.

tances (linking capital)'. Other studies caution against low network cohesion, i. e., the existence of many subgroups,<sup>36</sup> which tends to undermine joint actions to govern resources (Oh, Chung, and Labianca 2004).

Yet, so far, the emphasis at this intersection still lies with application rather than theory building and with treating collaboration as a binary variable rather than a multi-dimensional phenomenon. As the overall aim of this thesis is to better understand how actors' interactions contribute to collaboration in natural resource governance, it is important to discuss theoretical reasons for potential collaboration in natural resource governance. This is the aim of the next chapter.

## 2.3 Summary

Governance is a complex process and some may argue that because of the 'wickedness' inherent to natural resources, natural resource governance is a even more complex process. It is defined as interactions between interdependent and power-asymmetric actors who (aim to) steer natural resources and derive revenues (collectively) as well as the institutions and policies that embed these interactions. With this definition, the thesis touches on four recent streams in natural resources governance literature: complexity, decentralization, redistributive justice, and multi-actor constellations. The definition deliberately excludes normative concepts to evade the danger of romanticizing natural resource governance as cure-all. The given definition forms the basis of the relational perspective on natural resource governance which focusses on relations rather than actors, on interactions rather than unilateral actions and on boundless networks rather than bounded groups. Naturally, such a clear focus goes at the expense of illuminating other phenomena, for example in-depth insights into institutions. The most suitable methodical tool to apply this thinking is Social Network Analysis (SNA) which roots in an interdisciplinary combination from anthropology, sociology, psychology and, increasingly, political science and political ecology. All this provides the background to understand how actors' interactions affect outcomes in petroleum governance in Ghana and, therefore, the central aim of this thesis.

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<sup>36</sup> A 'subgroup' exists if there are significantly more ties between group members than relations with non-group members (Wasserman and Faust 1994).





### 3 Conceptual Approach: Steering Through Exchange

The central argument of this thesis is that in order to understand natural resources governance, the central unit of analysis has to be the relations between those actors who (aim to collectively) steer natural resources. Precisely, to understand petroleum governance in Ghana as the dependent phenomenon, this study focuses on exchanges among actors who aim to influence processes and decisions in Ghana's petroleum sector. As structural characteristics constrain and enable actors' agency to exchange, the research also takes into consideration the institutions and policies which embed actors' relations.

Based on exchange theory, I argue that exchanges are the core of collaboration. In the tradition of Blau (1964, 1986) and Molm (1997*a*) (see also Molm and Cook 1995; Molm, Takahashi, and Peterson 2000), the conceptual approach understands *exchange* as a voluntary social action that is contingent on rewarding reactions from others. These rewarding reactions are the provision of *resources*. In this research, such resources comprise economic capital (financial resources), human capital (an actors' capabilities or talents), social capital (resources provided through social relations), and legitimacy through the order to represent others in exchanges. Successful exchanges are assumed to benefit collaboration. However, as actors can also use their economic, human and social capital or their legitimacy to exploit each other, collaboration is by no means an automatic outcome of exchanges. Rather, contestation is equally likely.

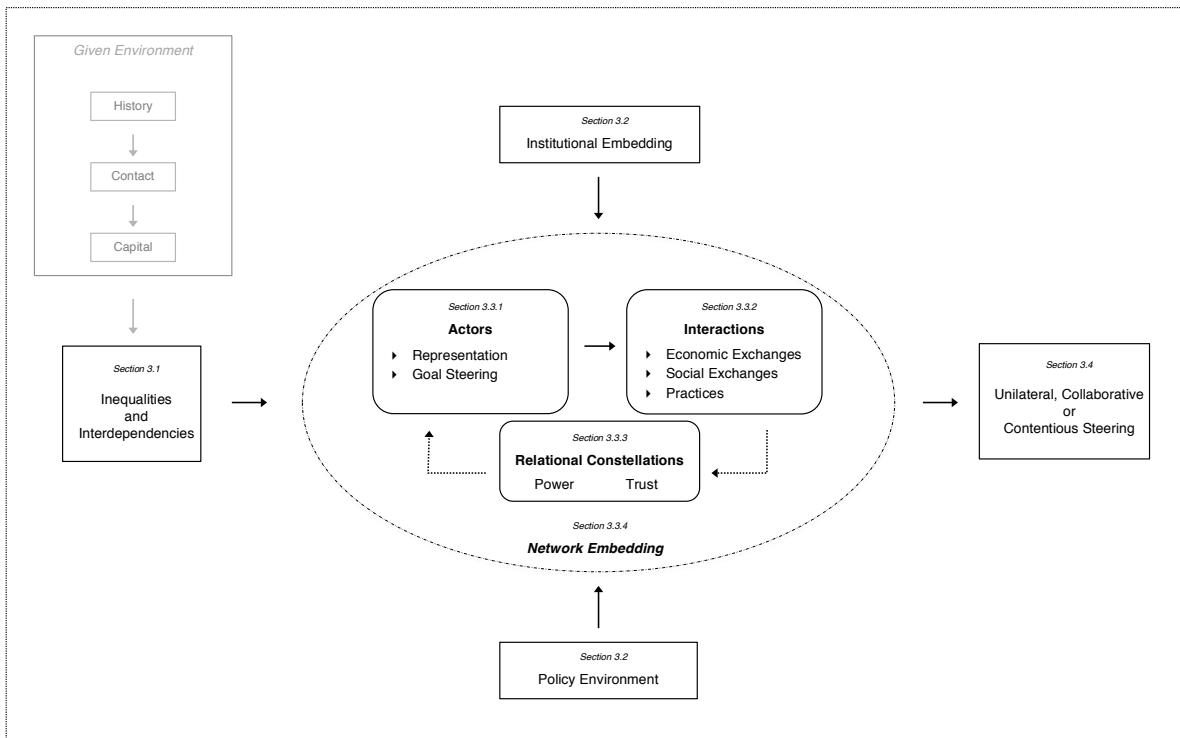
Exchange theory has its interdisciplinary roots in sociology (Homans 1961; Blau 1964, 1986; Emerson 1962, 1972*a,b*; Molm and Cook 1995; Molm 1997*a*; Molm, Takahashi, and Peterson 2000), behavioral psychology (Thibaut and Kelley 1959; Kelley and Thibaut 1978), anthropology (Malinowski 1922; Mauss 1966; Lévi-Strauss 1969; Sahlins 1972), and rational-choice theory (Coleman 1990; Bienenstock and Bonacich 1993; Diekmann et al. 2014).<sup>37</sup> It taps the cornerstone of societies, i. e., that actors need others to achieve valued outcomes. Its key goal is to understand how relations develop and change, how these relations create social structures and in which ways these social structures enable and restrict actors' agency (Cook and Rice 2003: 53; Molm and Cook 1995: 209). The strength of exchange theory is not only this simplicity but also its ability to shed light on how the simple mechanism of exchange is “[...] forging relationships, maintaining social bonds, creating obligations and debt, gaining status and social position, and obtaining resources needed [...]” (Hill 2012).

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<sup>37</sup> For a thorough review of exchange theory's historical evolution and recent trends see Cook and Rice (2001, 2003).

Figure 3.1 visualizes the conceptual approach which structures the subsequent theoretical discussion and the empirical analysis of petroleum governance in Ghana.

Figure 3.1: **Conceptual Approach: Natural Resource Governance**



Source: Own graph influenced by Scharpf (1997: 44) and Swedberg (1994).

Accordingly, this chapter begins with the argument that complex inequalities and interdependencies – resulting from social contact and the unequal accumulation of capital in the past – necessitate interactions (Section 3.1). It continues with discussing how institutions and policies embed actors’ networks and, by that, structure their interactions (Section 3.2).<sup>38</sup> Section 3.3.1 then takes a closer look at actors in exchange while Section 3.3.2 scrutinizes different forms of interactions (economic exchanges, social exchanges and practices). In Section 3.3.3, power and trust as two important relational constellations assumed to result from exchanges are discussed. As exchange theory argues that the opportunity to exchange depends both on actors’ positions within a network *and* the network’s overall shape, Section 3.3.4 elaborates potential effects of network characteristics on collective steering. The last two parts discuss these conceptual considerations in regard to unilateral, collaborative or contentious steering (Section 3.4), elaborate limitations of the conceptual approach and summarize potential implications for the petroleum sector

<sup>38</sup> It stands to reason that in their interactions, actors do also influence institutions and policies. Yet, this thesis focuses on the structural embedding of actors’ social conduct and, consequently, the figure includes one-directional arrows only.

in Ghana (Section 3.5).

Overall, the present chapter aims to fulfill three goals: (1) To conceptually explain the need for and the different kinds of actors' interactions in natural resource governance, (2) to provide a theoretical contribution to the study of networks and (3) to guide the subsequent empirical analysis of petroleum governance in Ghana.

### 3.1 The Need for Exchange: Inequalities and Interdependencies

As Figure 3.1 indicates, the conceptual approach builds on the assumption that actors' inequalities and interdependencies necessitate interactions. These two factors originate from past social contact and the resulting unequal distributions of capital (i. e., actors' resources)<sup>39</sup> among actors. Bourdieu (1997: 46) defines *capital* as accumulated labor (materialized or embodied) that enables actors to accrete this labor if it is appropriated on an exclusive basis. It is both an inherent force (*vis insita*) and an immanent principle (*lex insita*) underlying the social world. Capital is, once accumulated, to a certain degree self-pertaining, heritable and is, thus, the sharp opposite of “[...] this imaginary universe of perfect competition or perfect equality of opportunity” (Bourdieu 1997: 46).

All forms of capital are productive, that is, they enable actors to achieve certain ends or, if absent, deny this achievement (Coleman 1988: 98): *Economic* capital are financial resources whereas *cultural* capital describes all forms of cultural competences and know-how.<sup>40</sup> *Human* capital is commonly defined as an actor's capabilities or talents while *social* capital contains the actual or potential resources provided by social relations (Bourdieu 1997: 51). As the “Wild West” in academia (Burt 2005: 5), an infinite number of scholars have defined and discussed social capital (see, for example, Coleman 1988; Fukuyama 1996; Hardin 1999; Lin 2004; Putnam 2000). Burt (2005) gives a simple and clear definition:

“The human capital explanation of the inequality is that people who do better [...] are more intelligent, more attractive, more articulate, more skilled. Social capital is the contextual complement to human capital in explaining [...] how people do better because they are somehow better connected with other people [...] One's position in the structure of these exchanges can be an asset in its own right. That asset is social capital” (Burt 2005: 4).

However, scholars tend to ignore potential downsides of social capital (Browning 2009). For Portes' (1998: 15) this is a result of “[...] our sociological bias to see good things

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<sup>39</sup> In this thesis, the term ‘resources’ is used as a collective for all capabilities an actor possibly possesses. These capabilities enclose the different forms of capitals as well as legitimacy through representation. See Section 3.3.2 for further details.

<sup>40</sup> These are, in Bourdieu's (1997: 47-51) thinking, cognitive competences (embodied cultural capital), transferrable assets (objectified cultural capital) and the objectification of these competences and know-how (institutionalized cultural capital).

emerging from sociability; bad things are more commonly associated with the behavior of homo economicus”. Potential negative consequences can range from the exclusion of outsiders to the enforcement of certain “do’s and dont’s” which imply restrictions on personal freedoms (Portes 1998: 15-18). In the present case, negative impacts on natural resource governance could emerge from social capital if, for example, interactions between state authorities and private companies systematically rule out civil society actors or the interests of communities.

Applied to natural resource governance, it is argued that actors attained different kinds and amounts of capital through past social contact making them interdependent (though not equally important) for governing natural resources. For example, private investors are likely to possess large amounts of economic capital and human capital (in the form of knowledge about managing natural resources) but may lack the local knowledge necessary to find suitable staff, gain support for their policies or attain trust within the resource-rich country. Contrary to this, local NGOs may possess exactly this kind of cultural and social capital while lacking sufficient economic resources. The assumption then holds that all actors are aware of their respective talents, weaknesses and mutual dependencies and, thus, are aware of the necessity to engage with each other or the possibility to exploit each other.<sup>41</sup>

### 3.2 The Structural Embedding of Exchange: Institutions and Policies

While inequalities and interdependencies are assumed to perpetuate actors’ need for exchange, the institutional framework and/or the policy environment may even *force* actors to interact: the second step of the conceptual approach suggests that *structures* – provided by institutions and policies – constrain, enable and, sometimes, even demand actors to interact. In parallel, actors’ ability to pursue exchanges, withdraw rewards, punish exchange partners, or refuse exchanges overall (i. e., their *agency*), provides them with the possibility to set and pursue different agendas within this structural embedding.

Various scholars have appropriated the structure-agency-debate but for this thesis only the assumption that structure and agency are interdependent and reinforce each other is crucial (Giddens 1989).<sup>42</sup> While structure can ‘act back’ on actors, they themselves can change the more or less stable configuration of institutions, policies and resulting relations through their agency (Emirbayer and Goodwin 1994; Lawler and Yoon 1996, 1998; Lawler, Thye, and Yoon 2000; Uzzi 1996).

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<sup>41</sup> Legitimacy through representation is another resource that actors possess in exchange. Yet, it is discussed as a mechanism in Section 3.3.1 as indicated by the conceptual framework in Figure 3.1.

<sup>42</sup> Blau (1975) differs two major strands in social science: To perceive social structure as a fundamental underlying everyday life or as a multidimensional space of different social positions in a collectivity (see also Cook and Whitmeyer (1992) and King (2010)). Prominently, Giddens’ (1989) structuration theory argues that structures and agency are not separate entities but exist in an imperceptible, coexisting and mutually reinforcing duality which conflate in ‘social practices’.

*Institutions* are a contested concept in social sciences. Prominent scholars such as North (1990), Ostrom (1992) and Scharpf (1997) narrowly define institutions as sanctionable rules that structure actors' courses of action and, by that, influence actors' cost-benefit-rationales. For the aim of this thesis, it seems yet necessary to use a broader understanding that goes beyond the system of sanctionable rules: Accordingly, *institutions* specify the rules under which policies are made and set constraints to actors' behavior while shaping their goal orientations and navigating their goal implementation. Institutions further make behavior and interactions understandable and – to a certain degree – predictable for those who share the same institutional perception (Scharpf 1997: 40). Shared knowledge about valid institutions is, thus, decisive in social interactions.<sup>43</sup>

Beyond defining institutions, social science literature often separates institutions into *formal* and *informal* institutions (Ostrom 1992).<sup>44</sup> In research about African politics, the dichotomy is mostly used to negatively ascribe an alleged lack of statehood or state enforcement (Azarya and Chazan 1987; Helmke and Levitsky 2004; Hyden 2006; Liebert and Lauth 1999; Tripp 1997). Yet, the dichotomy is problematic in at least three ways: Firstly, it is often used to describe phenomena which are highly formalized but simply do not fit 'Western' standards of written codification. Though scholars revealed the complexity of African social and cultural realities in the past two decades, these realities often tumble normative Western distinctions and, hence, are put aside in an 'informality box' (Mamdani 1996; Yarrow 2011). Secondly, the dichotomy confines institutions, actors or relations at least rhetorically (close) to the area of illegality. Thirdly and most importantly, the dichotomy imposes an artificial rivalry between 'formal' and 'informal' institutions which fails to adequately describe the complex and coinciding realities in most African countries and elsewhere. Hence, if it is necessary to use the dichotomy in order to articulate an argument in the course of this thesis, I understand '*informal*' as closed and invisible rather than simply unwritten (Boone 2005). As MacLean (2010: 24-25) emphasizes: "The key is not whether these rules are actually written, but the degree to which knowledge of the rules is open, visible, and transparent. Public codification is essential for formal institutions, but that codification process may be oral and not written."

*Policies*, on the other hand, are intentional and collectively binding decisions that are enforceable by selected actors in particular political regimes. Applied to natural resource governance it is assumed that institutions and policies enable, constrain or demand actors' interactions in steering natural resources and deriving revenues.

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<sup>43</sup> Ethnographers urge that this characteristic necessitates a sensitive assessment by those outsiders who do not share the same institutional perceptions as it is the case for me in doing research in Ghana.

<sup>44</sup> Having the same in mind, Cleaver (1999) differs 'organizational' vs. 'socially embedded' institutions whereas Giddens (1984) separates between 'rules' vs. 'norms/values'.

### 3.3 The Relational Embedding of Exchange: Actors' Networks

The third major theoretical argument is that institutions and policies influence the network embedding in which actors pursue their agendas (see Figure 3.1, page 24). Network structures and, within them, the configuration of relations, shape actors' behavior by creating opportunities and access to these opportunities (Lawler and Yoon 1996, 1998; Lawler, Thye, and Yoon 2000; Uzzi 1996). Granovetter (1985: 485) summarizes this view:

“Actors do not behave or decide as atoms outside a social context, nor do they adhere slavishly to a script written for them by the particular intersection of social categories that they happen to occupy. Their attempts at purposive action are instead embedded in concrete, ongoing systems of social relations”

Consequently, inequalities and interdependencies due to past exchanges, institutions and policies shape the network's structural embedding and the overall network structure determines how actors engage in natural resource governance. Yet, within the network, actors still have the agency to exchange or not. Hence, it is necessary to move one step further to actors in exchange.

#### 3.3.1 Actors in Exchange

*Actors* are defined as any individual or collective players that are capable of making purposeful choices among alternative courses of action (Scharpf 1997: 7). They are assumed to pursue their agendas with bounded rationality. *Bounded rationality* sees actors as being motivated for exchange by weighing out costs and benefits of alternative interactions with limited knowledge, limited possibilities to process this knowledge and limited time to make decisions based on this knowledge (Rubinstein 1998; Simon 1984; Wittek, Snijders, and Nee 2013). Actors behave rationally to the extent that they repeat successful (beneficial) exchanges and to revoke unsuccessful (costly) exchanges (Molm, Takahashi, and Peterson 2000; Cook and Rice 2003). They interact to obtain rewards (financial means, projects or reputation) or to avoid costs (penalties, reputation loss, or legal sanctions).<sup>45</sup>

Assuming bounded rationality neither implies benefit-maximization (selfish actors with full information engaged in atomized interactions as often assumed by rational-choice theory) nor does it contradict potential collective steering.<sup>46</sup> First, due to existing inequalities, interdependencies and the “double embeddedness” (Kadushin 2012: 202),<sup>47</sup>

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<sup>45</sup> Costs have a two-folded meaning in exchange theory: Contrary to the purely utilitarian assumption of opportunity costs (lost rewards) in economics, exchange theory also takes into account aversive stimuli potentially induced by exchange (Emerson 1976: 349). Opposing this rational assessment of means to achieve goals, scholars such as Schütz (1971 *a,b*) and Esser (1990) argue that actors seek to stabilize a ‘structure of relevance’ (“Relevanzstruktur”) which preconditions meaningful action.

<sup>46</sup> For a recent account of rational-choice thinking see Wittek, Snijders, and Nee (2013).

<sup>47</sup> ‘Double embeddedness’ refers to institutions and policies on the one hand and network structures and practices on the other (Kadushin 2012).

maximizing benefits is – voluntary or involuntary – bounded. Second, as part of a larger network, actors may purposefully choose to not strive for utility maximization. Finally, actors often try to serve their self-interests *through* collaboration (Axelrod and Hamilton 1981).

### Representation

Chapter 2 argues that in governance, a multitude of actors engage with the authority to do so. This authority originates from legal entitlement through institutions or policies, public commissioning (*representation*) or de facto influence. Though representation is inherently tied to exchange, exchange theory sweeps over this particular form of exchange. Emerson (1962) only discusses the concept in regard to ‘corporate group’ constellations: Actors nominate one group member – or an outsider – to exchange resources with others on behalf of the group (e.g., because the actor is perceived as more powerful).

Contrary to its minor role in exchange theory, representation receives major attention within political science literature, at the latest with Pitkin’s (1967) differentiation of formalistic, descriptive, symbolic, and substantive representation.<sup>48</sup> Representation in this thesis comes close to substantive representation, that is, to what extent the represented view that representatives act in their interests. Various scholars reviewed, added, and revised Pitkin’s work.<sup>49</sup> Amongst them, Mansbridge (2003) understands representation as simple principle-agent-relationship (*commissioning*).<sup>50</sup> Williams (1998) develops the concept further by understanding representation as *mediation*. She argues that actors need to mediate constituents’ interests in a sound way in order to act as representatives. Moreover, she understands mediation as a precondition for building trust in that relationship. The importance of trust derives from the probability that the representative will behave in an expected way (Gambetta 1990).

In addition to representation as principle-agent-relations or mediation, Urbinati (2000) links representation to *advocacy* consisting of two components: “the representative’s “passionate” link to the electors’ cause and the representative’s relative autonomy of judgment” (Urbinati 2000: 773). Though this thesis aims to scrutinize representation as advocacy, this study goes beyond ‘electors’ and views representation to also take place beyond the institutionalized space of elections. With this view, the thesis follows Rehfeld (2006) who asks:

“What could “political representation” be if it does not necessarily depend on notions of accountability, authorization, and “acting for another’s interest”? [...] Political representation, I argue, results from an audience’s judgment that some

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<sup>48</sup> ‘Formalistic’ representation are the institutional arrangements that precede and initiate representation, ‘descriptive’ representation is the way representatives ‘stand for’ the represented, and ‘symbolic’ representative means the extent to which the representatives resemble the represented (Pitkin 1967).

<sup>49</sup> For a summary of their theories see Dovi (2014).

<sup>50</sup> See also Arrow (1985) and Moe (1984).

individual, rather than some other, stands in for a group in order to perform a specific function [...] Thus, political representation, per se, is not a particularly democratic phenomenon at all” (Rehfeld 2006: 2).

Representation is important in natural resource governance as it is the mechanism that provides actors with the legitimacy to claim influence. Quite pathetically, Heller (2013) evinces the importance of shedding light on citizens’ representation in natural resource extraction:

“Where citizens lack information on how their governments are managing resources and what is being done with the money generated by extraction, corruption is left to fester in darkness. Where policy makers do not feel the need to answer to their public, decisions are too easily guided by narrow or short-term considerations. Where there is no effective mechanism for communities directly impacted by extraction to express their concerns, their risks of violence skyrocket (Heller 2013: 90).”

Therefore, representing others’ interest gives actors legitimacy to act or interact in natural resource governance.

#### **Actors’ Agendas**

Exchange theory assumes that actors are motivated by the agendas (goals) they are pursuing in a particular situation (‘principle of motivation’, Blau 1968).<sup>51</sup> The question as to how actors form these goals remains, yet, unclear. Erickson (1988: 99) maintains that attitudes “[...] are made, maintained, or modified primarily through interpersonal processes [...] [which] occur largely within the boundaries of social networks”.

If alternative exchange partners (i. e., those offering similar resources) are available, exchange theory assumes that actors drag on exchanges among homophile actors (‘principle of alternatives’, Blau (1968)). *Homophily* maintains that actors with similar characteristics share related views, have similar goals and are, thus, likely to collaborate. This probability is strengthened as exchanges among ‘equals’ are assumed to reduce uncertainty and to decrease power differences inherent to exchange (Allan 2010: 104; Burt 2005: 12).

In sum, the conceptual framework assumes that actors are motivated for exchange by their legal mandate, their mandate to interact on behalf of others and their aim to pursue their respective agendas in the governance process. Hereby, these different motivations do not exclude but rather occur in parallel to each other. The necessary precondition for such exchange is the provision of resources that are valued by others.

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<sup>51</sup> Appadurai (2013) refers to this as ‘aspirations’. In his understanding, aspirations are necessary to navigate outcomes and shape the future.



### 3.3.2 Interactions

The next step in the conceptual approach (see Figure 3.1, page 24) looks more closely at how actors actually interact. Blau (1964, 1968, 1977) is one of the few exchange theorists who acknowledges different forms of interactions. He maintains that the pervasiveness of exchange

“[...] makes it tempting to explore the fruitfulness of the concept by trying to apply it to all social conduct. But the concept of exchange loses its distinctive meaning and becomes tautological if all behavior in interpersonal relations is subsumed under it. Although much of social conduct is oriented toward expected returns from others – indeed, more than we usually think – not all of it is” (Blau 1968: 453).

According to Blau (1968), social conduct occurs in four different forms: physical coercion, irrationality, exchange and internalized norms.<sup>52</sup>

#### Economic and Social Exchange

*Exchange* refers to “[...] voluntary social actions that are contingent on rewarding reactions from others and that cease when these expected reactions are not forthcoming” (Blau 1968: 454). It is the act of giving and receiving resources and the reinforcing obligations that result from this act. Every relation mediated through exchange carries three obligations: The obligation to give, the obligation to receive and the obligation to reciprocate.<sup>53</sup> As discussed in Section 3.1, *resources* are capabilities (possessions or behavioral skills) that are valued by others (Emerson 1976: 347). ‘Valued by others’ is important: Though resources are actors’ individual attributes, they unfold their potential (‘operating force’) only if others value them (Molm and Cook 1995: 216; Emerson 1976: 347).<sup>54</sup> Thereby, resources are either tangible (e.g., money) or intangible (e.g., advice or social support).

Exchange theory differs between two forms of exchange. In *economic* exchanges, explicit agreements about the ‘terms of trade’ are negotiated before the exchange takes place. Explicit agreements such as contracts or memorandums of understanding include written rules, monitoring systems and/or sanction mechanisms which decrease the necessity of trust among exchange partners. *Social* exchanges lack this explicit understanding about the terms of trade and are ‘only’ based on two norms: *reciprocity* as the norm to get back to someone who was beneficial in the past and *fairness* as the norm to be honest and

<sup>52</sup> Physical coercion literally means the use of force (or the threat to do so) while irrationality refers to completely asocial behavior. Both forms are excluded in the following.

<sup>53</sup> Mauss (1966) explicitly looks at gift-giving and gift-receiving as an exchange relation enforcing the necessity to reward, if only gratefulness, to the giver. Contrary to this, Blau (1968: 453) argues that “[...] there are men who selflessly work for others without thought of reward and even without expecting gratitude, but these are virtually saints, and saints are rare”.

<sup>54</sup> Molm and Cook (1995: 216) note that also “[a] mother’s capability to offer approval is a resource in her relation with her child but may not be in her relation with someone else’s child”.

free from fraud. The logic of social exchange appears in other social science literature. For example, parallels between ‘equality matching’ in the understanding of Fiske (1991, 1992) and social exchange become concrete in “[t]he idea [...] that each person is entitled to the same amount as each other person in the relationship, and that the direction and magnitude of an imbalance are meaningful” (Fiske 1992: 691). Imbalance (i. e., outstanding exchanges) create obligations and, consequently, power (Blau 1968: 455).

In natural resource governance, collective steering therefore will only take place if actors possess resources that are valued by others and if they are able and willing to exchange these resources. Because of the diverse set of actors, their respective capitals and different agendas, economic and social exchanges are likely to occur in parallel. While economic exchanges foster predictability and, by that, can ease collective steering, social exchanges first necessitate some amount of trust. If successful (i. e., reciprocated and fair), social exchanges are likely to boost trust formation and the probability of collaboration.

### **Practices as ‘Internalized Norms’**

Besides exchanges, Blau (1968) identifies ‘internalized norms’ as a further form of interactions (or, in his terms, ‘social conduct’). Internalized norms are values that demand some ‘righteous’ behavior and are not governed by the interest in rewards as exchange is (Blau 1986; Waldman 1972). While Blau (1968) speaks of internalized norms, others refer to ‘practices’ or ‘frames’.

The purpose of this thesis is neither to scrutinize Ghanaian practices in the understanding of Bourdieu’s (1990) habitus nor in Reckwitz’s (2002) theory of practice nor in the details of Holtz’s (2014) coherence.<sup>55</sup> The sole aim here is to look behind the orally or visibly expressed and to discuss how different practices (more in the sense of routinized behaviour (Reckwitz 2002) or political trends) coin network interactions in petroleum governance in Ghana by shaping actors’ interactions in a way that benefits or impedes collective steering of petroleum revenues (Fine and Kleinman 1983; Pachucki and Breiger 2010; Sewell 1992).

Network researchers such as McLean (1998) and White (1992) highlight the necessity to scrutinize network practices as “[...] stories are the essential vehicle for elaborating networks” (White 1992: 67). Practices can act as important drivers to mobilize recognition for certain topics in natural resource governance, and, thereafter, in constructing collective identities (Crona 2011; Ernstson and Sörlin 2009: 1461).<sup>56</sup> Also Fuhse (2009)

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<sup>55</sup> Holtz (2014) suggests that coherence is necessary for a practice to persist and to spread. Coherence includes cognitive consistency, i. e., the absence of a (strong) cognitive dissonance against performing the practice, and performing a practice based on habits (behavior which is efficiently, effortlessly, and unconsciously repeated) rather than based on conscious decisions. Giddens’ (1984; 1989) argues that practices are the glue between structure and agency as they mediate between both.

<sup>56</sup> Latour (2005) pushed this view with his Actor-Network Theory (ANT) which assigns agency to non-human entities (‘actants’). ANT aims to rebuild social theory out of networks and intrigues with its innovative character. Yet, it is criticized for assuming agency of non-human entities and for being

argues that networks are composed of observable communicative processes ('transactions') *and* a 'meaning' structure (expectations, symbols, or cultural practices embodied in interpersonal structures). While transactions draw attention to *what* happens in networks, the meaning structure asks *why* exchanges and, in turn, unilateral, collaborative or contentious steering occurs (see also McLean 1998). Therefore, scrutinizing such practices – and particularly the actors constructing or contesting them – helps to understand natural resource governance in more depth.

### 3.3.3 Relational Constellations in Interactions

As already mentioned, exchange can lead to power (through unreciprocated exchanges) and trust (through iterated, reciprocal exchanges). Power and trust are 'relational' as actors have power *over* and trust *in* other actors.

Conceptually, they entail a kind of 'chicken-and-egg'-problem: For example, due to historical interdependencies and inequalities, power is inherent to exchanges but exchanges make actors also more or less powerful. Similar, successful social exchanges increase trust among involved actors whereas unsuccessful (non-reciprocated) exchanges decrease it. But trust is also an input to exchange: the more two actors trust each other, the more they are assumed to exchange resources, particularly in social exchanges which lack a contractual model and a sanction mechanism in case of defection. The assumption upheld here is that if two actors interact for the first time, exchange precedes power and trust. In this sense, in some kind of 'state of nature', these relational variables are first an outcome and *then* an input to exchange.

#### Power in Social Relations

Power is here understood as a dependence structure between two actors: An actor is *powerful* as much as others depend on the rewards handed out by this actor (Emerson 1962). A relation is balanced if two actors equally depend on each others' resources and imbalanced if one actor depends more on the other.<sup>57</sup>

In examining the extensive literature on power, it is helpful to differentiate between three consecutive perspectives: (1) The (here-called) 'resource' perspective, which conceptualizes power as an actor's attribute due to its exceptional capabilities or resources,<sup>58</sup> (2) the 'attributive' approach, which views power as an attribution assigned by others,

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constructivist and descriptive rather than analytical (Elder-Vass 2008: 471). Still, it helps to underline the importance of analyzing how different actors shape discussions in natural resource governance by constructing and applying certain practices that, in turn, influence actors' interactions.

<sup>57</sup> Based on Emerson's (1972a; 1972b) concept of power, Molm (1990, 1997a, 2003) differentiates between two types of power: 'reward power' in which actors engage in mutually contingent but not necessarily equal exchanges of rewards, and 'coercion power' in which one actor provides rewards for the other's withholding (Molm 1997b: 115). For a thorough discussion about power see Han (2005).

<sup>58</sup> Rodney (1982: 224) defines power as "[...] the ability to defend one's interests and if necessary to impose one's will [...]".

and (3) the ‘positional’ perspective, which understands power as a positional advantage in a larger network structure. Thus, the decisive difference between these three approaches is the focal examination unit: ‘resource’ approaches focus on the individual level, ‘attributive’ approaches on the dyadic level and ‘positional’ approaches on the triadic or multi-actor level. These three perspectives are consecutive by building on each other: Without resources, there would neither be attributions nor positions in a larger network structure.

The question how exchanges create power differences and, in turn, how power shapes exchange relations has a long and disputable tradition in exchange theory. Scholars agree with Mauss (1966) that power is *innate* to exchange. In consequence, power is also inherent in relations among actors who (aim to) steer natural resources and revenues (collectively). Yet, its role is theoretically inconsistent: powerful actors can boost collective actions in natural resource governance as much as they are able to impede such outcomes. This theoretical inconsistency demands the need to consider actors’ agendas, strategies and practices as discussed in the previous sections.

Theoretically consistent is the assumption that power differences in dyadic relations are only a temporal state as actors aim towards power balance. To decrease power imbalances four types of ‘balancing operations’ exist (Emerson 1962; Cook and Gillmore 1984). They become easier to understand if discussed with a concrete example: A donor organization aims to support petroleum affected communities by providing funds to local NGOs to implement an alternative livelihood project. One of these NGO needs these funds to ensure its organizational survival (which, in fact, holds true for most NGOs in Ghana). The NGO, thus, depends more on the donor than the latter depends on the NGO as other suitable NGOs exist. In this scenario, the NGO has four options: (1) to increase its portfolio and, thus, make the donor more dependent on its work (*giving status*), (2) to devalue the donor money and decrease its own expenses to survive (*withdrawal*), (3) to look out for alternative donor funds (*network extension*), or (4) to decrease the number of alternatives NGOs available to the donor (*coalition formation*) (Emerson 1962: 35). Among these power-balancing options, coalition formation is argued to be the most rational means to counterbalance power dominance (Cook and Gillmore 1984).

Overall, power is an outcome of and an influencing variable in interactions. It is a resource that depends on institutions, policies and the network structure that embeds actors, and unfolds its operating force only with actors who value the resources of more powerful actors. In natural resource governance, power is decisive as the aim of collectively steering natural resources severely hinges on the agendas and strategies of powerful actors. At the same time, actors have the agency to balance power and, thereby, to shape natural resource governance in new directions.

### Trust in Social Relations

Besides power, trust is decisive in exchange and, thereafter, collaborative or contentious outcomes. Generally, trust ascribes

“[...] the willingness of a party to be vulnerable to the action of another party [...] irrespective of the ability to monitor or control the other party” (Mayer, Davis, and Schoorman 1995: 712).

It is an *expectation* that arises from continued, sincere and collaborative behavior (Fukuyama 1996: 26) and, hence, in exchange terminology, from reciprocated and fair exchange behavior.<sup>59</sup> Actors develop trust (or, as an attribute, trustworthiness) through repeated successful interactions which allow them to collect information about their exchange partners and to make behavior more predictable.<sup>60</sup> Actors typically start with risk-free exchanges that demand low trust and exchanges become more serious – and more useful, i. e., less costly – if actors repeatedly adhere to the norms of reciprocity and fairness. Little by little, social exchanges consequently build trust and actors are able to expand their trustworthiness and reputation as reliable exchange partners (Blau 1968: 454; Cook and Rice 2001: 702). In stark contrast, economic exchanges do not lead to the production of trust as it is formalized through monitoring and sanction mechanisms (Cook and Rice 2001: 702).

In natural resource governance, trust is efficient because it reduces transaction costs in exchanges, facilitates the development of rules and compliance with these rules, and increases the tendency to share knowledge and mutual learning processes (Crona 2011: 58). In fact, Fukuyama (1996) argues that hierarchies only emerge if actors cannot be trusted and explicit rules and sanctions need to coerce them to oblige to institutional arrangements. But such explicit rules and sanctions are costly as they have to be negotiated, agreed upon, litigated and enforced (Levi 2000). Contrary to this, trust is “[...] a very important lubricant of a social system, [...] extremely efficient [and] it saves a lot of trouble to have a fair degree of reliance on other people’s word” (Arrow 1974: 151). Buskens and Weesie (2000) further argue that reputation as a trustworthy partner can promote collaboration in particularly dense networks as sanctions against untrustworthy exchange partners cannot only be executed by the damaged actor but also by others in the network. Furthermore, having the reputation as a trustworthy partner in resource governance makes actors more popular and increases their attractiveness as exchange partners (Cook

<sup>59</sup> Exchange theory, hence, leaves out culture as an explanation for the formation of trust. Whereas for example Fukuyama (1996: 153) maintains that trust emerges when actors share common moral values, exchange theory argues that trust arises and increases with successful (iterated) exchanges.

<sup>60</sup> With the ‘principle of marginal utilities’, Blau (1968) argues that exchanges with the same actor have a satiation point by providing redundant information. This would lead actors to end partnerships after a number of reciprocated exchanges. In that, this proposition contradicts literature about trust and commitment. The principle of marginal utilities seems only likely in situations of pure information exchanges under the assumption that actors have no means to gain new (non-redundant) information.

and Rice 2001). Consequently, where literature about power in governance is ambivalent, trust is viewed as a purely positive factor for collective steering.

### 3.3.4 Network Characteristics

As already indicated in the beginning of this chapter, actors do not interact as atoms outside a social context but they are embedded in larger network structures. The following section summarizes some network characteristics argued to influence actors' abilities to exchange.

The first fundamental network characteristic is the number of actors that compose a network. As discussed in the second chapter, natural resource governance starts from the perspective that a multitude of actors (aim to) tackle collective problems with the authority to do so (Hall and Biersteker 2002). This authority either stems from legal entitlement through institutions and policies, public entitlement (representation) or de facto influence. Thus, the sheer number of actors within a network and – in addition – the quantity and quality of relations among them, influence potential outcomes. For example, if only one actor holds all relations in the network (and all others are disconnected to each other), collective steering of natural resources is highly unlikely.

Necessary is also a diverse number of connections between network actors. Many ties can help to exchange resources rapidly with low transactions costs. However, as Everett and Borgatti (2005) note, a highly interconnected network tends to provide similar and, thus, redundant resources. For natural resources governance this could mean that innovative ideas about how to handle the incoming flow of natural resource rents do not enter the network. Moreover, such highly connected networks can provide the mean to disseminate wrong information or rumors which endanger the trust among actors and, thus, the potential for collaborative outcomes.

Besides the number of actors and relations, literature discusses, among other things, brokerage, reciprocity, transitivity, density, centralization, and reachability as important network characteristics for natural resource governance. Appendix 1 (page 197) defines these concepts and Table 3.1 (page 38) summarizes the concepts' potential advantages and disadvantages for natural resource governance.

*Brokers* are located between two or more disconnected actors. Through linking others, brokers are generally assumed to have a positional advantage in networks. In natural resource governance, brokerage provides four possible advantages to the broker: (1) It provides access to a greater diversity of resources, (2) non-redundant resources are earlier accessible to the broker, (3) the broker can control the diffusion of these resources between two disconnected actors ('tertius gaudens'), and (4) the broker can act as a 'tertius iunges' by navigating conflicting interests and, in that, enhancing its own reputation as a reliable collaboration partner. Brokers can further boost collaboration if they distribute critical information or knowledge, link unconnected actors who are necessary

for collaboration (Burt 1992) or if they open up new sources of economic activity (Long 2001). Jansen (2003) additionally suggests that actors in this privileged position get the chance for deviant behavior due to loosened peer pressure and consequently may play an important role in processes of mobilization, modernization, innovation and diffusion. She further emphasizes the ability of brokers to act against processes of exclusion and for the integration of conflicting subgroups (Jansen 2003: 107). However, because of their privileged position, brokers can also undermine collaborative efforts, for example by exploiting relations, by steering events for their own benefits or by acting as “professional manipulators” (Boissevain 1968, 1974: 549, 148). This damages the aim to collectively steer natural resources. Thus, brokers are not automatically favorable for natural resource governance but only if they make use of their strategic position in a way that benefits collaboration.<sup>61</sup>

*Reciprocity* and *transitivity* are said to generate trust, increase social control and, as a consequence thereof, to broaden the compliance with mutual norms. Furthermore, reciprocity in relations can help to monitor or identify deviant behavior and, thus, may ensure that potential conflicts are dealt with (Ostrom 1990; Crona 2011: 56). Contrary to this, unilateral relations (i. e., a more or less clear division between actors who give and actors who take) endanger collaboration on eye level and decrease the likelihood of joint decisions in resource governance. Moreover, high transitivity indicates the presence of collaborative subgroups who are better able to steer collaboratively (Merrill-Matzner 2006).

*Dense* networks can help to exchange resources rapidly and with low transaction costs, and are associated with holding collective action potential (Ward, Stovel, and Sacks 2011: 250). However, dense structures also tend to provide similar and, thus, redundant resources. Contrary to this, *low* density can inhibit the spread of resources but natural resource governance may profit from an increased diversity of governance practices and a low risk of lock-ins.

High *centralization* in the context of natural resource governance can facilitate exchange through efficient coordination, decision-making and task fulfillment as a few actors can synthesize resources rapidly and ‘make things happen’. Similar, high centralization can help in times of change by coordinating diverse interests and goals. Yet, high centralization can reduce the diversity of accessible resources because all actors are closely connected to the same few central actors (Janssen 2006). Low centralization, on the contrary, generates an open atmosphere and potentially increases the efficiency in solving complex tasks, but may lead to a confusion about responsibilities, a lack of control and accountability, and inefficiency when solving simple tasks because coordinating actors are missing.

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<sup>61</sup> This argument finds confirmation in anthropological studies which argue that it depends on the goal orientation as well as personal attributes whether or not a broker uses its positional advantage to boost collaboration (Bierschenk, Chaveau, and Olivier de Sardan 2002: 21-23).

*Reachability* – the number of steps maximally needed to reach from one actor to any other actor in a network – can boost or impede exchange as well. On the one hand, *high* reachability is linked with access to distant resources, an increased ability to respond to change, and the possibility to form creative unions consisting of different actors to merge their respective resources. Contrary to this, in case of false or misleading information on important facts, high reachability can be highly problematic to natural resource governance as gossip will spread fast and the perpetrator is hard to identify. On the other hand, *low* reachability is positively linked with forming coherent and efficient subgroups. Moreover, disturbances – for example harmful gossip – do not extent beyond these subgroups. However, the lacking access to distant resources may hamper collective steering in networks with low reachability. Table 3.1 summarizes these theoretical graph level effects on natural resource governance.

Table 3.1: **Potential Network Effects on Natural Resource Governance**

<i>High</i> $\geq 0.5$	<i>Advantages for NRG</i>	<i>Disadvantages for NRG</i>
<b>Brokerage</b>	Link disconnected actors Innovation & mobilization Integrate conflicting subgroups	Exploit relations Professional manipulators
<b>Reciprocity</b>	Generates trust Social control Compliance with mutual norms	
<b>Transitivity</b>	Trust, social control, mutual norms Collaborative sub-groups Consistency in resource flows	
<b>Density</b>	Fast resource exchange Fast diffusion of innovations	Potential of resource redundancy Low diversity in governance practices Potential lock-ins
<b>Centralization</b>	Efficient synthesis of resources Efficient coordination Clear responsibilities Beneficial in times of change	Limited diversity of resources Limited distribution of resources Command and control / inequality Perception as undemocratic / unfair
<b>Reachability</b>	Access to distant resources Ability to respond to change Potential union of diverse actors	Spread of misleading information No formation of efficient subgroups High reach of disturbances

*Source:* Own graph based on Bodin, Crona, and Ernstson (2006), Janssen (2006), Merrill-Matzner (2006) and Prell et al. (2010). For a definition of the network concepts see Appendix 1.



Overall, this comparison of potential advantages and disadvantages of network characteristics for natural resource governance aims towards three things: First, it introduces and defines those network indicators that are discussed in the following empirical chapters. Second, it links the concept of natural resource governance, exchange theory and methods applied in the field with each other. And third, the conceptual approach shows that despite discussing network characteristics, it is still pivotal to take actors' agency into consideration (Crona 2011; Hauck 2010; Janssen 2006).

### 3.4 Exchange Outcomes: Unilateral, Collaborative and Contentious Steering

The last step of the conceptual approach (see Figure 3.1, page 24) summarizes how the previous steps relate to unilateral, collaborative or contentious steering in natural resource governance. In short, this thesis proposes that similar agendas, rule consistent exchanges, power balance, high trust and collaboration-favoring brokers benefit collaborative steering of natural resources if institutions and policies provide the necessary embedding for such collaboration.

*Competition* is likely in natural resource governance if actors aspire the same resources from similar exchange partners. *Contestation*, on the other hand, is the process of arguing and is likely to occur if actors pursue opposing agendas. The likelihood of contestation is assumed to increase in the case of power-imbalanced actors and if brokers use their positional advantages for unilateral exploitation rather than collective action. In contrast, *coordination* occurs in situations in which actors have a common aversion (Stein 1982). The averse outcome is (attempted to be) bypassed through coordinating respective actions. Actors can produce mutual gains but need to coordinate their actions to achieve mutually consistent decisions (e.g., battle of sexes). *Collaboration* occurs if actors have a common interest and are able and willing to contribute some reward in order to reach a collectively beneficial outcome. If one party fails to contribute, it damages the collective reward and the relational constellations (here, power trust) coining exchanges (Emerson 1976: 357; Molm and Cook 1995: 212).<sup>62</sup>

In regard to natural resource governance, reciprocated exchanges are assumed to benefit collaboration as they reduce power imbalances and contribute to the formation of mutual trust and commitment. Moreover, exchange theory argues that actors who trust each other are likely to exchange a number of different material or immaterial resources. In network terminology, such multi-dimensional exchanges are termed *multiplex* relations. Following Crona (2011: 55), multiplex relations increase exchange values and priorities

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<sup>62</sup> Parallels to cooperation theory are obvious, namely in the game theoretical component of iterated games. In 'iterated games', the games' end is unclear so that actors have both the opportunity and the incentive to develop cooperation based on reciprocity (Axelrod 2000). The 'shadow of the future' provides the basis for reciprocal collaboration even if only egoists participate.

and, consequently, amplify the likelihood of collective action.

Finally, in exchanges beyond the dyadic level – and this is one of the finer points of exchange theory – the creation of power and trust through exchanges moves the focus back from agency to structure. Reciprocated and fair exchanges lead, on the structural level, to the legitimization of power and trust whereas unrequited and unfair exchanges lead to de-legitimization and social disapproval of the ones in power or trust.

### **3.5 Limitations and Summary**

The inclusion of practices and frames already indicates that deriving the conceptual approach solely from exchange theory entails some limitations. A major criticism in literature targets the conceptualization of actors as rational agents weighing out the costs and benefits of exchanges: While, for example, Adams (1965) argues that actors do not always demand reciprocity in social relations, Miller (2005) accuses the theory to reduce human interaction to purely rational processes. Other scholars challenge the assumption that actors actually possess the cognitive awareness to weigh out costs and benefits with a diverse set of different actors. Finally, some critics question the overall novelty of exchange theory as all claims trace back to the simple idea of the importance of exchange in interpersonal relations already emphasized by Simmel in the 1920s (West and Turner 2014).

Besides this general critique, three caveats are pivotal for this thesis' main objectives: First, exchange theory is accused of being not testable. The problem of testability originates from the operational difficulty to separate between what actors value, what they perceive as rewarding and how they behave as rewards, values and actions are defined in dependence of individual exchange partners and not independently of them (West and Turner 2014). The problem that actors pursue multiple goals depending on which actor they confront is a problem common to all relational approaches. In natural resource governance, it is for example likely that NGOs pursue a different goal when relating to each other than when facing government representatives. A second problem is the circular relationship between interactions and relational constellations (power and trust) as the latter are both an output and an input of interactions. The third major criticism is exchange theory's ignorance of the cultural context in which exchanges take place. For example, while actors may be motivated for social conduct to exchange resources in some societies, actors in other societies may more frequently rely on internalized norms. This also applies to actors' bounded rationality as it is likely to be more pronounced in regard to strangers than in regard to close allies.

Despite these limitations, the thesis argues that exchange theory helps to understand actors' relations by drawing attention to structural coercion, exchanges and practices. The approach is further enhanced by its simplicity and its openness to additional propo-

sitions. As Figure 3.1 illustrates, the presented conceptual approach substitutes exchange reasoning with propositions of the structure-agency-debate, network research and literature on power and trust. It further considers propositions made by collaboration theory while abstaining from the inclusion of game theory models. Moreover, the conceptual approach links the structural and network embedding with actors' agency.

Applied to petroleum governance in Ghana, these conceptual considerations could have the following implications: Complex inequalities and interdependencies among Ghanaian actors emerged because of past interactions and different allocations of capital in society in general or natural resource sectors in particular. In order to better deal with these interdependencies and inequalities, institutions and policies emerged that influence the petroleum sector. This not only includes institutional regulations such as parliamentary oversight or specific laws but also codes of conduct or traditions about how to interact in regard to natural resource wealth. Both interdependencies and the structural embedding influence network structures and actors' positions within this structure. These positions offer advantages or disadvantages for actors' goal attainment. Actors' attributes, particularly their agenda and legitimation through others, influence whether and how they engage in natural resource governance.

If actors interact in the petroleum sector in Ghana, they have three basic choices: They can force each other, they can exchange tangible or intangible resources or they can interact based on practices. Interactions take place in an environment of mutual dependence, either between power balanced (equally dependent) or power imbalanced (unequally dependent) actors.

Actors are likely to collaborate if exchanges in the past were rule consistent. The dominant form of exchange can change and may indeed do so, particularly from economic to social exchanges parallel to the formation of trust among involved actors. Social exchanges promote the formation of trust whereas the failure to reciprocate damages it. Brokers can exploit their positional advantage to increase their power. Similarly, actors can weigh out power imbalances through exchanges, for example, by coalition formation. These changes, in turn, coin future interactions.

In sum, the conceptual approach proposes to shed light on the following six subquestions: (1) To what extent do interdependencies and inequalities, resulting from past social conduct and unequal distribution of capital, shape the overall context in which natural resource governance takes place? (2) How do structures, provided by institutions and policies, enable or restrict actors' interactions in governing natural resources? (3) Which goals do actors pursue in natural resource governance and which of these actors can, hereby, legitimately claim to represent the interests of others? (4) To what extent do actors engage in economic exchanges, social exchanges and network practices to collectively steer natural resources? (5) How do these exchanges and practices influence relational patterns such as trust and power? And (6) to what extent do all these factors shape unilateral,

collaborative or contentious steering of natural resources and deriving revenues?

By deriving these six subquestions, this thesis seeks to push forward theoretical considerations in network studies. As stated in Section 2.2, network studies still focus on method application rather than theory building. Although the here carved out arguments are not without weaknesses, they are a genuine attempt to understand why actors interact in natural resource governance, how they do so, to what extent they are therein enabled and restricted by a larger relational and structural embedding, and to what extent these interactions lead to collaboration or contestation in natural resource governance. The following Chapter 4 explains how these six questions are approached methodically.

## 4 Research Design: Case Study, Methods and Triangulation

The aim of this thesis is to scrutinize whether exchanges among diverse actors who (aim to) steer petroleum resources in Ghana (collectively) result in collaborative petroleum governance. The conceptual approach argues that similar agendas, rule consistent exchanges, power balance, high trust and collaboration-favoring brokers benefit collaborative steering of natural resources if institutions and policies provide the necessary embedding for collaboration. These theoretical assumptions necessitate a case study design that mixes qualitative and quantitative research methods. Consequently, the present chapter begins by explaining the rationale behind the case study approach. Section 4.2 sheds light on the data collection through observations and explorative interviews, data quality measurements and necessary ethical considerations. Afterwards, Section 4.3 outlines the reasons for implementing a survey to measure representation, the sampling strategy, the questionnaire design and its application in the field. The last section, Section 4.4, outlines the social network analysis approach. It explains how to sample networks, how to appropriate them by the means of a self-employed structured SNA questionnaire and how the network data were generated in the field. The chapter closes with theoretical, analytical and practical reasons for triangulating exploratory and explanatory methods and a summary of the methodical rapprochement of natural resource governance.

### 4.1 Case Study Approach

Gerring (2004) defines a case study “[...] as an intensive study of a single unit for the purpose of understanding a larger class of (similar) units. A unit connotes a spatially bounded phenomenon [...] observed at a single point in time or over some delimited period of time.”<sup>63</sup> In this study, the spatially bounded phenomenon is Ghana’s developing petroleum sector. The petroleum sector is investigated for the purpose of understanding multi-actor engagements in natural resource governance in Ghana as the larger class of units and for deducing potential conclusions and policy-implications for natural resource governance in general. As more and more African countries discover oil and gas resources (besides Ghana, Namibia, Mozambique, Uganda, Kenya, Tanzania and Ethiopia), a case study of one of these emerging petro-states can extract important results for other cases.

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<sup>63</sup> For an insightful discussion about problems in case selection in comparative study designs see Geddes (1990). For a typology in case study designs see Levy (2008).

Case study designs do not have an easy standing in social sciences. They are said to be subjective and to not allow for generalizations. Even worse, single case studies “[...] have such a total absence of control as to be of almost no scientific value” (Campbell and Stanley 1966: 6, 7). Flyvbjerg (2006) summarizes five common criticisms of case study designs: (1) Context-independent knowledge produced by comparative or large *N*-studies is more valuable than context-dependent, concrete knowledge produced by case studies. (2) In light of lacking possibilities of generalizations, case studies cannot contribute to social sciences. (3) Case study designs are only useful for hypotheses generating and not for testing. (4) Their designs have a bias towards verification and (5) general theories are hardly to develop on the basis of case studies. In response to these points of criticism, the Ghanaian petroleum sector is examined as a case for the following reasons:

First, several research gaps exist with regard to the Ghanaian petroleum sector that make it necessary to generate ‘context-dependent, concrete knowledge’. These gaps are partly due to the comparable youth of the sector as petroleum production only started in 2010. Besides its youth, researchers so far have not scrutinized the link between citizens’ representation by petroleum actors and the collaboration among them. Rather, the current focus evolves around the questions how Ghana can successfully evade the ‘resource curse’ and in which ways the petroleum activities affect the socio-economic and ecological well-being of coastal communities. Thus, due to the youth of the petroleum sector and the existing research gaps, only context-dependent, concrete investigations within a case study design provide the necessary insights to understand petroleum governance in-depth.

Second, by scrutinizing these research gaps, the case study approach contributes to ongoing discussions about the alleged benefits of multi-actor engagements. Ghana’s petroleum sector is a particular interesting case as the diverse number of actors from different sectors are, through the Petroleum Revenue Management Act, Act 815 (PRMA), legally entitled to participate in petroleum governance (see Section 5.3). Yet, as some actors – such as traditional authorities or civil society actors – seem to remain rather enmeshed in contentious national politics, we do not yet know whether they actually join the ‘big players’ in petroleum governance. Furthermore, the question if institutionally powerful actors are actually powerful within multi-actor collaborations remains unanswered. Thus, despite the fact that case studies do not allow for generalizations, they can contribute to research on chances and challenges of multi-actor approaches.

Third, and taking the conceptual approach into account, there is no reason why the logic of inference is not applicable to the Ghanaian petroleum sector as a critical case study (Flyvbjerg 2006: 229; Vennesson 2008: 228). This set-up will, fourth, help to elude the danger of verification. Finally, it might be true that a lot of case studies do not contribute to the development of general theories – but they also do not aim to do so. A case study, as much as any other research design, is contingent upon what the researcher looks for (Gerring 2004: 351). As this thesis aims to study the causal mechanisms –

rather than causal effects – behind petroleum governance in Ghana, a case study is most suitable (Gerring 2004: 352). In the following, the various data used in this thesis are discussed.

## 4.2 Observations and Semi-Structured Interviews

Besides publicly available literature, the most important secondary data in this study are reports in hard-cover form obtained in the field. For example, a vital document is a limited edition report about the early phase of the Ghana Gas Pipeline, published by the Centre for Public Interest Law (2014). So far, the report is the only available study on the gas project's socio-economic implications for surrounding communities. The report was essential to verify the route of the pipeline in order to identify the number of affected communities and to access citizens who are directly affected by the developing petroleum industry in order to structinize their representation and trust patterns.

However, the vast majority of data gained in the field are primary data. Extracting primary data requires the compliance with several ethical obligations. The Belmont Report, published in 1979, outlines three major principles: The obligation to 'respect persons' implies that researchers treat the study subjects as autonomous agents. The 'beneficence treatment' requires researchers to respect the subjects' decisions, advert any possible damage to and maximize possible benefits for them. And the obligation for 'justice' focuses on the question of who is the study's beneficiary and who bears its costs. The general rule to meet this third obligation is to treat equals equally.<sup>64</sup> I will discuss how I dealt with these ethical standards alongside each data collection method in the following.

To gain first insights in collective steering in petroleum governance and to approach potential interviewees, I employed obtrusive observations (i. e., with the subjects' knowledge) during 14 large multi-actor meetings (see Table 4.1, page 46). The following questions guided the observations: (1) Who is (not) communicating with whom and in which ways are actors communicating (observable positive or negative connotations)? (2) Who is crosscutting sectors, e.g., which NGO representative is talking to which traditional authority? (3) Which actors are dominating and which actors are dominated? (4) What is the content of communication (accusations, appreciation, promises, obligations, etc.)? And (5) do actors adhere to mutual agreements of previous meetings or do they rather move in circles?

As observations are always a selective, purposeful and positioned way of studying a phenomenon (Sultana 2007), I use observations to enlarge background knowledge about

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<sup>64</sup> The "Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research, Report of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research" is the most basic report on research ethics. The more specific formulations to comply with are: to each person an equal share, according to individual need, individual effort, societal contribution, and merit (US National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research 1979).

the actors engaged in the petroleum sector. Being comparably unfamiliar with the cultural circumstances and considering the need to understand social relations further motivated me to apply this method. Participating in these meeting also gave the change to make contacts and to build rapport.

In order to comply with ethical standards, I always introduced myself or was introduced at non-public meetings. I provided background information about myself and the purpose of my presence as well as my contact details.

Despite careful preparation and regular attendances, observations brought along some challenges: Firstly, obtrusive observations induce fallacies through reactivity.<sup>65</sup> Secondly, personal biases can threaten data quality. In order to limit these fallacies, I tried to record behavior ‘behaviorally’ and to stay neutral throughout the field research. Moreover, the limited number of five key questions helped to keep focus and to make results more comparable. Table 4.1 summarizes the 14 meetings attended.

Table 4.1: Synoptic Table of Observations

<b>Organizer</b>	<b>Meeting Purpose</b>	<b>Date &amp; Location</b>
Two NGOs	Strategic Meeting	June 23, 2014; Sekondi
Three NGOs	Strategic Meeting	June 24, 2015; Sekondi
FES	Survey Validation Workshop	July 24, 2014; Accra
Tullow Oil	Gas Flaring Education and Awareness Engagement for local NGOs	July 29, 2014; Busua
Tullow Oil	Gas Flaring Education and Awareness Engagement for Traditional Authorities	Aug. 4-7, 2014; Busua
Ministry of Finance	Stakeholder Forum on the Review of the PRMA	Aug. 14, 2014; Takoradi
PIAC	Launch of the 2013 Annual Report	Oct. 30, 2014 Accra
One Energy Limited	‘Ghana 1000’ Public Consultative Workshop	Nov. 20, 2014; Aboadze
GIZ	Civil Society Consultative Workshop on the GHEITI Bill	Dec. 5-7, 2014; Elmina
Petroleum Commission	Introduction of the New Petroleum Bill to Traditional Authorities	Dec. 22-23, 2014; Busua
WRFCF	Stakeholders’ Kick Off Workshop	Feb. 17, 2015; Takoradi

*Continued on next page*

<sup>65</sup> Bernard (2006: 504, emphasis in original) notes: “There is a commonly held notion in anthropology that participant observation is a means of reducing the severity of reactivity and other biases in direct observation. Unfortunately, we do not know if this is true, and if so how *much* error is reduced by this kind of training”.



Table 4.1 – *Continued from previous page*

<b>Organizer</b>	<b>Meeting Purpose</b>	<b>Date &amp; Location</b>
Tullow Oil	Updates on the Jubilee Field and the TEN Project for Traditional Authorities	March 3, 2015; Busua
Tullow Oil	Updates on the Jubilee Field and the TEN Project for District Authorities	March 4, 2015; Busua
Tullow Oil	Updates on the Jubilee Field and the TEN Project for NGOs	March 5, 2015; Busua

*Source:* Own graph.

Besides observations, several semi-structured interviews were conducted particularly in the beginning of the field research. Semi-structured interviews “... combine[s] the flexibility of the unstructured, open-ended interview with the directionality and agenda of the survey instrument” (Schensul, Schensul, and LeCompte 1999: 149). The interviews targeted the identification of actors active in the petroleum sector, past interactions among them and, hence, different kinds and amounts of potential collaborative steering. I selected respondents on purpose and from a number of different sectors. Among 15 semi-structured interviews, eight were audio-recorded (see Table 4.2).

Table 4.2: **Synoptic Table of Transcribed Interviews**

<b>Interviewee representing (the)</b>	<b>Date &amp; Location</b>
Western Regional House of Chiefs	July 10, 2014; Sekondi
Western Region Network of NGOs (WERENGO)	July 21, 2014; Takoradi
Platform of Coastal Communities (PCC)	July 24, 2014; Takoradi
Platform of Coastal Communities (PCC)	Aug. 01, 2014; Sekondi
Tullow Oil	Aug. 05, 2014; Busua
Land Valuation Division (LVD)	Sept. 17, 2014; Sekondi
Centre for Public Interest Law (CEPIL)	Nov. 14, 2014; Accra
Community Land & Development Foundation (COLANDEF)	Nov. 19, 2014; Takoradi
Kumasi Institute of Technology and Environment (KITE)	Dec. 13, 2014; Accra
Tullow Oil	Dec. 18, 2014; Takoradi
Land Valuation Division (LVD)	March 15, 2015; Sekondi
Development Planning Unit, STMA	March 16, 2015; Sekondi
Ghana Rubber Estimates Limited	March 23, 2015; Takoradi
Ghana National Canoe Fishermen Council (GNCFC)	March 23, 2015; Takoradi
Ghana Rubber Estimates Limited	March 26, 2015; Takoradi

*Source:* Own graph.

In order to comply with ethical obligations, I provided an informed consent sheet to each interviewee (see Appendix 3, page 199). Based on this sheet, I introduced myself and explained the background and aim of my research. I further elucidated respondents about their right to ask questions, to refuse answers or to withdraw at any time during the interview. I ensured confidentiality and anonymity at all stages in the research process and included my contact details in Ghana and Germany. I transcribed the recorded semi-structured interviews and send the transcript to the respective respondents for proof-reading and revisions.

Interviewer effects and informant biases influence the data's quality. For example, being a foreigner and a woman might have primed respondents' answering behavior. Moreover, informant biases (i. e., discrepancies between self-reported and actual behavior) occur unintentionally or intentionally (Sudman and Bradburn 1974; Bernard et al. 1984: 504; Knoke and Yang 2008: 35). As I was mainly interested in past exchanges and collaborative efforts, respondents might, for example, have overestimated their interactions with others (social desirability) or remained silent about certain interactions.<sup>66</sup> To minimize interviewer effects and informant biases, I phrased all questions plainly, shortly, respectfully and precisely. To ensure directionality, to expose respondents with the same stimuli as much as possible, and to show respondents that I was "[...] prepared and competent but [...] not trying to exercise excessive control" (Bernard 2006: 212), I used an interview guide, i. e., a list of topics and questions I definitely wanted to cover during the respective interview.<sup>67</sup>

Both observations and qualitative interviews carry benefits and limitations: Researchers' lenses always filter observations and observational methods are, therefore, prone to personal biases. Equally, researchers influence the setting by their presence, behavior and personal characteristics. Personal characteristics change the amount and kind of information researchers have access to, their perception of the phenomena studied and their relationship with informants (Bray 2008: 304). Moreover observed people tend to adopt their behavior and tend to act differently as if they do unobserved (problem of reactivity).

Interviewing entails the drawback that "[t]he questions dictate the answer" (Gilchrist and Williams 1999: 84). Inversely, cultural assumptions and traditions guide researchers in the kind of questions they ask and the kind of people they interview. Informant biases and inaccuracies are troublesome and marginalize the validity<sup>68</sup> and accuracy of data gained through interviewing. Ultimately, researchers have to define a satiation point in the data collection process under the condition of limited resources and they constantly

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<sup>66</sup> The 'spiral of silence effect' stipulates that humans are social beings fearing social isolation. This isolation prompts respondents to remain silent about certain topics rather than stating their opinions (Noelle-Neumann 1984).

<sup>67</sup> Contrary to structured interviews, semi-structured interviews do not include a catalogue of pre-defined answer categories.

<sup>68</sup> A 'valid' measurement truly reflects the phenomenon it is supposed to measure. In most cases, validity is assumed rather than tested (Wasserman and Faust 1994: 57).

have to face the fact that by entering the field, they become an independent variable in the framework they are studying (Bray 2008: 304).

### 4.3 Survey Design

While observations and qualitative interviews are used for gaining and providing an initial overview about which actors (aim) to steer petroleum resources and deriving revenues, a survey instrument is used to scrutinize which of these actors ‘speak with the voice of the people’. Actors across the public, civil and traditional sector recurrently use this frame to seek influence for steering the oil and gas sector. But empirical insights into feelings of representation do, so far, not exist.

Consequently, this section outlines the survey instrument administered in petroleum affected communities in the Western Region in Ghana. It starts with a detailed discussion of the sampling procedure to portray the numerous complications in the field. Afterwards, the content of the questionnaire, its application and the advantages of the conducted survey are summarized. The section closes with limitations and ethical considerations.

The rationale behind conducting structural interviews was to get insights in the anticipation of representation and trust by those individuals who are directly affected by the petroleum industry. A representative sample allows to draw generalizations regarding affected citizens’ attitudes towards those actors who claim to represent communities.

#### 4.3.1 Study Population and Sampling

In shedding light on the political attitudes of citizens, my research deviates from existing studies focusing on the resource curse and the wellbeing of coastal communities who are assumed to suffer the most from the developing petroleum industry in Ghana. By now, the term ‘affected communities’ is a frequently used and highly politicized narrative. In all cases, coastal communities and, therein, fishers and fish mongers are framed as most affected. This is a result of the increasing depletion of fish catches and, hence, the deterioration of livelihoods in communities along the coast where fishing is the most important economic resource. Yet, scientific results strongly question a negative relationship between petroleum extraction and fish catch decreases (Environmental Protection Agency 2014).<sup>69</sup> Petroleum actors, practitioners and researchers nevertheless take upon this narrative of ‘being affected’ without questioning the meaning of it: So far, no discussion about how to *define affectedness* by offshore oil explorations has emerged. The aim of having a precise definition of ‘being affected’ culminated in a quite different definition

<sup>69</sup> Instead, overfishing, catching baby fishes and the use of illegal fishing methods provoke fish declines. Such illegal fishing methods include the use of dynamite or so-called ‘light fishing’ to attract fishes throughout the year (see Interview Transcript XII).

of ‘affected communities’ in this research: The theoretical population<sup>70</sup> in this survey contains all individuals within the Western Region directly affected by the oil and gas activities. *Direct affectedness* is defined as *having lost land(s) and / or crops* due to a petroleum related infrastructure.

The 111km long ‘Ghana Gas Pipeline’, part of the ‘Western Corridor Gas Infrastructure Development Project Phase 1’, fits this criteria perfectly.<sup>71</sup> The project, so far, includes an offshore pipeline connecting the vessel at the Jubilee Field with the mainland in Atuabo, a gas processing plant in Atuabo, and the 111km long Ghana Gas pipeline connecting the gas plant with the Volta River Authority (VRA) power plant in Aboadze close to Takoradi.<sup>72</sup> The pipeline, depicted in Map 4.1, enters the mainland at Atuabo (Ellembelle District), crosses the Western Region and ends in Aboadze (Sekondi-Takoradi Municipality Area). I perceive this definition of ‘being affected’ as clearer and, hence, better suitable for a PhD research. Furthermore, the route of the pipeline (going from the coast to the hinterland back to the coast) gives a broad picture of people’s attitudes in coastal *and* inland communities.

### Short Background on the Ghana Gas Pipeline

Natural gas is an important global energy resource, much cleaner than coal or oil, and is a versatile resource that can be employed in several different ways, including energy production and fertilization (Coombs 2013: 210). The government’s rush for gas exploitation is a direct consequence of the increasing demand for power by citizens, companies and industries in Ghana. As the country’s economy grew considerably until recently since the new millennium, citizens (with their partly increased incomes) and businesses consume an increasing amount of electricity.<sup>73</sup> The problem, however, is that the power infrastructure cannot keep up with this trend. Since 2008, Ghana experiences regular power cuts that pose serious barriers to further economic growth and social development.<sup>74</sup> *Dumsor*, meaning “off and on” in Akan, has become part of Ghanaians’ everyday lives.<sup>75</sup>

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<sup>70</sup> The ‘theoretical’ population includes all units of interest. In some cases, this theoretical population is equivalent to the ‘study’ population to which the researcher has access to.

<sup>71</sup> The gas project is only one part of the planned “Western Corridor Development Zone”, which is planned to include a petroleum terminal, the railway modernization, the Takoradi Port rehabilitation as well as the Sekondi Free Zone.

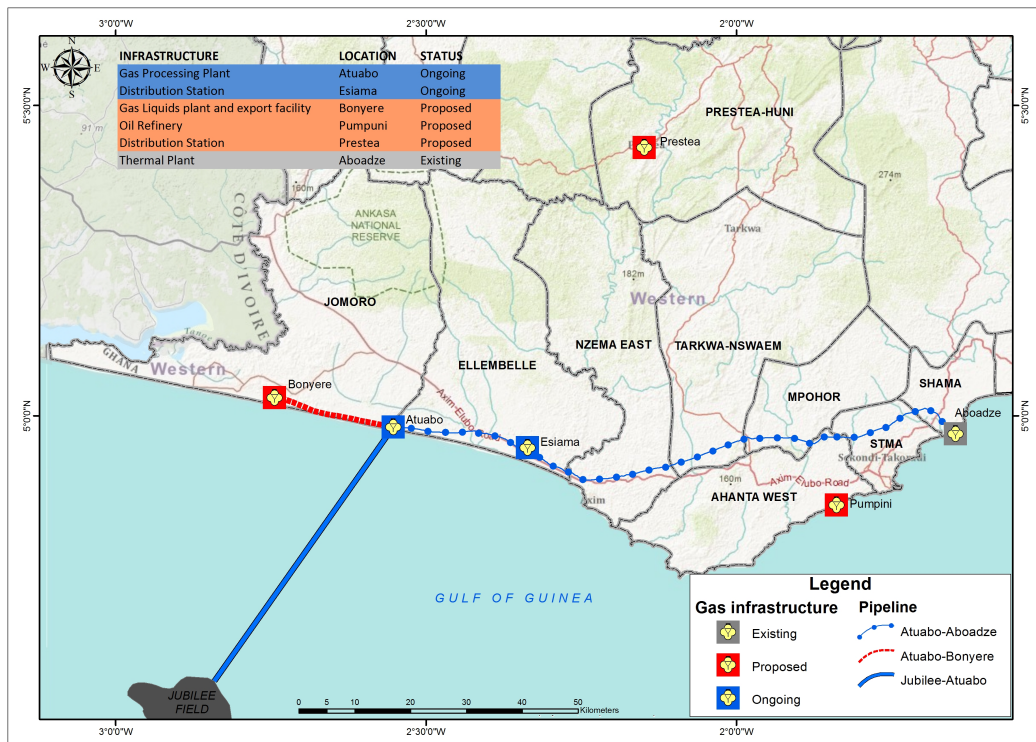
<sup>72</sup> Currently under construction is further a 75 km long lateral pipeline stretching between a gas distribution station in Esiam (between Atuabo and Aboadze) and a regulating and metering station in Prestea in the northern part of the Western Region (SINOPEC 2014: 5).

<sup>73</sup> According to the Ministry of Energy, power demand is expected to grow at an annual rate of 7.5% between 2012-2021, and, slightly decreased, at a rate of 6.3% from 2022 onwards.

<sup>74</sup> According to estimates by GRIDCo, the public company in charge of electricity transmission in Ghana, the power outages costs up to 6% of GDP (Power Systems Energy Consulting (PSEC) 2010: 71).

<sup>75</sup> *Dumsor* arises from a number of obstacles: First, the existing facilities do not sufficiently meet Ghana’s power demand – even if they would work smoothly. Second, the Akosombo Dam, the biggest energy supplier, suffers from significant water shortages which reduces the amount of generated hydro power. Third, the natural gas supplies from Nigeria through the ‘West African Gas Pipeline’, which power the thermal plants in Takoradi and Tema, are increasingly unreliable and continuously force authorities

Figure 4.1: The Western Corridor Gas Infrastructure Development Project



Source: Justice Camillus Mensah and author's own graph.

The company responsible for the project is the Ghana National Gas Company (GNGC), most commonly referred to as “Ghana Gas”, in collaboration with Sinopec, a Chinese state-owned company.<sup>76</sup> The Government carved Ghana Gas out of the Ghana National Petroleum Company (GNPC) in July 2011 in order to build, own and operate the gas infrastructure.<sup>77</sup> According to Ghana Gas, the project entails “enormous benefits to Ghana”: new employment opportunities, socio-economic development, new infrastructure, and self-sufficient energy production (Ghana National Gas Company 2011: 7). The “Environmental and Social Impact Assessment” for the pipeline re-emphasizes the generation of employment and training opportunities as the following abstract from the report articulates:

to put the thermal plants on hold (Ministry of Energy 2012; Fritsch and Poudineh 2015). Fourth, both the public VRA and the Electricity Company of Ghana (ECG) are coined by inefficiency, a lack of transparency, and the failure to appropriately maintain existing infrastructure, let alone to build new one (Fritsch and Poudineh 2015: 5-6).

<sup>76</sup> The company has been accused of human rights violations in conflict-ridden Sudan.

<sup>77</sup> Hereby, Ghana Gas is a midstream operator regulated by the Petroleum Commission (PC) in its upstream activities, the Energy Commission in its midstream activities, and the National Petroleum Authority and the Public Utilities Regulatory Commission in its downstream activities (Ghana Gas 2013). In brief, the upstream industry discovers and produces crude oil and natural gas, the midstream industry stores, processes and markets the commodities and the downstream activities mean the refining of crude oil or the distribution of natural gas.

“The local economy is expected to benefit from regular monthly earnings of workers and artisans during the 6 months construction period. Their purchasing power will be *greatly enhanced* and *members of the communities involved will be in a good position to plan their personal and family lives better*. This will in effect contribute significantly to the national economy [...] Renting of rooms to the workers will also develop as an *avenue for generating income*. This will *improve the aesthetics of the communities and encourage entrepreneurs to provide more social infrastructure* such as internet cafes, chop bars or even restaurants as well as other supporting services in health and education. Availability of social amenities will therefore increase and *school children can have easy access to good education*. *Standards of living will very likely improve*” (Ghana National Gas Company 2012: 95, own emphasis).

Several remarks are questionable in this quotation: Firstly, considering the number of about 150 people the project employed during the construction phase, it is controversial to state that improvements to the salary of 150 people along a 111km long pipeline can ‘greatly enhance’ the purchasing power across the region. Secondly, it can be disputed whether a salary over six months will put workers into a position ‘to plan their personal family lives better’. Thirdly, the statement that income can be generated by renting out rooms to the Chinese workers is questionable, taking into consideration that Chinese workers tend to live in houses built by themselves and outside the communities.

In contrast to these alleged benefits, the project has been conflict-ridden since before constructions started: In the very beginning, the pipeline was planned to run off-shore close to the coast. Yet, this plan was soon abandoned.<sup>78</sup> Likewise, Ghana Gas revised the route of the pipeline: In the initial plans, the offshore pipeline was planned to come onshore in Bonyere in the Jomorro District instead of Atuabo in the Ellembelle District. The community of Bonyere is located approximately 15km west of Atuabo towards the border with Cote d’Ivoire (see Map 4.1, page 51). Although the change of location was explained and justified by several reports of independent valuers, there is speculation that the location switched because of personal networks: the site only changed as both the Minister of Energy (who is also the Member of Parliament (MP) for the Ellembelle District) and the CEO of Ghana Gas come from the Ellembelle District, and favored the re-location to secure the above mentioned project benefits to their home district.<sup>79</sup>

The ongoing changes of location contributed to a third problem, the overall delay by 18 months.<sup>80</sup> According to estimates by Amin and Boakye (2014), the delay costed the

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<sup>78</sup> The Ghana National Gas Company (2012: xiii) states the following reasons: Lower capital cost, lower operating and life cycle cost, easier handling of increasing gas flows from future oil fields, the potential creation of direct and indirect employment opportunities for Ghanaians, as well as decreased threats for public health and safety.

<sup>79</sup> The rumors are aggravated by the ‘co-incidence’ that the brother of the MP is currently building a hotel lodge next to Atuabo.

<sup>80</sup> Legal proceedings against Ghana Gas initiated by the Omahen of the Nzema East Traditional Area, where the gas plant is located, further caused this delay. See therefore Section 8.1.1.

country around US\$550 million per year since 2011.

## Sampling

Following the definition of ‘direct affectedness’, the study population comprises an estimated number of 72 communities along the gas pipeline. Time and financial constraints made it necessary to select a sample population. A *sample* is a smaller but hopefully representative collection of units from the study population. Sampling requires three consecutive steps: Building a sampling frame, selecting a sampling approach (non-probabilistic or random) and determining the sampling size.

(1) The *sampling frame* is a list of units from which the sample is taken. Yet, in the case of the gas pipeline, the local conditions impeded the building of a sampling frame with individuals as units of analysis. Failing a list of individuals (for good reasons from an ethical perspective), I used communities as the sampling frame. Yet, also a list of affected communities was not available. Several informants explained to me that no such list exists. Ghana Gas generally withholds information besides some few and irregular published press statements. Official requests for a meeting or for further information were repeatedly unsuccessful.<sup>81</sup> As an alternative solution, I identified as many communities as possible by studying secondary data,<sup>82</sup> interviewing representatives of the Lands Commission and the Land Valuation Department in Sekondi, and by using satellite and GIS data.

Despite this extensive research over several weeks, the ultimate number of affected communities and, respectively, farmers and landowners is hard to finalize: For example, on July 10, 2012, the Daily Guide reported that 166 farmers had been compensated for crops destroyed in the course of the pipeline’s construction. According to a press statement by Ghana Gas, released on November 26, 2012, 1498 farmers within 57 communities were soon expected to receive compensation for their crops. On September 24, 2013, GhanaWeb proclaimed a number of 2361 compensated farmers and 80 more to be compensated. Contrary to this, the Centre for Public Interest Law (2014: 30, 53-55) report recounts 1566 farmers in 57-66 affected communities. The report supports its validity by presenting the first actual list of affected communities. In the end, I was able to identify 72 communities and approximated the number of 1800 affected individuals for the sampling frame.

(2) The second step in the sampling procedure is to select a *sampling approach*: In random sampling,<sup>83</sup> every unit within the population has an equal probability of being

<sup>81</sup> One informant working for Ghana Gas traced this back to an incident occurred in 2014 which is still pending: An organization interviewed a Ghana Gas Liaison Officer for ‘information purposes’ only. After the interview, the organization publicly used the retrieved information against the company.

<sup>82</sup> Newspaper articles, the Centre for Public Interest Law (CEPIL) report and documents from an informant.

<sup>83</sup> In non-probabilistic sampling some elements of the population do not have the chance of being selected. Non-probabilistic samples are, *per definitionem*, not representative for the population, do not allow for the estimation of sampling errors and prevent generalizations about the population. The most frequently used non-probabilistic sampling techniques are quota sampling and convenient sampling.

selected. This allows for the estimation of sampling errors and more valid generalizations about the study population. Within random sampling, *cluster sampling* is a useful strategy if no convenient list exists to build a sampling frame.<sup>84</sup> Cluster sampling assumes that individuals act in more or less enclosed ‘natural groups’. These groups can either refer to villages or cities (geographical context) or to similar activities (like schools, churches, etc.). If it is impossible to conduct a list of units for the sampling frame, a list of such natural groups can help out. From this cluster frame, an *ex ante* defined number of clusters is *randomly* chosen as the study’s sample. Based on the community sampling frame with 72 affected communities, I used random cluster sampling to select sample communities. First, I subdivided the study population in eight clusters along the district borders (see Map 4.2). Second, I applied random sampling of communities and selected the first 30 communities on the list. Map 4.2 depicts the pipeline’s route, the district borders and the sampled communities.

The comparably high number of 30 communities aimed at increasing the likelihood of sampling at least one community within each district cluster. Further, such a scattered selection of communities along the pipeline gives diverse insights in representation. As it was usually impossible to determine the number of affected individuals within each community in advance,<sup>85</sup> it left a further 39 communities<sup>86</sup> for additional random selection in case the sample would be too small after visiting the initial 30 communities. Within the 30 sampled communities, the respondents were randomly selected as much as possible.

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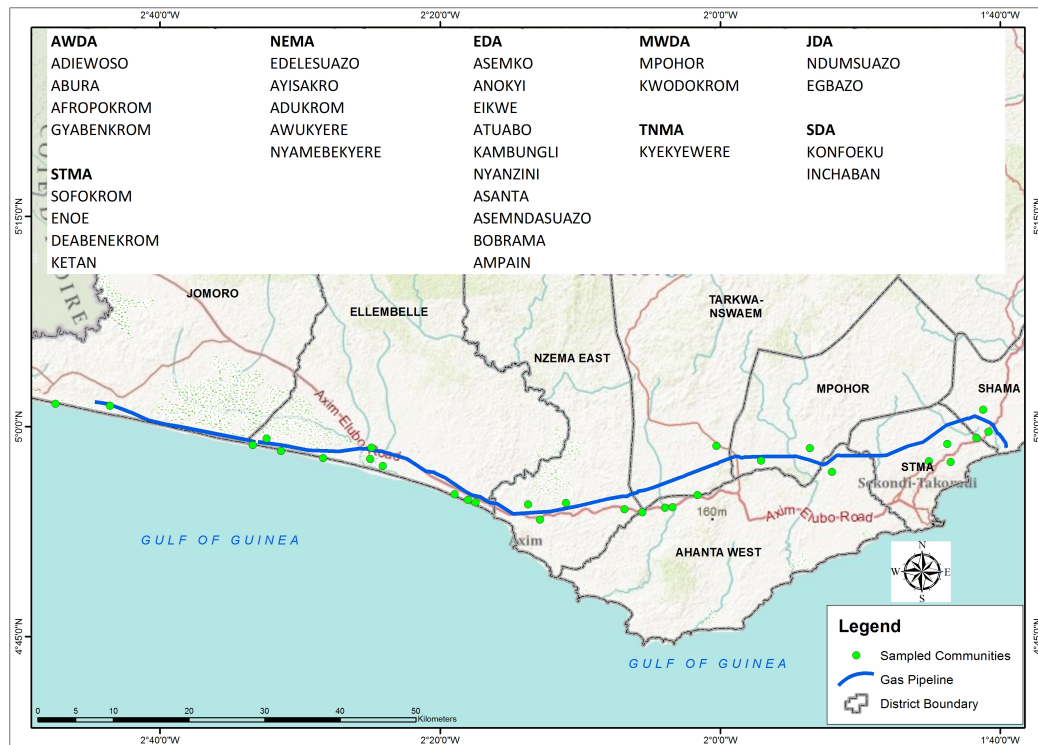
<sup>84</sup> Others are simple random, systematic, stratified, multistage and multiphase sampling. *Stratified sampling* is useful to ensure the inclusion of key subpopulations in the sample (Bernard 2006: 153). The study population is sub-divided by independent variables in several ‘strata’ which are, in the following, treated as independent sub-populations. *Every* strata is included in the sample with a particular number of strata units. I did not pursue the initial idea of applying stratified sampling based on different communal categories (urban vs. rural, coastal vs. inland). Two major problems impeded stratified sampling: First, it was hard to categorize urban vs. rural communities before sampling. Second, a lot of farmers and landowners live, e.g., in an more urban community along the coast, but have their (farming) land in a rural setting in the inland (or the other way around). This fact made stratified sampling impossible.

<sup>85</sup> We sometimes were able to find out an approximate number with the help of community members and informants.

<sup>86</sup> From the remaining 42 communities, we pretested the questionnaire in three communities, resulting in 39 communities for subsequent random selection.



Figure 4.2: Route of the Ghana Gas Pipeline and Sampled Communities



Source: Justice Camillus Mensah and author's own graph.

(3) The third step is to determine the *sample size*. This minimum number of necessary respondents for the sample to be representative depends on several factors such as the size and the heterogeneity of the population, the size of subgroups, the estimates and the precision. The minimum number of respondents can be determined based on the (estimated) population size, a multiplier of the confidence level, the standard deviation and a marginal error. With a confidence level of 95%, a margin error of 5% and the population size of 1800, a minimum sample size of 317 respondents was found to be statistically adequate (236 respondents for a confidence level of 90% respectively). Table 4.3 (page 55) provides an overview of the sample's composition with  $N = 333$ .

Table 4.3: Overview of Sample's Composition ( $N = 333$ )

<b>Sex</b>	Male	58.26%, $n = 194$
	Female	61.74%, $n = 139$
<b>Age</b>		$\bar{x} = 51$ years
		$min = 18, max = 101$
<b>Marital Status</b>	Married	74.17%, $n = 247$
	Widowed	12.31%, $n = 41$
	Divorced/Separated	7.51%, $n = 25$

Continued on next page

Table 4.3 – Continued from previous page

	Single	5.71%, $n = 19$
	Polygamous Marriage	0.30%, $n = 1$
<b>Household Size</b>		$\bar{x} = 7$ people $min = 1, max = 21$
<b>Household Location</b>	Rural	69.37%, $n = 231$
	Semi-Urban	12.01%, $n = 40$
	Urban	18.62%, $n = 62$
<b>Education</b>	No formal schooling	30.63%, $n = 102$
	Primary School	55.85%, $n = 186$
	High School	6.01, $n = 20$
	Polytechnic	1.20%, $n = 4$
	Bachelor	2.70%, $n = 9$
	Diploma	1.50%, $n = 5$
	Other	2.10%, $n = 7$
<b>Major Occupation</b>	Farmer	74.77%, $n = 249$
	Teacher	4.50%, $n = 15$
	Fisher/Fishmonger	4.20%, $n = 14$
	Artisan	3.00%, $n = 10$
	Trader	2.10%, $n = 7$
	Driver	1.20%, $n = 4$
	Student	1.50%, $n = 5$
	Unemployed	0.60, $n = 2$
	Retired	2.40%, $n = 8$
	Other	4.80%, $n = 16$

Source: Own graph. Answers derived from question numbers 1 - 5 including the preamble.

### 4.3.2 Questionnaire Design

Survey questionnaires generally include either fixed-choice or open questions. *Fixed-choice questions* enclose pre-coded answers whereas in open questions the respondents' verbal answers are noted and coded afterwards. The answering categories in fixed-choice questions have to be mutually exclusive and exhaustive.<sup>87</sup> My questionnaire instrument included both fixed-choice items and open questions.<sup>88</sup> I used open questions if exhaustive answer categories were impossible to provide but also to break the monotony of fixed-choice items. In fixed-choice items, I chose to use 5-point likert scales rather than 3-point likert scales as I aimed to extract quasi-metric data and to give respondents the chance to make

<sup>87</sup> 'Mutually exclusive' are answers only if respondents cannot confirm two categories at the same time. 'Exhaustive' questions cover all possible answers.

<sup>88</sup> Converse and Presser (1986: 43) note the usefulness of using open questions as follow-ups to fixed-choice questions as this procedure can guide the interpretation of fixed-choice questions results.

“finer-grained choices” (Bernard 2006: 274).<sup>89</sup>

To ensure exhaustiveness and to increase the questions’ quality, I applied the guidelines discussed in the previous section: To be unambiguous, clear and simple in the questions’ wording and to avoid loaded, biased or double-barreled questions. I thoroughly ordered the questions from general to specific as interviewees tend to be as sensitive about the order of questions as they are about the wording. To meet ethical demands, each question included the residual categories ‘Other, please state’, ‘None’, ‘Don’t know’ and ‘Refuse to answer’.<sup>90</sup>

The questionnaire consisted of ten thematic blocks (see Appendix 5, page 201). Each time before starting a new section, the interviewer team (consisting of three research assistants and myself) briefly informed the respondent about the upcoming topic. The title page covers the name of the interviewee, contact details, the sex, the community and traditional area, and the settlement location (urban, semi-urban, rural). Block (1), *Socio-Demography and Economic Activity*, covers the age, the marital status, the educational degree, the household size, the number of years living within the community and reasons for migrating to the community (if applicable). This section aims to give a general overview over the participants’ backgrounds. Block (2), *General Questions on Political Issues in Ghana*, targets the political involvement of respondents (political interest, voting behavior and general trust in political actors and society). Moreover, the respondents report three major challenges in their community and rank actors in their helpfulness in addressing these challenges. This will show to what extent affected respondents perceive the developing petroleum sector as a challenge at all and to give insights into representation as commissioning. Block (3), the *Land Acquisition and Compensation Process (LACP)*, follows. This section divides the sample along landowners and farmers and gives in-depth insights in respondents’ experiences within the LACP.<sup>91</sup>

Block (4), *Knowledge about the Oil and Gas Sector*, and Block (5), *Interests and Information in the Oil and Gas Sector*, illuminate respondents’ knowledge about and interest in the petroleum industry as well as the information policy of state authorities. It will help to understand how much affected individuals actually know about the developments taking place in their immediate living environment. In block (6), *Participation in Oil and Gas Related Matters*, the interviewees report about their own engagements in the petroleum sector. This section is decisive as results will highlight which actors respondents rely on if they have a problem related to oil and gas and, consequently, which of

<sup>89</sup> Furthermore, 5-point likert scales are standard in existing survey instruments such as the Afrobarometer Survey.

<sup>90</sup> These residual categories are disputed due to their non-interpretability and as more interviewees choose them if they are offered (Converse and Presser 1986: 35). However, in my opinion, it is more important to refrain from forcing respondents to answer all questions. Additionally, as the various answers show, the problem of non-interpretability is absent in this research.

<sup>91</sup> Even though the compiled answers provide novel insights in current developments in Ghana’s petroleum industry, they are excluded from this thesis for the sake of clarity and shortness.

these actors can claim to represent affected communities. To find out more about the individually perceived inclusiveness in and satisfaction with the petroleum developments, the questionnaire proceeds with block (7) (*Personal Inclusiveness and Satisfaction*). This block aims to find out how satisfied affected citizens are with the way petroleum actors govern the petroleum resources and deriving revenues.

The last three sections directly target the respondents' satisfaction with, and trust in, petroleum actors by first looking at the *Performance of National Policy-Implementers* in block (8). In block (9), *Trust, Power and Legitimacy in/of Policy-Implementers*, respondents evaluate their trust in and the perceived influence of petroleum actors. This block is important as responses can be analyzed to show whether respondents differ in their general trust towards political actors and the particular trust they forward to them in petroleum governance. Moreover, two questions explicitly scrutinize the brokerage abilities of non-state actors (traditional authorities, NGOs and media). Only respondents who understood the concept behind NGOs and CSOs, answered the final block (10) (*Civil Society Assessment*).<sup>92</sup> Here, the interviewees summarize past participation(s) in NGO projects and the usefulness thereof. The very last question includes a list of NGOs and CSOs who are active in the oil and gas sector. This section will test whether these organizations are really known by the people they aim to represent. The questionnaire closes with an open window for additional remarks to give respondents the chance to add comments which they felt should be included in my PhD project.

### 4.3.3 Arising Problems and Applied Solutions

The structure of the questionnaire, the questions themselves as well as the interview situation influence the quality of extracted data and the amount of missing data. To put the research into a larger picture, I will shortly discuss some problems I faced in the field and how I tried to solve them. They range from methodological challenges over practical problems to ethical considerations.

#### Methodological Problems and Applied Solutions

A very general problem of survey instruments is their artificial demand: Respondents are essentially 'forced' to put a numerical 'price tag' on non-numerical behavior or attitudes. This demands high cognitive abilities of respondents and potentially blurs reality. Further, even if the questionnaire includes a 'Refuse to answer' category, social desirability research shows that respondents may shy away from choosing this exit option as they face the person that is interested in the answer. Particularly in light of controversial questions, this face-to-face situation can cause false statements. Moreover, face-to-face interviews

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<sup>92</sup> This filter induces high drop out rates. This is unfortunate for the analysis, yet it already tells us a lot about the image and self-image of civil society actors on the grass root level.

are “intrusive and reactive [and it] takes a lot of skills to administer a questionnaire without subtly telling the respondent how you hope he or she will answer your questions” (Bernard 2006: 257). The problem of reactivity increases with the engagement of research assistants as respondents tend to adapt to the person asking the questions. Hence, with the different interviewers in my PhD project, the respondents faced different stimuli – but imposing the same stimuli to all interviewees is the initial idea of structured interviews.

To counterbalance these disadvantages, the research team always encouraged respondents to not shy away from making use of the residual answering categories. As the answers show, respondents made particularly use of the “Don’t know” category, for example with regard to the performance of NGOs: Within the sample, 35.74% ( $n = 119$ ) respondents indicate to not know (enough about) NGOs for evaluating their performance. The data, thus, suggests that respondents did not shy away due to social desirability. To decrease interviewer effects, the research team discussed the questionnaire in-length and the Ghanaian assistants agreed upon a common translation of the English questionnaire into Fante and Twi. All of them speak at least one of the local languages dominating the Western Region and were, thus, able to interview respondents in their mother tongue if required. Moreover, all research assistants have profound knowledge in administering questionnaires. We further intensively discussed each field trip and, thus, had constant feedback mechanisms to minimize respondents’ reactivity and interviewer biases.

### **Practical Problems and Applied Solutions**

A rather practical downside of surveys are the high financial costs and the trade-off between these costs, the available time and the sample size: To increase the size of the sample, researchers either have to delegate responsibilities to research assistants who need to get paid or they have to invest more time for interviewing more respondents on their own. Working with three research assistants helped to best balance sample size, duration of the survey and financial possibilities.

Time can turn into a problem in face-to-face interviews on its own: Interviewing over 300 respondents with the same questionnaire is challenging and tiring. Related to this, external challenges such as bad infrastructure and climatic conditions (e.g., heavy rain-falls, floods, etc.) are time-consuming. Moreover, researchers need to take care of not “[...] being overtaken by events [...]” (Bernard 2006: 258), e.g. in the case of political disruptions. These challenges are particularly troublesome as they are completely independent from the researcher’s agency. In order to minimize these disadvantages, we tried to minimize the duration of the questionnaire’s application to four months and collected the data during dry season (as some of the communities are hard or impossible to reach during the rainy season). Yet, bad infrastructure greatly aggravated our travels and, thus, was very time consuming.

### **Ethical Problems and Applied Solutions**

The ethical considerations of the Belmont Report discussed in Section 4.2 are as much as valid and decisive for survey studies as they are for exploratory methods: Respect for respondents and their fair and equal treatment is crucial. Equally essential are informed consent with extensive information in a comprehensive manner, willingness to volunteer, a risk-benefit-assessment, the right to refuse or withdraw, confidentiality, and anonymity.

Besides these general guidelines, I want to discuss some particular examples emerged in my survey research: First and foremost, the affected individuals were not asked whether they want to be present in the population, sampling frame or sample. Strictly speaking, already this first step violates the ethical guidelines of voluntariness and informed consent. Some community leaders and members were skeptical about how they had been identified. The biggest challenge we faced – besides transportation – was to assure communities that we were not working for or with Ghana Gas. Thereby, we always emphasized that the study will not influence government's decisions or the compensation processes. Besides that, both community leaders and community members were very welcoming and open to us.

Second, as I worked with research assistants, the number of people who are able to identify respondents and the danger of violated confidentiality increased. As a consequence, they all ensured confidentiality before starting to work on the survey. Third, we tried to interview everyone who was interested in sharing their experiences and opinions with us.<sup>93</sup>

Lastly, the question of whether or not paying the respondents and gatekeepers came up. The decision for or against financial compensation is disputed: While some argue it is a rightful exchange, others argue that it compromises the 'scientific community' as future researchers might not have the available resources to follow suit to a researcher who paid informants. In my case, the decision for or against payment was obsolete as the size of my sample inherently impeded a financial compensation of respondents.

#### **4.3.4 Application in the Field**

Before entering a community as an outsider in Ghana, it is appropriate and in most cases necessary to first introduce yourself and the purpose of your visit to the community leaders. Depending on the communal setting, these leaders include the local chief(s), the District Assembly representative or other opinion leaders. Therefore, introducing ourselves and the purpose of the research was always the first step. In most cases, we had some background understanding of the respective community leaders and were able to

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<sup>93</sup> This means we did not restrict the number of respondents before entering the community so that everyone interested got the chance to be interviewed (in order to prevent potential tensions between respondents and non-respondents).

prepare appropriately.<sup>94</sup> Almost all community leaders were very welcoming and helpful in identifying affected community members. In most cases, we interviewed the community members at their homes or at communal places.

Before the interviewing process started, we explained the purpose of the study, the right to refuse and all other ethical necessities, based on the “Participant Information Sheet” (see Appendix 4, page 200) of which each respondent received a copy.

To improve the questionnaire’s overall quality, the research team pretested it in November 2014 before the main survey took place between December 2014 and March 2015. By pretesting, I aimed to evaluate the questionnaire as a whole and to assess the quality of each single question (Converse and Presser 1986: 54-65). Together with the assistants, I pretested the questionnaire with 17 different respondents (men and women, old and young, literate and illiterate) in three affected communities in different geographical settings (urban and rural, coastal and inland) in three waves. The pretesting phase helped to shape the questionnaire, to discover important items and to eliminate unnecessary ones.

Although I conducted open-ended interviews particularly in the beginning of my field research, I applied this method also during the survey in affected communities. If all respondents chose to answer the questionnaire in Fante or Twi, I could not help in the interviewing process due to my insufficient knowledge of either of these languages. This gave me the time to talk to community leaders or other communities members. Herein, I spoke with several chiefs, opinion leaders, citizens and Ghana Gas Liaison Officers.<sup>95</sup> The conversations mainly evolved around the implications of the gas infrastructure and more general concerns.

In summary, the investigation of the *second* main research question – which of the actors who aim or claim to steer petroleum resources and resulting revenues (collectively) are representatives of petroleum-affected communities – is based on the answers of 333 individuals who lost crops and/or land due to the construction of the Ghana Gas pipeline. The *third* research question – to what extent do these actors collaborate with each other – is premised on the analysis of social network data. The following section discusses the collection of these data.

<sup>94</sup> After explaining my status as a PhD Student, we were never obliged to provide the traditional gifts of schnapps or money. In one case we had the *a priori* knowledge that the chief will insist on the schnapps, so we decided to follow suit. In a second case we were asked to contribute to the renovation of the chief palace after we interviewed community members. As the chief allowed us to conduct the interviews without his presence in his palace, we were happy to contribute a minor amount of money.

<sup>95</sup> Ghana Gas engages these officers to act as a point of contact and broker between communities and the company. In most cases, these Liaison Officers are community members and used to farm before starting to work for Ghana Gas. According to conversations with three different Liaison Officers, they each are responsible for about four communities and earn around 800 Ghana Cedis (~ US\$ 210 per month). They all got the jobs by chance such as David who observed the Land Valuation Division (LVD) demarcating the land. As his community was not informed before the valuation took place, he went to Ghana Gas for more information and got the job in return. Also Daniel got the job by his own initiative after getting to know that Ghana Gas is looking to engage community members.

## 4.4 Social Network Analysis (SNA)

As discussed in Section 2.1.2 (page 13), scientists and practitioners in international development cooperation assume that natural resource governance is successful only if a diverse set of actors are able to participate and interact in the steering of natural resources and deriving revenues. Among other things, proponents of this approach argue that through actors' collaboration, knowledge and innovations spread easier and faster and that collaboration benefits the formation of mutual trust. Social Network Analysis (SNA) is the most suitable research technique to scrutinize relations and *interactions* between social entities. It helps to understand interactions in-depth by providing “[...] a convenient, efficient, and [...] productive way of penetrating to the heart of various social orders” and by sensitizing “[...] the investigator to the inherent tension in social relations between persons who have differential access to resources which affect power chances” (Boissevain 1979: 393).

Surprisingly, development researchers only begin to scrutinize natural resource governance by the means of SNA (Bodin and Crona 2009; Bodin et al. 2011; Ramirez-Sanchez and Pinkerton 2009; Ramirez-Sanchez 2011; Lienert, Schnetzer, and Ingold 2013). And within this little space of cross-cutting disciplines and methodologies, the available information on how to individually generate social network data is still scarce: Insights into the development of a suitable questionnaire and its application in the field remain very limited. If SNA data is generated in the field, questionnaires often consist of only two dichotomous questions examining the existence or absence of relationships among actors (Ramirez-Sanchez 2011; Lienert, Schnetzer, and Ingold 2013). Yet, such a research approach is insufficient to answer the third research question. Accordingly, the next section first defines networks in terms of boundary, population and sampling. It then discusses the structure of the questionnaire used to generate network data among petroleum actors in Ghana and provides an overview of the derived data.<sup>96</sup> The chapter proceeds with debating arising challenges and applied means to address these challenges. It closes with summarizing how the different data sets are used to answer the thesis' central research questions.

### 4.4.1 Boundaries, Population and Sampling

The first step in a SNA is to identify the network actors (boundary setting) and, if the network is too big, to sample. Laumann, Marsden, and Prensky (1989) are the pioneers in recognizing the significance of boundary setting. Until then, “[...] boundaries of a network are presented as so self-evident in a social situation studied as to require no comment”

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<sup>96</sup> For studying ego-centric networks see, for example, Prell (2012: 65-66). For theoretical reasoning and differentiations in ego-centric networks (such as intimate, effective and extended networks) see Boissevain (1968).



(Laumann, Marsden, and Prensky 1989: 20). The *boundary* of a network refers to the demarcation line “[...] around a set of actors that the researcher deems to be the complete set of actors for the network study” (Prell 2012: 66). The difficulty of identifying this set of actors varies, according to the study interest.<sup>97</sup>

Laumann, Marsden, and Prensky (1989) suggest a two-steps procedure: First, network researchers have to choose between proceeding either nominalistic or realistic. The *nominalist* approach sets the boundary based on theoretical or practical considerations (Laumann, Marsden, and Prensky 1989: 21; Prell 2012: 66-67) whereas the *realist* approach assumes that “[...] a social entity exists as a collectively shared subjective awareness of all, or at least most, of the actors who are members” (Laumann, Marsden, and Prensky 1989: 21).<sup>98</sup> Second, network researchers need to choose from three “definitional foci” (Laumann, Marsden, and Prensky 1989). These three foci are attributes, relations and events, or a mixture of all of them. The most frequently used focus are actors’ *attributes*. If actors possess a particular attribute, they are inside the boundary, if not they are excluded.<sup>99</sup> The second focus defines those actors as network alters who share a specific type of social *relation* (e.g. advisory relation).<sup>100</sup> The third focus are *events*: Here, the network consists of actors who participate in the same event(s) (‘event-based approach’, Wasserman and Faust 1994; Marsden 2005; Knoke and Yang 2008). As all approaches come with advantages and disadvantages, no approach overrides the other. Rather, all are ideal types and scientists have to adapt them case-to-case while taking theoretical and practical considerations into account.<sup>101</sup>

In the present research, the *nominalistic* approach was combined with the three foci in a three-step approach.<sup>102</sup> The first step studied the Petroleum Revenue Management

<sup>97</sup> If studying the relations among students in a classroom, the classroom is the boundary and, hence, the boundary definition is straightforward. In other cases, and this is rather the rule than the exception, it is difficult or even impossible to correctly determine the boundary (Wasserman and Faust 1994: 31).

<sup>98</sup> Realistic network researchers therefore include those actors who are perceived as network members by the alters themselves. An early selection of key informants, who are able to identify members of the network, is consequently crucial (Prell 2012: 66).

<sup>99</sup> The most popular approach using the attributional focus is the ‘positional approach’ which includes actors in a certain position (e.g. all CEOs from different organizations) in the network.

<sup>100</sup> The most popular approach using this foci is the ‘reputational approach’: The researcher starts with an initial list of actors (roster) who are identifiable network members. These actors are then asked to nominate alters with which they share, e.g., an advisory relation.

<sup>101</sup> Moreover, we should keep in mind that the two-steps procedure can cause different networks and, by that, different results. This becomes evident if we, for example, rely on the reputational approach: Firstly, the boundary is biased by the initial actors on the roster. Other respondents might nominate different actors as network alters. Secondly, taking into account only those alters who are immediately nominated, can cause a more densely connected network than the other two approaches. Yet, the reputational approach is important for “hard-to-reach populations [...] such as drug dealers and user, illegal immigrants, sex partners of HIV-positive people, or underground militia” (Knoke and Yang 2008: 18). The best strategy depends on the context. Mixing foci by starting with one focus and reviewing the results with the other two foci seems to be a favorable solution.

<sup>102</sup> Mixing the three foci by applying them gradually is possible but tend to overestimate the network’s size (and, hence, more theoretical degrees of freedom, Laumann, Marsden, and Prensky (1989: 28-30)).

Act, Act 815 (PRMA) and deemed those actors inside the petroleum actors' network who are legally assigned to influence the petroleum revenues' management. These are specific actors like the Ministry of Energy and Petroleum but also here-called 'sectors' like civil society, traditional authorities or media representatives. The second step reviewed this nominalistic approach with the *attributional* focus, here defined as taking (or aiming for) an active part in petroleum governance, e.g. by providing policies such as the Ministry of Finance or by implementing petroleum related projects such as NGOs. The third step cross-checked the results by attending numerous meetings (*event* focus) and by observing interaction patterns during these meetings (*relational* focus).

By these means, I compiled a list of potential network actors ("roster") with 41 organizations and institutions from ten different sectors (see Appendix 8, page 217). For lack of time it was impossible to interview all 41 actors. But contrary to traditional surveys that consider actors to be independent units which can be added until a representative sample of the study population is reached, network data are non-independent observations and impede a random selection by nature. Consequently, I had to apply convenient sampling and interviewed all actors who were accessible and who were interested in participating in the study. As a result, the interactions and relations analyzed in this thesis compile an 'artificial' network, a snapshot of a much bigger network.

#### 4.4.2 Questionnaire Design

Network researchers essentially use four key methods to extract network data: Internet-based data extraction,<sup>103</sup> archival studies,<sup>104</sup> observations, and interviews.<sup>105</sup> I used *observations* as initial stage of discovering unknown relations and a questionnaire as the main instrument.<sup>106</sup> The questionnaire consists of three parts (see Appendix 7, page 216): Six

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<sup>103</sup> They currently enjoys considerable attention. Due to the rise of social media platforms (e.g. Facebook, Twitter) and professional platforms (e.g. LinkedIn), the data volume is massive, easy accessible, and allows for sophisticated quantitative network and data mining models. Moreover, drawbacks of other methods such as biases or recall mistakes in observations and interviewing are avoided (Prell 2012: 74).

<sup>104</sup> Archival studies are most frequently used in cases in which the interactions of network alters can not be studied directly (Henning et al. 2012: 82-83; Marsden 2005: 24. The most famous social network publication realized with archival methods is the study of Florentine networks in medieval Italy society by Padgett and Ansell (1993). By extensively combing historical archives, they identified different types of relationships (e.g. kinship, marriage ties and business ties), were able to explain the Medici's rise to power, and moved the focus of network studies away from structure to localized agency.

<sup>105</sup> Other methods are experimental designs, (reverse) small-world techniques or Cognitive Social Structure (CSS) designs. Small-world techniques search for chains of connections at different removes. The reverse small-world methods searches for an extended number of connections in immediate social circles by the means of an initial imaginary sample of network alters (Killworth and Bernard 1978; Knoke and Yang 2008: 27). CSS designs gain data indirectly by that respondents report on their perceptions of other people's relations rather than their own (Krackhardt 1987; Wasserman and Faust 1994: 51-54; Marsden 2005: 9, 20-21; Knoke and Yang 2008: 32-34).

<sup>106</sup> The observations were helpful to navigate through the variety of organizations and institutions particularly in the beginning of the field research. A number of characteristics yet became apparent: First, observing interactions between different pairs of organizations was challenging as not all interactions

preliminary questions give background information about respondents, the organization they work for and its respective goals in the petroleum sector. These answers are pivotal in order to scrutinize actors' agendas in petroleum governance and to test how communities' interests and actors' agendas intersect in petroleum governance. The questionnaire's second part consists of 13 open questions that extract directed and valued network data. *Directed* data indicate the direction of a tie from the sender  $i$  to the addressee  $j$ . As *undirected* data 'only' denote the presence or absence of a relation, directed data hold more content, allow for a better understanding of relations and, thus, are preferable to undirected data. The same applies to the dichotomy between binary and valued data: *Binary* data only measure present or absent ties (i. e., dummy variables) whereas *valued* data indicate the strength, intensity, duration or frequency of a relation (Wasserman and Faust 1994: 44). Yet, as Granovetter (1973) famously shows with his concept of 'the strength of weak ties', strong ties are not automatically 'better' or more useful than weak ties and it depends on the researcher to interpret the meaning of valued network data.

Twelve of these relational questions generate both active (outgoing) and passive (incoming) ties in regard to six forms of economic and social exchanges (general communication, meetings, advising, advocacy, resource exchange and gatekeeping). Tackling both directions allows to cross-check answer and this aim constitutes a decisive novelty of this PhD research. As results in Chapter 7 show, only about 30% of interactions are confirmed by both the sender and the addressee of a tie.

The 13. relational question aimed to extract negative ties, a major research gap in SNA research. Unfortunately, the answering behavior of most respondents leads to the conclusion that the question's wording was not well chosen. Though I tried to phrase it in a 'positive' way ("With which of your contacts / partners are you currently not intending to collaborate in the year 2015?"), only two respondents specified former partners with whom they would not collaborate again in the future. All other interviewees stated that they would continue collaborating if the chance arises. It remains unclear whether this is really the case or whether respondents shied away from giving a correct answer. Considering the resource scarcity in the petroleum sector and the general openness of all actors to interact, it is not unlikely that actors indeed intent to collaborate with all contacts / partners again.

The questionnaire's third part consists of six attributional, closed-end questions in which respondents evaluate their alters on a scale from 1-5 with regard to the following attributes: usefulness to consult, to coordinate, to represent, to link unconnected alters, the amount of trust,<sup>107</sup> and the assigned influence in petroleum governance. These attri-

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are visible and, hence, observable. Second, as discussed in the previous section, actors tend to behave differently if observed. Ultimately, I had to be very clear on what constitutes an interaction: Is it merely the presence of two individuals in the same room, their greeting or is it rather a conversation for a certain period?

<sup>107</sup> In order to ensure the same understanding of 'trust' by all respondents, I chose to use a very narrow

butional questions (also called ‘name interpreter’ questions) allow to check to what extent relational and attributive data coincide.

#### 4.4.3 Arising Problems and Applied Solutions

Gaining network data through interviews brings along the same problems as do survey studies (see Section 4.3, page 49) and some specific challenges: inaccurate data (reliability and validity), missing data and ethical problems. Very profoundly, it was necessary to define ‘collaboration’ by distinguishing six ways of collaborating and by illustrating each way with a specific example. Simply asking whether or not actors ‘collaborate’ would have been an invalid instrument as actors can understand ‘collaboration’ very differently. Besides validity, discrepancies between actual and reported behavior pose a big problem for the reliability of SNA data. In ‘traditional’ social science methods, a reliable measurement yields the same results over and over again. However, this understanding is problematic in SNA as relations are fluid and unstable over time (Knoke and Yang 2008: 38).<sup>108</sup> This problem made it necessary to define a specific timeframe, i. e., the year 2014. Readers might rightly argue that capturing one year is insufficient and that actors within the petroleum sector interacted before 2014. Other readers might argue that one year is too long to approximate, yet to recall, different means of collaboration across a number of exchange partners. Both views are justified but three reasons required this specific timeframe: Firstly, this timeframe was clearly demarcated and easy to define. Secondly, all pretest respondents<sup>109</sup> felt more comfortable with this timeframe and favored it over the two other tested timeframes (“the last three months” and “the last six months”). Thirdly, as I had the chance to meet each interviewee at least once before the actual SNA interview took place, I could inform respondents about the questions’ style so that they could think about their (long term) patterns of interactions or even go through their diaries. Consequently, the one year timeframe turned out to be the best option in the field and the best practice in order to balance respondents’ memories and relatively stable patterns of interactions.<sup>110</sup>

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understanding of trust. I defined it (and explained it to each interviewee) as ‘receiving trustworthy information’, that is the trust that information are provided “[...] in good faith according to the best of competence [...] where opportunism is limited or absent” (Ramirez-Sanchez and Pinkerton 2009).

<sup>108</sup> Prell (2012: 77) argues that SNA measurements are reliable if they generate reciprocal ties. Yet, this understanding is problematic in some kinds of relations, for example in regard to advice as in my study: If *i* nominates *j* as a family member, the measurement is assumed to be reliable if *j* replicates this relation.

<sup>109</sup> The pretest respondents were familiar with the structural context of my study and actors in the network but outside the boundary themselves.

<sup>110</sup> Freeman and Romney (1987) make a resounding theoretical argument to defend network data against the criticism that network data are overall invalid and unreliable as respondents tend to forget alters and are biased towards regular interactions (see, for example, Bernard 1977). They state that even though recalls are biased, they are biased towards the *norm* rather than the exception and, hence, are valid and reliable: “To some extent [...] the verbal recall data should at least in part, be tapping into the subject’s recollections of the same kinds of regular patterns of interaction that we have

Nevertheless, the SNA data are prone to inconsistencies, for example if respondents reported themselves as better connected than they actually were, if they were unable to memorize occurred interactions or if they falsely recalled exchanges. These inconsistencies either stem from unintentional cognitive structures, informant biases, lacking trust towards the interviewer, ‘wrong’ interviewees or are the result of intentional false statements (Knoke and Yang 2008: 36-38, see also Bernard and Killworth 1977; Bernard, Killworth, and Sailer 1979; Bernard et al. 1984).<sup>111</sup> To tackle this problem, the collection of both outgoing and incoming ties is decisive as it allows to control for false memories, strategic responding and the ‘individual reliability’ of each respondents.<sup>112</sup> To address the potential problem of lacking trust, I met each of the interviewees several times and scheduled semi-structured interviews before the actual SNA interview.

‘Wrong’ interviewees were a challenge that could only be minimized and not completely solved. It refers to the presence of various large organizations in the petroleum sector (e.g., the Ministry of Finance or the Ministry of Energy and Petroleum). While I interviewed respondents as representatives of their respective organization, relations are still very much linked to individuals. Particularly in the case of larger organizations, this can lead to contradictions in answers and may trouble the reciprocity of ties. To address this challenge, I followed Casciaro’s (1998) and Marsden’s (2005: 23) suggestions to consider respondents’ personalities, their position in the organization and their position in the larger network structure. I interviewed those people who had a leading role regarding petroleum governance in their organizations and who I felt were able and willing to answer the network questionnaire. However, as some of the interviewed organizations are very small, I will not display the status of respondents in any of the interviewed organizations. For the sake of protecting respondents, network researchers often have to take the loss of data and the loss of some clarity in their publications (Kadushin 2005: 145).

Incompleteness in my data set is mainly caused by missing actors who were not interviewed due to time and financial constraints. SNA is particularly sensitive to missing data as only one absent tie can alter the observed network structure completely, for example if this concerns a broker that connects two separated networks.<sup>113</sup> Though missing

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characterized as social structure. Subjects will be systematically biased, but they will be biased in the direction of providing accurate descriptions of the underlying structure that is our true focus of interest” (Freeman and Romney 1987: 331).

<sup>111</sup> LaPiere (1934) famously shows that most people tend to differ in what they practice and in what they preach: Between 1930-1932, LaPiere visited over 250 hotels and restaurants together with a Chinese couple. They were ‘only’ refused in one of these places. Afterwards LaPiere send out letters to all hotels and restaurants asking whether they would accept “members of the Chinese race” in their location – 92% reported to *not* accept Chinese.

<sup>112</sup> With the increase SNA data collection, current network researchers caution against so-called “strategic responding” by interviewees. If respondents are aware that their answers might influence their future within an organization (or the future of fellow or unpleasant colleagues), they tend to manipulate the ‘true’ structure. If respondents even coordinate themselves, this can end up in a “dialectical arms race” (Borgatti and Molina 2003: 345).

<sup>113</sup> Here it is important to differentiate ‘absent ties’ from ‘null ties’. Absent ties are those ties for which

data are “[...] exceptionally troublesome [...]” (Borgatti and Molina 2003: 339), there is “[...] no failsafe solution [...]” (Knoke and Kuklinski 1982: 35) to this problem, neither in literature nor in this research.<sup>114</sup> From the compiled list of network actors with 41 organizations, I was ‘only’ able to interview 29. Therefore, it is again pivotal to emphasize that the networks analyzed in the empirical chapters are only a snapshot of existing relations and not *the* network in petroleum governance in Ghana.

In regard to the ethical challenges I faced, the most interesting question might be: Who *owns* the reported ties? On the one hand, we can argue that ties always belong to the source *and* the addressee. Consequently, it is unethical to use relational data if only *one* of the involved actors is participating in the study. On the other hand, we can maintain that the respective respondent is the sole owner of what (s)he perceives as and reports about a relation and, consequently, network data can simply be treated as data gained by more ‘conventional’ methods of data collection. Either way, both arguments have a saying and researchers have to carefully decide on a case-by-case basis what the most appropriate procedure is. In this research, I focus on complete network data, i. e., answers from both sender *and* target.

Besides this fundamental question, the research confronted three further ethical points:<sup>115</sup> The first concerns the anonymity of network alters. As it is the very aim of network analysis to extract names, respondents actively report about their interactions and the unsuspecting addressee of ties become identifiable (Borgatti and Molina 2003: 338; Kadushin 2005). This inherent lack of anonymity posed burdens both to my interviewees (who had to trust that I will handle the data appropriately) and to myself who has to do justice to this trust throughout the research project. Second, as rosters violate anonymity if they entail the names of individuals,<sup>116</sup> I only included the names of organizations and not the names of individuals. To further respect the first Belmont Report guideline (to avoid harms to innocents), I thoroughly veiled my network data for identifying information, replaced names with ID numbers and remove all other identifying attributes.<sup>117</sup>

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researchers have no information about their nature (regardless of whether or not they are present) whereas ‘null ties’ indicate a missing link between two actors (Žnidaršič, Doreian, and Ferligoj 2012: 134).

<sup>114</sup> The following authors discuss the problem: Knoke and Kuklinski 1982; Stork and Richards 1992; Schafer and Graham 2002; Robins, Pattison, and Woolcock 2004; Borgatti and Molina 2003; Huisman and Steglich 2008; Huisman 2009; Žnidaršič, Ferligoj, and Doreian 2012; Žnidaršič, Doreian, and Ferligoj 2012.

<sup>115</sup> Ethical obstacles do not only arise with primary data but also with publicly available secondary data as SNA makes ‘invisible visible’ Kadushin (2005: 149).

<sup>116</sup> Seeing the own name on the list can further discourage potential respondents to participate in the survey (Prell 2012: 80).

<sup>117</sup> Borgatti and Molina (2003) argue that ‘innocents’ can be avoided in the first place by complete disclosure of participating actors and voluntarism. If everyone knows which actors are participating in the survey, no one is ‘innocent’ in that sense. The expanding selection method used to enlarge the roster violates this rule as alters were added step-by-step. If an alter was nominated three times, I gained access to this actor with the help of the sender of the tie as suggested by (Kadushin 2005: 149).

The third ethical problem relates to the *relative youth* of network analysis. By now, (most) people are used to ‘traditional’ methods of social science. People habitually report what their opinions and perceptions are, and are, if informed rightly, well aware of possible consequences. Yet, this is often not the case in network studies. Due to its youth in social sciences, “[...] we are in what could be called the golden age of social network research because most respondents seem to fill out the questionnaires quite naively” (Borgatti and Molina 2003: 345). Also the network actors in this study were not familiar with network analysis and its potentially powerful results (Borgatti and Molina 2003: 341). As a consequence, I extensively explained the aims and methods behind SNA, how I plan to use the data and what research outputs might emerge. I further emphasized the voluntary basis of participating, lacking financial benefits, confidentiality and anonymity according to the “Participant Information Sheet” (see Appendix 6, page 215). The answer categories ‘Don’t know’, ‘Refuse to answer’ and ‘Not applicable’ were included in the interviews.

#### 4.4.4 Application in the Field

To obtain the network data, I interviewed 29 organizations and institutions from January 2015 to March 2015. The preliminary meeting observations and the semi-structured interviews gave necessary background information and helped to identify knowledgeable respondents within larger organizations. During the interview, respondents reported their relations to each actor on the roster with initially 41 organizations and institutions. The first question<sup>118</sup> compiled the ‘personal’ roster for the respective respondent and formed the basis for the subsequent questions. The roster was helpful as it allowed interviewees to recognize rather than to recall alters. If necessary, I gave contextual assistance (‘aided recalls’) to stimulate respondents’ memories. As rosters are prone to the inclusion of unnecessary or the exclusion of necessary actors (Prell 2012: 72-73), I adopted the expanding selection method provided by Doreian and Woodard (1992). They use a roster but give their interviewees the opportunity of free recalls if their alters are not included in the roster. The initial list is revised and enlarged after the same actor has received at least three nominations by different respondents.

In the petroleum sector, this procedure was necessary as the set of actors who (aim to) steer petroleum resources is scattered and convoluted. The method combined the advantages of rosters with the flexibility of recalls. In the course of 29 network interviews, the initial roster with 41 organizations increased to the final roster with 58 actors (see Appendix 8, page 217). For example, the respondents completely ‘generated’ the international civil society sector and the sector with ‘other institutions’ (such as the University in Kumasi, the Auditor General Department, etc). As I never came across any of these

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<sup>118</sup> “In the year 2014, with which of the following actors have you interacted with, by face-to-face talks, telephone, emails or any other communication means, concerning matters related to Oil and Gas in Ghana?”.

across during meetings or interviews, and for the lack of time, I did not interview any actors out of these two sectors but ‘added’ five actors from other sectors. After the personal roster was compiled, the numeric answers in regard to the 13 relational and the six attributional network questions were captured in a matrix (see Appendix 9, page 219).

To sum up, the aim of generating a pool of primary network data by interviewing network alters is ambitious. Not only do researchers have to define the network boundaries and get in contact with all network members but they also have to prioritize different means of collaboration, find suitable instruments for their measurement and have to identify qualified and interested respondents. They additionally have to thoughtfully handle aspects of inconsistencies, incompleteness and ethical precautions.

## 4.5 Summary

It became obvious that this thesis works with triangulation, a procedure that mixes methods of data collection and analysis under the assumption that different methodical strategies are complementary rather than mutually exclusive (Bryman 2006: 109-110; Porta and Keating 2008: 34).<sup>119</sup> Triangulation is assumed to underpin scale validity in quantitative studies (Merrill-Matzner 2006: 133; Petróczi, Nepusz, and Bazsó 2007: 39) and to increase data efficiency and reliability (Boyne 2011: 47). Moreover, it is particularly useful in research designs which include a network approach. For example, Prell (2012: 68) regularly informs her SNA questionnaire designs by means of qualitative methods before data collection. Petróczi, Nepusz, and Bazsó (2007: 42) review their quantitative data against observational results after data collection and Walther (2015) combines SNA results with qualitative data that provide information on the historical and social nature of actors’ ties.<sup>120</sup> From a similar perspective, I argue that in order to fully grasp problems in natural resource governance as a prime example of a convoluted, complex problem, it is necessary to understand the dynamics ‘on the ground’ (by qualitative analysis) to subsequently relate it to ‘the bigger picture’ (by quantitative analysis).

Besides these theoretical and analytical components, practical considerations favor a triangulated research approach. Qualitative methods (desktop studies, attendances of meetings, exploratory interviewing and semi-structured interviews) helped to embed the research questions into the local context throughout the field research. Additionally, the exploratory methods provided the contacts to petroleum actors and were necessary to build trust with interviewees. Ultimately, the qualitative methods opened the doors for the survey in affected communities and the SNA questionnaire.<sup>121</sup>

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<sup>119</sup> Due to this mixture, some researchers prefer to use the term ‘multi-method approach’ rather than ‘triangulation’ (MacLean 2010: 35; Muethel 2012: 121).

<sup>120</sup> For mixed-methods in SNA see Edwards (2010).

<sup>121</sup> In this sense, qualitative methods are somewhat exploited for the subsequent quantitative procedure. This remark is linked to the differentiation by Klein and Newell (1996: 10-11) between instrumental



To this end, I conduct a mixed-method assessment to answer the thesis' six subquestions: (1) To what extent do interdependencies and inequalities, resulting from past social conduct and unequal distribution of capital, shape the overall context in which natural resource governance takes place? (2) How do structures, provided by institutions and policies, enable or restrict actors' interactions in governing natural resources? (3) Which goals do actors pursue in natural resource governance and which of these actors can, hereby, legitimately claim to represent the interests of others? (4) To what extent do actors engage in economic exchanges, social exchanges and network practices to collectively steer natural resources? (5) How do these exchanges and practices influence relational patterns such as trust and power? And (6) to what extent do all these factors shape unilateral, collaborative or contentious steering of natural resources and deriving revenues? Table 4.4 (page 71) splits these key questions according to the conceptual approach (Figure 3.1, page 24) and summarizes the data sources used.

Table 4.4: **Natural Resource Governance and its Methodical Rapprochement**

	<b>Theoretical Component</b>	<b>Data Sources</b>
Box 1	Inequalities and Interdependencies	Secondary data; explorative interviews; semi-structured interviews
Box 2a/b	Institutional Embedding Policy Environment	Legal documents; semi-structured interviews; survey data
Box 3	Network Embedding	Semi-structured interviews; survey data; SNA data
Box 4	Actors	Secondary data; survey data; SNA data
Box 5	Social Conduct	Semi-structured interviews; SNA data
Box 6	Relations	SNA data
Box 7	Governance	SNA data

*Source:* Own graph.

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and critical interdisciplinary as discussed by Mollinga (2008: 5). For further insights into qualitatively SNA see Heath, Fuller, and Johnston (2009).



## 5 The Structural Embedding of Petroleum Governance in Ghana

Chapter 2, “*Framing Natural Resource Governance*”, defines natural resource governance as interactions between interdependent and power-asymmetric actors who (aim to collectively) steer natural resources and deriving revenues, as well as the institutions and policies that provide the structural embedding in which these interactions take place. In this regard, the thesis empirically scrutinizes the kind and extent of actors’ collaborative steering rather than normatively discussing its necessity as put forward by literature about how to ‘better’ governing natural resources. Subsequently, Chapter 3, “*Conceptual Approach: Steering Through Exchange*”, argues that past social contact and the resulting unequal distribution of capital among actors lead to inequalities and interdependencies which necessitate actors’ interactions in natural resource governance. It further maintains that while structures enable and impede actors’ interactions, actors still have the agency to exchange resources or to refrain from such exchanges to a large degree. To investigate these arguments in Ghana’s petroleum sector, Chapter 4, “*Research Design: Case Study, Methods and Triangulation*”, presents the necessary data.

According to the conceptual approach summarized in Figure 3.1 (page 24), it is first necessary to assess how Ghana has governed her natural resources in the past and how this prehistory shapes the rapprochement of the developing petroleum industry today. As the mining sector frequently performs a point of reference in petroleum actors’ interactions, the first step of the empirical analysis (Section 5.1) investigates how experiences in the mining sector invoke the set-up of institutions and policies in petroleum governance. The subsequent Section 5.2 discusses the structural embedding of actors’ interactions by focussing on institutions whereas Section 5.3 outlines the policies that structure the petroleum industry. The chapter closes with some concluding remarks.

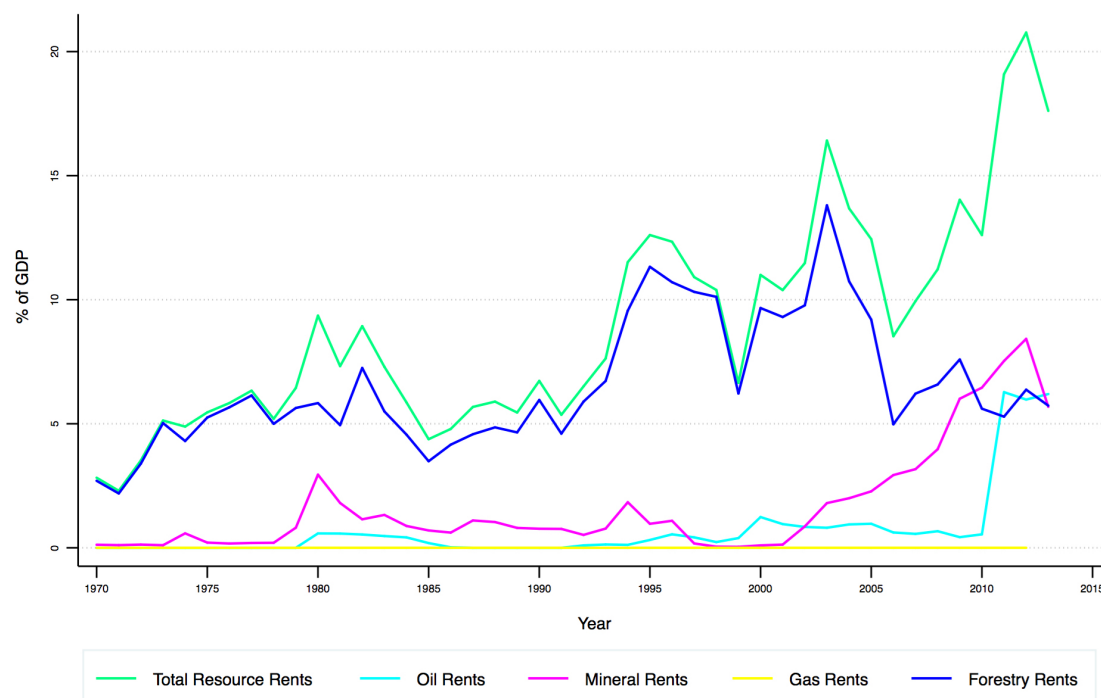
### 5.1 Some Effects of Mining on Petroleum Governance

Ghana is endowed with a wide range of natural resources, among others gold, timber, cocoa, iron, bauxite, diamonds and petroleum. Figure 5.1 depicts the total natural resource rents (% of GDP) since 1970 and, separately, the rents from minerals, forestry, and oil.<sup>122</sup>

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<sup>122</sup> So far, natural gas is used for domestic power generation only, together with dry gas imports from Nigeria via the ‘West African Gas Pipeline’ installed in 2009.

Figure 5.1: Natural Resource Rents (% of GDP, 1970-2013)



Source: World Bank data, own graph.

Ghana's experiences in resource extraction reach back to pre-colonial times when mainly traditional authorities and communal organizations were in charge (Crook 2005: 1; Mahama 2009: 8). The British colonial rulers altered this system – for economic and ideological reasons or simply out of ignorance – by using the existing structures of the traditional system as a means of economic exploitation, for gaining control over the local populations and for exercising power (not authority) in society (Eguavoen and Laube 2010; Lutz and Linder 2004; Spear 2003).

After independence in 1957, Ghana nationalized her natural resources for several reasons: To fit the socialist ideas of the first President Kwame Nkrumah, to underline the government's emancipation from the British crown and to disempower the chiefs as former “henchmen” of the colonialists who represented the very “antithesis” to the political set-up Nkrumah imagined for the young nation (Eguavoen and Laube 2010: 12; Herbst 2000: 174).<sup>123</sup>

Today, the mining sector differs from the other natural resource sectors in two important ways: quantitatively as mining contributes about 47% to total exports, advancing Ghana to the second largest gold producer in Africa;<sup>124</sup> and qualitatively as the common negative point of reference for petroleum actors who aim for a ‘better’ governing of petroleum

<sup>123</sup> For an intensive study about chieftaincy under Nkrumah see Rathbone (2000).

<sup>124</sup> In 2015, Ghana produced 94.7 tonnes of gold. Africa's biggest producer is South Africa with 167.5 tonnes (2015). Worldwide, China produces the most gold (460.3 tonnes in 2015). All numbers retrieved from the World Gold Council.

resources and revenues. Together with researchers, these actors emphasize four major problems in the mining sector: (1) the inability to counterbalance negative environmental and social side effects; (2) the legislative failure to capture the realities of the sectors' dynamics and to enforce existing laws; (3) the lost opportunity to integrate the sector and its value chain into the national economy; and (4) a failed integration of necessary stakeholders (Banchirigah 2008; Hirons 2013; Teschner 2012; William 2009).

The first problem, negative environmental and social impacts, is mainly induced by the dominance of galamsey mining. 'Galamsey' are artisan or small-scale gold miners who operate unregistered – and, thus, illegally –, but with the knowledge or even concession of gold mines. In consequence, the registered and unregistered sectors work parallel to each other, interweave with each other and highly depend on each other (Banchirigah 2008; Hilson and Yakovleva 2007; Teschner 2012). The use of chemicals, such as cyanide or mercury, and the use of explosives to speed up mine production, have detrimental effects on the health of miners, pose serious threats to the environment and pollute water bodies and ground water. For example, in the Western Region, the illegal gold mining activities have resulted in a serious deterioration of the Pra River's water quality and the quantity of available water. This not only deprives adjoining communities of their fresh water access but also massively destructs the flora and fauna along the river. But even though the environmental and social problems are immediately visible, public authorities repeatedly fail to address them appropriately.

This goes hand in hand with the second problem: Legislative failures and the lack of law enforcement have culminated in a sector employing about one million Ghanaians (including galamsey miners) without government control and law enforcement. The responsible state agencies are poorly resourced (e.g. for inspecting mines), coined by internal weaknesses, are not able to synchronize their agendas, and are incapable of implementing effective accountability mechanisms (Dashwood and Puplampu 2010). Additionally, the high costs of legally registering a mine (fees are tremendous and the paperwork excessive) and the *de facto* toleration of unregistered mines by the state, make galamsey the most rational choice for artisanal miners.

The lost opportunity to integrate the mining sector and its value chain into the national economy is a third warning for governing the petroleum resources: As Ghana barely processes gold and mostly exports the raw material, it loses the value chain, attached jobs as well as tax opportunities. While this is also induced by (foreign) private companies and the global trade system, the government is continuously blamed as the main culprit of this problem.

Finally, researchers and practitioners criticize the exclusion of important actors and unilateral decision-making by state authorities. Among other things, traditional authorities – who still control about 75-80% of land in Ghana – were mostly excluded from negotiation processes between companies and state authorities in the past. This continuously

led to tensions or open conflicts between traditional authorities, mining communities and companies.<sup>125</sup> Additionally, the communities themselves were often excluded, enforcing their marginalization and objectification in political bargaining processes.

The present thesis argues that these four failures coin actors' interactions in petroleum governance in several ways: On the one hand, they led to interdependencies between the various actors. Fundamentally, only the failures within the mining sector gave rise to the new quantity and quality of NGOs which are today highly active in the petroleum sector "in order to fight mistakes made in mining in the past" (personal conversation). Together with traditional authorities, these NGOs continuously remind public agencies about the failed chance to make the mining revenues more inclusive and beneficial for the country to such an extent that government representatives can hardly ignore them in petroleum governance. In addition, it led to a deep mistrust within civil society towards public institutions and within local communities towards private companies (Hilson and Yakovleva 2007; Mensah and Okyere 2014; William 2009; Interview Transcript IV).

Consequently, I suggest that the four problems in mining invoked the following four steps in petroleum governance: (1) an emphasis on high and up-to-date environmental safety standards, (2) a diverse set of institutions and policies that are aimed at structuring the petroleum sector, (3) the goal of, and pressure for, vesting the petroleum industry in the national economy 'for the benefit of all Ghanaians', and, (4), the inclusion of a diverse set of actors who aim to steer petroleum revenues from the onset, starting with the "National Forum on Oil and Gas" in February 2008.<sup>126</sup> This inclusion explicitly targets the protection of communities – given the historical experiences of land and compensation disputes in mining – and their active participation through local content policies.<sup>127</sup>

## 5.2 The Institutional Embedding of Petroleum Governance

Section 3.2 (page 26) argues that the structures embedding actors' relations enable, constrain or even force actors to collaborate in natural resource governance. It further suggests that two decisive structural components in natural resource governance are institutions and policies as they afford actors with sets of resources that empower or constrain social interactions and that are reproduced by these interactions. Therefore, it is necessary to investigate how institutions and policies shape actors' interactions in petroleum governance in Ghana.

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<sup>125</sup> The failed integration of traditional authorities in the mining sector is, however, also a product of Western donor politics: As Hirons (2013: 29) notes, donor agencies often ignored the role that chiefs play in land tenure and Ghanaian politics because this role differs from their view on how politics should work in Ghana and, therefore, clearly excluded traditional authorities from mining governance.

<sup>126</sup> For further information on the content of the Forum see Appiah-Adu and Appiah-Adu (2013: 83-85).

<sup>127</sup> In consequence, even though the thesis does not pursue any normative prescription of petroleum governance, these normative problems have to be discussed as petroleum actors regularly tackle them.

### 5.2.1 State Institutions

In regard to the petroleum sector, important ‘rules of the game’ are provided by the constitution and orally passed institutions. Since gaining independence as the first country in Sub-Saharan Africa in 1957 under Kwame Nkrumah<sup>128</sup> and after surviving nine different political regimes, Ghana is hailed as a ‘role-model’ democracy since the 1992 Constitution established the current IV. Republic. The institutional set-up and the reputation as ‘role-model’ democracy play a decisive role for natural resource governance as they define the legal margins of public institutions, provide civil society with scopes of actions, legally confirm the role of traditional authorities in natural resource governance, turn Ghana into a reliable partner for the private sector, and – last but not least – make it a promising development cooperation country.

The political system combines a directly elected President with a Westminster-style parliament. Two dominant parties, the National Democratic Congress (NDC) and the National Patriotic Party (NPP), regularly alternate in power and enforced three democratic turnovers since 1992.<sup>129</sup> They are voted for in universal, free and fair elections every four years. Participation in the general elections is viewed as an important civic responsibility. This becomes evident in the survey along the Ghana Gas Pipeline in which 94.89% of respondents indicate to have voted in the presidential elections. The national trend in the last presidential and parliamentary elections with voter turnouts of around 80% supports this high percentage.<sup>130</sup>

In regard to natural resource governance, the institutional framework declares the president to be a central actor by stipulating that

“[e]very mineral in its natural state in, under or upon any land in Ghana, rivers, streams, water courses throughout Ghana, the exclusive economic zone and any area covered by the territorial sea or continental shelf is the property of the Republic of Ghana and shall be vested in the President on behalf of, and in trust for the people of Ghana” (Article 257, 6).

The Parliament is in charge of adopting all petroleum related policies. It annually

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<sup>128</sup> Nkrumah’s party, the Convention People’s Party (CPP), had emerged as a dyarchy to colonial administration since 1949 and mobilized the masses with pan-Africanist, post-colonialist and socialist convictions. Although Nkrumah led Ghana into independence as a democracy, he quickly established an extremely centralized state with a one-party system, a myriad of state corporations and, by that, gave rise to corruption and state inefficiency. He was overthrown in 1966.

<sup>129</sup> J. J. Rawlings overthrew the democratically elected Government of Hilla Limann in 1981 and became the Chairman of the Provisional National Defense Council (PNDC). He was democratically elected in 1992 as the first President of the new Republic and ruled with the NDC (arising from the PNDC) from 1992-1996 and from 1996-2000. That is why Lyons (1997: 71) contemplates a “transition without change”. In the 2000 elections, the National Patriotic Party NPP under John Kufuor superseded Rawlings. Kufuor ruled until 2008 when John Atta-Mills (NDC) replaced him. Atta-Mills died in office in July 2012, his vice John Mahama took over. Mahama emerged as the winner in the 2012 elections and lost the 2016 elections on December 7, 2016 against Nana Akufo-Addo (NPP).

<sup>130</sup> The same holds true for the last district elections in 2010 with a voter turnout in the sample of 91.29%.

decides about how the petroleum revenues are spent as part of the national budgetary process. Currently, the Parliamentary Committee on Mines and Energy is in charge of overseeing the government, but there are repeated calls from civil society to establish a permanent committee exclusively responsible for petroleum governance. Yet, the presidential powers weaken the Parliament's strength in petroleum governance severely. For example, the Constitution denies Members of Parliament to propose a bill that carries any financial burden to the government, which is the case for most bills (Article 108). Moreover, the Constitution requires the President to appoint the majority of Ministers among Members of Parliament (Art. 78, 1), which endangers their independence and poses a double-edged burden to them.

These factors compromise the Parliament's independence, its effectiveness and its legitimacy in enforcing horizontal accountability (Whitfield 2011: 57; Gyimah-Boadi 2013: 9-10). The executive dominance also undermines the judiciary's independence: For example, the extensive presidential powers include the right to appoint an unlimited number of justices within the Supreme Court (Article 128, 1), making it prone to executive manipulations.

The current system of local government in Ghana originates from a decentralization program that began in the late 1980s under Rawlings.<sup>131</sup> Under the slogan "Bring the government to the people" (Lentz 2007: 223), the Provisional National Defense Council (PNDC) established a local governance system as an institutional expression of participatory democracy (yet, under military rule). The specific aim was to boost development on the local level, an aim that is still pursued by local authorities today (Ahwoi 2010*a*). The first elections on the local level took place during the turn of the year 1988/1989 and paved the way for democratic elections on the national level as "Ghana's significant [...] progress had reached the stage where it needed popular legitimacy and political institutions to support it" (Lyons 1997: 6).

On the regional level, ten Regional Coordinating Councils (RCCs) – one for each region – are the highest decision-making bodies and constitutionally responsible units.<sup>132</sup> Yet, they do not play any considerable role in petroleum governance as they do not have any policy-making, legislative or financial power. They act on behalf of the national government and only play an administrative and coordinative role between Accra and the regions. Because of this deconcentration (see page 14), the RCCs are the weakest unit in the local governance system (Ahwoi 2010*b*: 13). Their closest function in petroleum governance may be found in regard to the Western Region's Regional Planning Coordi-

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<sup>131</sup> In the Second Republic (1969-1972), Kofi A. Busia initiated the first attempts of local government structures in the shape of so-called 'District Councils' (Azarya and Chazan 1987).

<sup>132</sup> They comprise the Regional Ministers (the chairperson), District Chief Executives (DCEs), the Presiding Members of each District Assembly (DA) in the Region, two Paramount Chiefs nominated by the respective Regional House of Chiefs, and the regional heads of decentralized departments who have no voting rights. For a detailed overview on the local governance system in Ghana see Ahwoi (2010*a*).



nating Unit which is in charge of monitoring and evaluating the district planning units and which occasionally mediates conflicts between landowners and investors in the sector (personal conversation). Besides that, they were never present at any petroleum meeting or indicated as an important partner in the network study.

On the district level, the 216 Metropolitan, Municipal and District Assemblies (MMDAs) take up the role of devolved units with policy-making, legislative and taxation power. Additionally, they provide guidance to and supervise other administrative authorities in their district. An important goal of the Assemblies is to rally for the development of their areas. 70% of the Assemblies are publicly elected on a non-partisan basis<sup>133</sup> whereas the remaining 30% get nominated by the President in consultation of traditional authorities and interest groups (Ahwoi 2010a: 65).<sup>134</sup> This selection process aims to induce the Assemblies with expertise and experience while including traditional authorities in the process and, therefore, recognizing their importance on the local level (Ahwoi 2010b: 5). Districts are headed by District Chief Executives (DCEs) who are appointed by the President and endorsed by a two-third majority of the respective Assembly.

However, the increasing polarization of politics and the ‘winner-takes-it-all’ character of the electoral system undermines the non-partisan character of district elections and increasingly divides the country. The two dominating parties are more and more turning into ‘vote-gathering machines’ instead of offering real alternatives to citizens. In consequence, party politics increasingly split the country:

“My family, I have brothers and sisters, they have children, their children are my children, my children are their children. So the family system is very strong but now, because of politics, it is divided. If my sister is NPP and my sister is NDC, we will see eye to eye. But this should not happen. Some of us are worried about these things that are happening [...] [Partisan politics] is dividing us seriously.” (Interview Transcript III, page 6-7).

This is a particular problem for governing the petroleum resources as parties instrumentalize the spare information citizens have about petroleum for their own benefits:

“[T]he party which has lost [the elections] often tries to misinform the people. So because of the [low] level of education and information, [the people] will take whatever the opposition says as true and this creates tension” (Interview Transcript I, page 16).

Yet, the role of District Assemblies in petroleum governance is not only undermined by this politicization but also their marginalization by the executive: Although the constitution legally affords the District Authorities major rights and tasks in petroleum gover-

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<sup>133</sup> The district elections are further state-sponsored (giving poorer people the chance to run for office) and literacy is not a precondition anymore. Furthermore, the requirement of being an ‘ordinary citizen’ of the district excludes urban elites with their potential advantages (Ahwoi 2010b: 4).

<sup>134</sup> The Fourth Republic adopted this appointment procedure from the PNDC regime.

nance, their scope of action is, de facto, very limited. The President's right to entitle an area to constitute a district has become a political instrument for ensuring votes before elections.<sup>135</sup> The financial situation of District Assemblies is delicate across the country and, de facto, makes it impossible for them to fulfill their mandate of actively influencing the allocation of petroleum revenues.

Finally, the levels of accountability and responsiveness of the district authorities and their service delivery capacities remain extremely weak because of lacking human capital (Gyimah-Boadi 2013: 7). The President's right to appoint the Regional Ministers, the District Chief Executives (DCEs) heading the district authorities, and 30% of the District Assemblies, further promotes the executive's dominance and gives rise to clientelistic practices. The 'gratitude effect', as it is often referred to in Ghana, deteriorates public confidence in political institutions:

"We need people to stand up for us and fight for the Western Region. That is what we want. For now I can say we do not have that. If I am appointed by a political head, definitely I want to achieve whatever he wants me to achieve [...] What I am saying is: If the President appoints me as a Regional Minister, a District Chief Executive, I want to dance with the President. Because I will always have the fear [that he empowers me and so I do] not fight for the people. That is the case" (Interview Transcript III, page 13).

Another interviewee observes the 'gratitude effect' particularly in regard to the youth:

"Most of the youth is now paying their attention to party politics. Because they see it as a lucrative venture. Because if you are with somebody and he was fortunate to get voted as a MP [Member of Parliament], the next day he becomes an important man, drives expensive cars, [has a] big house [...] And even if you do not go that far, if you follow a political party, you are assured of a job. [So] many young people are now turning into politics for the wrong reasons. This is another problem that the country is facing" (Interview Transcript I, page 16).

Indeed, the trust in political institutions is low among the survey's respondents as Table 5.1 illustrates. It shows that within the sample, skepticism towards the President and the DCEs is high.

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<sup>135</sup> This contradicts the Local Government Act 1993, Act 462 which entails frankly clear requirements for defining a new district (such as a 'single compact settlement' for a Municipality or 'economic viability' for a District).

Table 5.1: **General Political Trust (numbers in percent)**

	Not at all	Little	Neither	Fairly	Very	Total
President	35.26	12.16	7.60	11.25	33.74	100
MP	34.95	8.81	7.90	15.50	32.38	100
DCE	36.94	11.25	6.05	17.83	28.03	100
DA (Wo-)Man	26.20	11.75	9.64	17.47	34.94	100

*Source:* Own data, numbers in percent. Answers derived from question number 11.  $N = 333$ . ‘Don’t know’ and ‘refuse to answer’ coded as missing.

### 5.2.2 Traditional Authorities

The constitutional recognition of the traditional system is another important institutional feature that structures the network of petroleum actors. The 1992 Constitution acknowledges chieftaincy as an integral part of Ghanaian politics and guarantees both its existence and its independence from state interference (Art. 270 and following). The traditional sector has its own structural organization parallel to the decentralized political system (regulated by Art. 271 and 272 of the Constitution and the Chieftaincy Act, 2008 (Act 759)): Officially, the Ministry of Chieftaincy and Traditional Affairs leads the traditional authorities and aims for an efficient and effective traditional system in line with the government’s policies. More important than the Ministry is, yet, the National House of Chiefs in Kumasi (in the Central Region), composed of 50 Paramount Chiefs (five from each Region in Ghana), the ten Regional Houses of Chiefs comprising all Paramountcies in each region, and 275 Traditional Councils on the district level.

The constitution further recognizes customary lands as vested in the stools<sup>136</sup> on behalf of and the trust for the stool’s subjects (citizens) in accordance with customary law and usage (Art. 267, 1). Between 75-80% of all land in Ghana is customary land and traditional authorities earn good money as 25% of received land royalties benefit the current chief for expenditure (Amanor 2006: 5; Boafo-Arthur 2003: 133). In consequence, all onshore petroleum activities by the government or external actors constitute important venues for traditional authorities to bestow recognition and financial income (Kleist 2011: 645).

In 1996, Rawlings proposed to actively include chiefs in party politics by offering them the possibility of running for offices without the abdication of their stools. The proposed constitutional amendment exemplifies how chiefs view themselves and how the public

<sup>136</sup> In most of Ghana, the customary offices are occupied by the chieftaincy institution – the *stool* in southern Ghana and the *skin* in the North. The *stool*, a carved wooden seat, is the most important symbol of power and has social, political, and religious significance. As there cannot be a chief without a stool, chiefs are ‘enstooled’ when they come into office and ‘destooled’ when they (have to) leave it (Edusei 2004).

thinks about the role of traditional authorities in today's Ghana. Both argued against the amendment, fearing that day-to-day politics could damage chieftaincy as an institution with long-standing traditions (Lentz 1998: 52). The exclusion of traditional authorities from partisan politics, according to a interviewee, has one particular reason:

“[T]here is a wisdom in doing that: Because if a chief is found to be actively involved in politics, he will lose the respect that he has. Because our politicians are perceived as somebody who talks anyhow. That is how the Ghanaian mentality is. Politicians talk anyhow [...] So if you are a politician, that is how they see you. Meanwhile the traditional authorities are respected. So that is why our Constitution hinders them to get involved in politics” (Interview Transcript I, page 2).

Traditional authorities position themselves as trustees and defenders of communities' interests, not only in petroleum governance. They repeatedly emphasize their standing through acquired wealth in the past, cultural leadership, the representation of communities' interests and identity, and the constitutional duty to socially and economically develop their respective traditional areas (Amanor 2006; Bofo-Arthur 2003; Crook 2005; Kleist 2011; Knierzinger 2011; Lutz and Linder 2004; Rathbone 2000; Ray 2003; Valsecchi 2007). Thereby, their key power-balancing strategy is to recurrently refer to their 'non-partisan' character in contrast to other petroleum actors:

“A lot of people respect our chiefs and our chieftaincies. Government politics is something new that has come. So we realize that even our government officials, the kind of respect that the chiefs can command, they cannot command. Someone can talk on radio and insult the chief. But that will have consequences. So we either accept that [chieftaincy] has been here or we are dividing ourselves. Our traditional system is the core” (Interview Transcript III, page 6).

A second interviewee maintains the same view:

“Democracy is good but we see it as an alien phenomenon here because it is at variance with the traditional authorities' system. In the olden days, when the chief spoke, nobody was speaking against. If the chief spoke, whether you liked it or not, you had to accept it. But democracy sees that as dictatorship. Because democracy includes the freedom of speech. So even if a chief speaks and I have a different opinion, I have the right so share my opinion [...]” (Interview Transcript I, page 6).

As traditional authorities' legitimacy and power decisively depend on their individual agency, strategic behavior and their ability to transform social into economic and political power (Lentz 1998: 52-53), they do, by far, not form a coherent group. Rather, their power and legitimacy differ from region to region, from traditional area to traditional area and from chief to chief. They contest each other as much as they contest other political actors. For example, severe struggles exist among members of the Western Regional

House of Chiefs as different Paramount Chiefs mistrust and envy each other in regard to the developing petroleum sector (personal conversations). As the network analysis will show, this contention troubles traditional authorities' ability to form an effective alliance in order to balance power in their favor.

In sum, even though the power and legitimacy of traditional authorities varies individually, they are assumed to constitute important venues of representation. They are formally acknowledged by the constitution and recognized as important sensitizers and transmitters by key players in the developing oil and gas sector. Section 6.2 will investigate whether this is also the case for local communities affected by the developing petroleum industry.

### 5.2.3 Freedom of Press and Association

Finally, important institutions that structure petroleum governance are the freedom and independence of the media (particularly Art. 162 - 165), and the freedom of assembly and of association “[...] which include freedom to form or join trade unions or other associations, national or international, for the protection of their interest”, i. e., civil society organizations (Art. 21, 1e). Both media and civil society are said to play a pivotal role in petroleum governance by controlling the government and by bringing information to the citizens.

Radio, an easily accessible means of gathering information, remains by far the most popular device across Ghana whereas newspapers are barely used: In the Afrobarometer 2014/15 survey, two-thirds of all respondents indicate that they get news via radio daily whereas almost three-quarters never read newspapers to inform themselves. These results correspond with the survey in petroleum affected communities: As Table 5.2 indicates, radio is, with over 23%, the most important source for regular information about oil and gas related matters. Friends and family follow with 18%, television with 12.5% and newspapers with only 2%.

Table 5.2: Sources of Information on Oil & Gas Activities (numbers in percent)

	Never	Once	Occasionally	Few times	Regularly
Radio	19.39	5.15	36.97	15.45	23.03
TV	47.81	8.75	24.06	6.88	12.50
Newspaper	84.11	3.97	9.27	0.66	1.99
Family & Friends	29.73	13.21	29.42	9.61	18.02

*Source:* Own data. Answers derived from question number 27. *N* ranges between 302 (newspaper) and 333 (friends & family). ‘Don’t know’ and ‘not applicable’ coded as missing.

The importance of radio is further illustrated by asking respondents how they first heard about the petroleum discovery. As Table 5.3 shows, nearly two-thirds of all interviewees heard about Ghana’s oil discovery on the radio for the very first time. If not on radio, the news spread mostly through social contacts, TV and the gong-gong.<sup>137</sup>

Table 5.3: **Channel to Hear About Oil Discovery for the First Time**

	Frequency	Percent
Radio	209	62.76
TV	30	9.01
Newspaper	3	0.90
Family & Friends	33	9.91
Gong-gong / community meeting	11	3.30
Politician	4	1.20
Community Chief	2	0.6
Initial intervention of oil & gas companies	8	2.40
Other	7	2.10
Can’t remember	26	7.81
<b>Total</b>	<b>333</b>	<b>100</b>

*Source:* Own data. Answers derived from question number 21. No respondent refused to answer this question.

Besides the media, civil society organizations aim to play a significant role in petroleum governance. Although the term ‘civil society’ differs locally, it here refers to intermediary actors who aim to represent diverse societal interests and who encounter the state’s hegemonic ambitions (Chabal and Daloz 1999: 19). In this way, civil society is defined as a contra-distinction to both the family and the state (Yarrow 2011: 100).<sup>138</sup>

As Vormawor and Atuguba (2014: 61) argue, civil society in Ghana is complex:

“It is impossible to paint a calcified outline of civil society in Ghana. Such an attempt would be to disregard historical sensitivities. This is especially because the formation and/or development of civil society in Ghana is anything but uniform, sometimes emerging as solutions devised by rational actors in their attempts to decipher strategic coordination and collective action problems [...], other times concocted as expedient devices to surmount social or ethnic cleavages”.

<sup>137</sup> The gong-gong is beaten if the chief or any other citizen wants to spread information in a community.

<sup>138</sup> Therefore, the thesis understands civil society as a broad family of non-governmental and non-profit organizations that express the interest of their members or others. While the focus here lies upon NGOs as one element of civil society, civil society is much broader and includes labor organizations, faith-based associations or foundations as well. In the Ghanaian context, some authors also categorize traditional authorities under this term. For an historical acknowledgement of civil society in Ghana see Vormawor and Atuguba (2014).

Literature critically examines the re-conquering of agenda-setting and policy influence by civil society in Ghana, paralleled by the flourish of NGOs worldwide in response to donor policies. Yarrow (2011) provides the most recent account of Ghanaian NGOs. He emphasizes the moral reasoning of development practitioners who ‘sacrifice’ themselves with their commitment to development. With this argument, he challenges two views: those who argue that civil society most often perpetuates longstanding patronage relations with government officials, undermining the autonomy of both (Bayart 1993; Chabal and Daloz 1999); and post-colonialist thinking which proclaims that developmental visions never serve altruistic but rather selfish interests. Though such criticism is necessary to oppose the vision of NGOs as panacea for development, Yarrow (2011) rightly argues that in order to understand the work of NGOs in Ghana, it is necessary to not mistake the institution for the process.

According to Kopiński, Polus, and Tycholiz (2013: 592), the new role of civil society in Ghana traces back to its strategic move facing challenges in the mining sector as discussed in Section 5.1:

“Usually, [civil society groups] vehemently attack governments for their lack of transparency in mineral revenue management policies, whereas in Ghana, both members of the political class (including the opposition) and representatives of civil society claim that their cooperation is on the right track and that both sides are benefiting from it [...] In general, it might be argued that Ghanaian civil society has moved away from street protesting [...] towards constructive engagement with the government”.

An interviewee supports this view:

“Lately, there have been a lot of improvements between civil society and government agencies [...] In the past, it was difficult with government agencies. Government agencies were very hesitant in terms of their relations with civil society. But over the years in the work of civil society, government has got to realize that civil society can be wired in the way they present themselves but they are looking at the general interest of the Nation and in things the government is interested in. So there was a kind of new form of collaboration. And that increased the space for interaction between civil society and government agencies” (Interview Transcript IV, page 9).

Yet, the fact that various NGOs were also not immune to the great expectations after the oil discovery troubles the integrity of some civil society organizations: “For many Ghanaian civil society groups, Ghana stood at a threshold of making a giant leap into its dream of becoming a middle income nation in the shortest possible period” (Gyampo 2010: 4). Additionally, the petroleum discovery caused the establishment of numerous new civil society organizations and an increase of “charlatans” (Vormawor and Atuguba 2014: 93). Some interviewees anticipate this flourishing with caution:

“A lot of [NGOs] just realized that oil and gas is now the new kid on the block. And that there is a high level of funding in the area. So in order to stay in existence [as an NGO], you need to move towards this direction. So there are a lot of NGOs in this area now” (Interview Transcript IV, page 10).

The sheer number of NGOs repeatedly leads to problems, for example in their interactions with state representatives:

“[...] some of the things they [government authorities] tell you [as an NGO] is that “We are tired of engaging with you. The last group was here yesterday, you are here today, another group will be here tomorrow” (Interview Transcript VIII, page 6).

The upcoming SNA findings will support this lack of tuning and coalition formation. The biggest problem for NGOs, yet, might be citizens’ unawareness of their work. While all NGOs aim and repeatedly claim to “represent the voice of the people”, Table 5.4 suggests that NGOs fail in this goal. The table depicts those NGOs that have implemented a project related to oil and gas in the Western Region. First of all, out of the 333 respondents, only 214 (64.24%) feel able to answer questions about NGOs – the remaining 119 respondents either do not understand the concept of NGOs or see themselves not knowledgeable enough to answer questions about them. And even among those who do understand the concept of NGOs, their work is not very much recognized.

Table 5.4: **Awareness of NGOs & CSOs in the Western Region (numbers in percent)**

	Know NGO / CSO called ...			Know NGO / CSO called ...	
	<i>No</i>	<i>Yes</i>		<i>No</i>	<i>Yes</i>
AYA	84.11	15.89	GWS	65.42	34.58
ACEP	88.79	11.21	IADI	94.39	5.61
ASSI	77.10	22.90	KITE	82.24	17.76
CEPIL	78.97	21.03	NETRIGHT	83.18	16.82
CESCA	88.79	11.21	NYA	61.21	38.79
COLANDEF	82.71	17.29	PCC	79.91	20.09
FoN	84.11	15.89	UCSOND	80.84	19.16
CSPOG	73.71	26.29	WERENGO	85.98	14.02
GNCFC	67.76	32.24	WiLDAF	91.59	8.41

*Source:* Own data. Answers derived from question number 45.  $N = 214$ .

The most popular organizations are the Nzema Youth Association (NYA), the Ghana Wildlife Society (GWS) and the Ghana National Canoe Fishermen Council (GNCFC) –



organizations which are very much absent in network interactions. Contrary to this, those NGOs which advocate for local communities the loudest – Friends of the Nation (FoN), the African Centre for Energy Policy (ACEP) and the Western Region Network of NGOs (WERENGO) – are barely known to those they aim to speak for. Only around 15% of respondents recognize their work. These numbers cast first doubts on civil society’s abilities to represent citizens’ interests.<sup>139</sup>

To sum up, the overall institutional setting in Ghana enables several actors to participate in the steering of petroleum resources: the central state, most importantly the executive, district authorities and traditional authorities. However, the example of the Regional Coordinating Councils (RCCs) exemplifies that such an institutional enabling does not automatically translate into an active engagement in petroleum governance. Moreover, although institutional structures provide the right of free press and association, it is only through their respective agenda-setting abilities that the media and civil society participate in steering petroleum resources and revenues.

### **5.3 The Policy Environment in Petroleum Governance**

Besides the institutional embedding, the government passed several policies explicitly aiming to structure responsibilities and interactions in petroleum governance: the (1) Ghana National Petroleum Corporation Law, 1983 (PNDCL 64), the (2) Petroleum (Exploration and Production) Bill, 1984 (PNDCL 84), the (3) Petroleum Commission Act, 2011 (Act 821), the (4) Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204), and the (5) Petroleum Revenue Management Act, Act 815 (PRMA). This section analyzes which actors are enabled or restricted in their aim to unilaterally, collaboratively or contentiously steering petroleum resources and deriving revenues by these policies.

#### **5.3.1 Governing Petroleum Resources**

The ‘Ghana National Petroleum Corporation Law, 1983 (PNDCL 64)’ and the ‘Petroleum (Exploration and Production) Bill, 1984 (PNDCL 84)’ are a heritage from the military regime under Rawlings in the 1980s. Despite their age, they still coin Ghana’s petroleum sector by setting out general directions: the PNDCL 64 established the Ghana National Petroleum Company (GNPC) as Ghana’s national oil company with the mandate to explore, develop, produce, and dispose petroleum resources. Subsequently, PNDCL 84 provides the regulatory framework for the management of upstream oil and gas exploration, development and production, and details the contractual relations between the state, GNPC and potential investors in the upstream petroleum industry. But even

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<sup>139</sup> Though the age bias in the sample (which is induced by the fact that mostly elderly people are subsistence farmers in Ghana) might also cause respondents’ unawareness, the sample is still representative of communities affected by the developing petroleum industry.

though these laws make GNPC the state representative in petroleum operations, disputes emerged over clear areas of responsibilities between GNPC on the one hand and the Ministry of Energy and Petroleum (MoE) as the oversight body of all petroleum activities on the other (Banful 2013).

To solve these obscurities, the government established the Petroleum Commission (PC) in 2011 to “[...] regulate and manage the utilisation of petroleum resources and to coordinate the policies in relation to them” (Petroleum Commission Act, Act 821). The PC, consequently, became the sole upstream regulator of petroleum resources.

Besides the Petroleum Commission Act, the government drafted a new ‘Petroleum (Exploration and Production) Bill’ in 2013 to supersede PNDCL 84. After a parliamentary rejection in 2013 and resubmission in 2014, it was finally approved by Parliament in August 2016. While some stakeholders hail it as an instrument “[...] to ensure that upstream petroleum operations are conducted in accordance with the principles of good governance, transparency and sustainable development” (African Centre for Energy Policy 2014), others fear that Ghana’s petroleum expertise is still insufficient to handle the planned change of the fiscal regime (Adombila 2016).<sup>140</sup> The law further gives the MoE considerably more power and, hence, replicates the excessive role of the executive branch (Woodroffe 2015). Accordingly, two interviewees note: “The new Petroleum Bill is even worse than the former one [...]” (Interview Transcript IV, page 6) and “The law is silent [on a lot of things]. The Minister can do whatever he wants” (Interview Transcript III, page 9).

The ‘Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204)’ came into effect in February 2014.<sup>141</sup> The regulations require all foreign investors to give first preference to Ghanaian companies, to integrate indigenous companies (besides GNPC) for at least 5%,<sup>142</sup> and to use local labor as much as possible. The objectives of the policy are to maximize patronage of Ghanaian goods and services, to increase employment of Ghanaian professionals, to facilitate technology and skills transfer, and to boost local participation in equity holding and management offices (see Meeting Transcript I, page 5).

The pressure for local content in petroleum governance traces back to the problems discussed in Section 5.1: the missed opportunities in the mining and other sectors (e.g., in telecommunication), a moral argument (as petroleum is typically formed over centuries but produced in only one or two generations), a paradigm shift in resource governance from a revenue-focus to an in-country focused strategy promoting local capacity’s develop-

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<sup>140</sup> The law replaces the current concessionary system which transfers ownership to the licensee holders in exchange for percentage of total revenue accrued, with production sharing agreements which restrain ownership in the state and, thus, often create higher revenues for the state (Adombila 2016).

<sup>141</sup> According to the Ministry of Energy (2010), local content and local participation refers to the level of using Ghanaian expertise, goods and services, labor, and businesses in the petroleum activities.

<sup>142</sup> To qualify as an indigenous company, the company must have at least 51% of its equity owned by a Ghanaian with 80% management and senior positions occupied by Ghanaians (personal conversation).

ment, and the value addition indirectly induced by local content measurements (Meeting Transcript I, page 6).

The legal enforcement of the local content regulations is, however, pending. Local content, so far, only exists on paper and lacks reasonable implementation and serious enforcement. Local procurement is limited as local products and services are not purchased by international companies, either because the products are not standardized or because they do not conform to the industries' regulations. Furthermore, Ghanaian businesses have an unrealistic understanding of what it means to become competitive suppliers in the petroleum sector (personal conversation). Finally, the very ambitious timetables of the L.I.2204 pose serious challenges to the Petroleum Commission (PC) which is in charge of receiving and approving the companies' business plans and of ensuring the implementation of the regulations' provisions (Interview Transcript VII, page 1).

The last key policy, the Petroleum Revenue Management Act, Act 815 (PRMA), causes the most disputes among petroleum actors. Accordingly, the following discussion is more detailed. These details are necessary to understand the subsequent discussion of network interactions.

### 5.3.2 Governing Petroleum Revenues

Shortly after the oil discovery, the government under Atta Mills accepted the key idea of continual consultations with civil society actors, traditional authorities, and media representatives. The "National Conference on Oil and Gas" in Accra in February 2008 formulated the goal of multi-actor consultations to manage deriving revenues and to tare potential impacts on society. Passed by Parliament in April 2011, the Petroleum Revenue Management Act, Act 815 (PRMA) institutionalizes the interplay among state and non-state actors in form of the Public Interest Accountability Committee (PIAC), and provides the legal framework for the collection, allocation and management of petroleum revenues.<sup>143</sup>

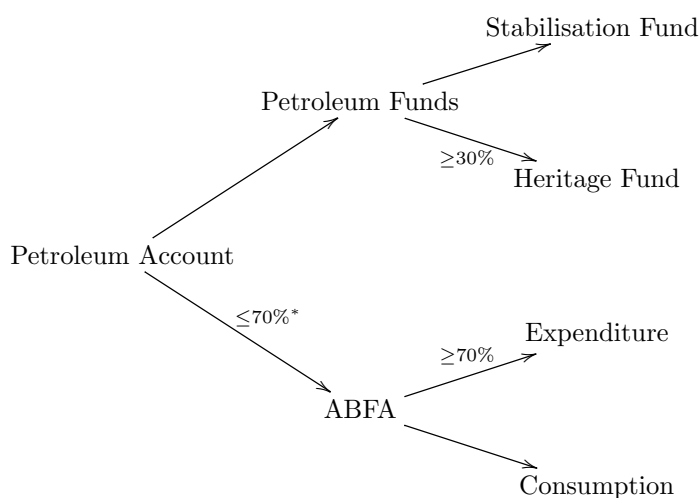
Figure 5.2 depicts how the petroleum revenues are distributed between spending and saving as regulated by the PRMA. The allocation depends on a 'benchmark revenue' which is based on a seven year moving average of oil prices (Amoako-Tuffour and Ghanney 2013: 35). From the benchmark revenue, 50-70% are allocated to the Annual Budget Funding Amount (ABFA) and the remaining 30-50% are split between the 'Ghana Petroleum Funds'.<sup>144</sup> The 'Stabilisation Fund' is assigned to alleviate shortfalls in unan-

<sup>143</sup> The government has four different components of oil revenue: (1) Royalties from oil and gas of 5% of gross oil revenues including receipts from the sale or export of petroleum, (2) 13.78% of the Jubilee's field commercial net profits received from the GNPC, (3) an 'additional oil entitlement' of 10-25% of petroleum revenue, net of royalties and the GNPC interest, accrued if the project rate of return is between 18-33%, and (4) the government levies company income tax on all net profits of 35%. For further insights into the petroleum fiscal regime see Amoako-Tuffour and Owusu-Ayim (2010).

<sup>144</sup> The Ministry of Finance (MoF) estimates the benchmark revenue, makes distributional propositions concerning the ABFA and the Petroleum Funds to the Parliament, oversees the Fund's investment

anticipated or actual petroleum incomes by giving government the opportunity to make withdrawals (Section 9 and 10, PRMA). The ‘Heritage Fund’ aims to provide future generations with a profit of the petroleum wealth after reserves will be depleted. Whereas the Stabilisation Fund was built up quickly to cushion the impact of adverse prices or production changes, the Heritage Fund is built up slowly and will support the welfare of future generations. In 2026, 15 years after the date of commencement of the PRMA, the Parliament can review the restriction on transfers from the Heritage Fund and change its cap with a simple majority.<sup>145</sup>

Figure 5.2: Structure of the Petroleum Revenue Management Act, Act 815 (PRMA)



\* Up to 70% of the annual benchmark revenue from petroleum operations.

Source: Own graph based on the Petroleum Revenue Management Act, Act 815.

The PRMA stipulates twelve areas in which the Annual Budget Funding Amount (ABFA)’s money has to be spent.<sup>146</sup> From these twelve areas, the Minister of Finance can prioritize no more than four areas for each legislative period. In 2011, the Parliament approved to use the ABFA for the following four priority areas: expenditure and amorti-

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policies, and is responsible for the overall management of the Petroleum Funds (Amoako-Tuffour and Ghanney 2013).

<sup>145</sup> For a comparison between different petroleum laws in Africa with a focus on transparent regulations see Veit and Excell (2015).

<sup>146</sup> These areas are: (1) Agriculture and industry, (2) physical infrastructure and service delivery in education, science and technology, (3) portable water delivery and sanitation, (4) infrastructure development in telecommunication, road, rail and port, (5) physical infrastructure and service delivery in health, (6) housing delivery, (7) environmental protection, sustainable utilization and the protection of natural resources, (8) rural development, (9) developing alternative energy sources, (10) the strengthening of institutions of government concerned with governance and the maintenance of law and order, (11) public safety and security, and (12) provision of social welfare and the protection of the physically handicapped and disadvantaged citizens.

zation of loans for oil and gas infrastructure, agricultural modernization, roads and other infrastructure, and capacity building (including oil and gas). They were maintained for the period 2014-2016 (Public Interest and Accountability Committee 2014). Table 5.5 depicts the distribution of oil revenues among these areas for the year 2014 and the years 2011-2014.

Table 5.5: **Distribution of ABFA to Priority Areas, 2011-2014**

<b>Priority Area</b>	<b>2014 in GHS</b>	<b>2011-2014 in GHS</b>	<b>in %</b>
Expenditure / Amortisation of Loans	163.084,572	421.005,419	22.49
Agricultural Modernization	170.624,180	269.848,985	14.42
Road and Other Infrastructure	215.691,357	1.047.810,541	55.99
Capacity Building (incl. O & G)	—	132.893,097	7.1
Total	549.400,109	1.871.558,042	100

*Source:* Public Interest and Accountability Committee (2014: 39).

Despite its general high acknowledgement, the PRMA has several weaknesses: For example, it neither criminalizes nor sanctions the government for withholding public information. While the governments in other African petro-states such as Uganda or Liberia need to justify why certain information should stay confidential, in Ghana the public is prompted to argue why information should be released (Veit and Excell 2015: 71-77). Moreover, several fiscal issues exist which are objects of criticism (for details see Meeting Transcript II). Finally, the capitalization of the Ghana Stabilization Fund to the “arbitrary” cap of US\$ 250 million in 2014 caused outrage in Ghana. Triggering the cap to 250 million enabled the Ministry of Finance to allocate around US\$ 195 million to the Contingency Fund and the Debt Service Account.

The reasons why the PRMA attracts the highest attention are not explicitly laid out but the observations, interviews and meetings suggest the following interpretations: First, revenues expenditures – as regulated by the PRMA – are easier to understand for non-experts than the highly technical downstream and upstream industry regulated by the other policies. Second, the revenues’ spending is visible and immediately affects the lives of ordinary Ghanaians, who petroleum actors claim to represent. Third, the revenue spending opens the space for regional debates in which local actors want to secure the highest benefits for their region (see Section 8.1.2). Fourth, the PRMA institutionalizes the Public Interest Accountability Committee (PIAC), the multi-actor platform that is entitled to merge interests and to control and advise the government (see Section 6.1 for further information). Fifth, the law provides civil society actors and traditional authorities with the opportunity to advocate against the government: They criticize the number and kind of the twelve priority areas, the number and kind of the four areas the government in power selects, the way the government spends the revenue within these four areas, and

the transparency and success in this process. For example, one interviewee reports:

“I think if it would be concentrated on one or two areas for the period we would have gotten more benefits [...] in the four areas we do not see any impact! We do not see the impact [...] And if they are tackling a project, they should look at a project that will benefit the people [...] It does not help. So, I believe, they [should] concentrate on tackling few projects and [on] complet[ing these projects] [...]” (Interview Transcript III, page 11-12).

Following the discussions for the period of 10 months, it seems questionable whether criticism would stop if the number and/or kind of priority areas differed. This doubt is increased by the fact that the MoF seems to take past criticism on the petroleum revenues’ spending into account: While in 2012, the ABFA allocation to the priority area ‘Road and Other Infrastructure’ was still distributed across eight different sectors, the Ministry reduced this number to five sectors in 2013 and three sectors in 2014. It, hence, remains unclear whether detractors are really convinced of their criticism or whether they criticize primarily in order to take the stage and to raise a point. Critical voices are loud voices – and bring the attention which most stakeholders are aiming for in order to steer petroleum resources and revenues in their preferred way.

## **5.4 Summary**

The past chapter introduces natural resource governance in Ghana with a focus on the institutions and policies which embed network interactions in petroleum governance. In the beginning, the chapter argues that past experiences in the mining sector – most importantly, the government’s inability to alleviate negative impacts of mining, the failures of necessary law making and enforcement, the lost opportunity to integrate mining into the national economy, and the exclusion of necessary stakeholders – established or accelerated interdependencies and inequalities among state institutions on the national and district level, traditional authorities, civil society and communities in petroleum governance. These interdependencies and the different resources actors possess are argued to promote or impede exchanges in petroleum governance.

In regard to the institutional embedding of petroleum governance, the chapter reveals the following key results: First, a strong deviation between formal rules and their implementation, unclear responsibilities or dual roles of public institutions on the central level, and an executive dominance which thwarts decentralized decision-making and implementation of state institutions on the regional and local level. Second, traditional authorities’ constitutionally anchored power and the legitimacy they are assumed to enjoy among rural communities influence actors’ network embedding. Their exclusion from mining governance by state authorities in the past gives them a good justification for being included in the petroleum sector.

The emergence of civil society actors since the 1990s – pushed by the end of the military regime in 1994 – and their institutional recognition together with the freedom of press thirdly strengthen actors’ interdependencies. The experiences in mining governance made civil society aware of the importance of governing petroleum in a better way and the need to interfere in its steering. A great number of NGOs active in today’s petroleum sector were founded in regard to mining which replicates now for the petroleum sector. Their weight in Ghanaian politics and their means to advocate force government authorities to recognize them. In this vein, civil society actors and traditional authorities aim to build on their social and human capital as representing the ordinary people. However, it is doubtful to what extent civil society groups satisfy their own claim to ‘represent the voice and interest of the ordinary people’ as they are rarely known within affected communities.

Besides institutions, five explicit policies structure actors’ networking embedding. The legal enforcement of these policies is, however, pending to a large degree. The local content regulations only exist on paper and lack serious enforcement by state authorities. And even though the PRMA stands out as a unique policy in natural resource governance, it remains to be seen in the following chapters whether the PIAC is able to fulfill its mandate of advising and controlling the government in the petroleum sector. Overall, the diverse set of actors aiming to influence petroleum governance reveals the need to go beyond a purely institutional analysis in order to understand petroleum governance in Ghana. Therefore, the next chapter examines the network embedding of actors.





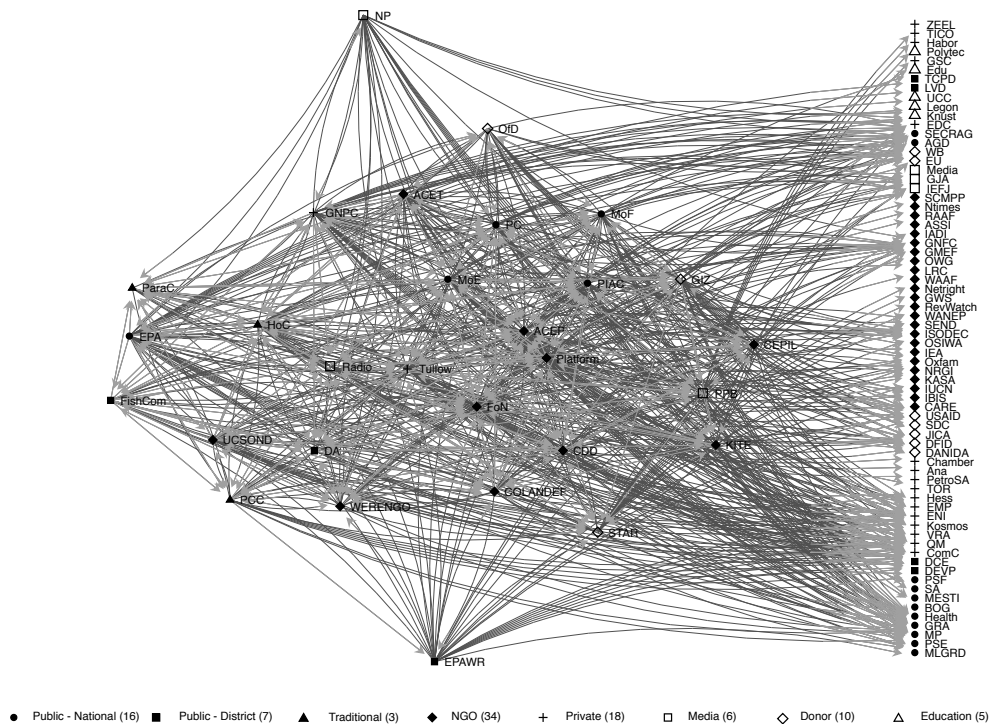
## 6 The Network Embedding of Actors in Petroleum Governance

The conceptual approach in Chapter 3 argues that past social contact and unequal distribution of actors' resources produce interdependencies which necessitate actors to interact (if not collaborate) in regard to natural resources. It further reasons that these interactions are enabled and constrained by structures on the one hand and actors' overall network embedding on the other. In answer to these two arguments, the previous chapter assesses how past experiences in the mining sector shape the rapprochement of the petroleum sector today. It further discusses institutions and policies that enable actors to interact in petroleum governance and it shows how structures and their interpretation in day-to-day-politics impede single actors, such as local government authorities. To pursue the arguments of the conceptual approach (see Figure 3.1, page 24) further, this chapter investigates the network embedding of actors in petroleum governance. This network embedding comprises the following actors, as an interviewee explains:

“[...] we wanted to create an arrangement that allows for dialogue between the oil and gas companies and communities. We realized, however, that it cannot just be the two [his NGO and the oil companies]. Because the two do not make up the complete system. We also need to look at the other actors which are engaging [in the petroleum sector]. So in developing a set-up [...] we ended up with five sub-clusters: (1) We have the *traditional authorities* because the chiefs are the custodians of the land and you cannot do something without them. Even though the new governance system as we have it – I call it ‘new’ not because it just came out but because it was not a way of ruling before –, it is important that we still recognize their contribution [...] (2) Then there is the *civil society* cluster. Because we realized that – yes, we are an NGO but we cannot reach everybody on our own. There [...] is a good number of NGOs who are actively involved. (3) So then, whatever development you are intending to carry out, it will happen within a *District Assembly* or the Municipal Sector. So we also had to include the District Assemblies and the Municipal Sector. Because you see, the development of each district is centered on their development plan. It is important to get them on board [...]. (4) And then there is a representative from the *Regional Coordinating Councils (RCCs)*. Because they set up the ground agenda that the districts set themselves out to do. And because this is not just a localized issue in one district, but across six districts, it was important that the people at the top are also involved [...] And then (5) the *companies* who are the business men, the main actors (Transcript VIII, page 1).”

The network data validates this summary. The overall network, compiled through 29 network interviews, comprises 809 relations ('arcs') among 99 actors ('nodes'). Figure 6.1 visualizes actors' network embedding in petroleum governance.<sup>147</sup>

Figure 6.1: Overall Network in Petroleum Governance



Source: Own data. Symbols represent different sectors, digits the number of actors within the different sectors. Graph compiled with STATA `nwcommands`.

Although the figure lacks explanatory power, it visualizes the complexity and purported interactivity in Ghana's petroleum sector: First, a high number of actors aim to influence petroleum governance. Interviewing only 29 actors produces a dense and complex network embedding in which relations provide the chance to exchange resources and, hence, to collaborate in petroleum governance. Second, the arcs among actors disseminate across sector boundaries. Eight broad and interconnected sectors emerge from the first analysis: State institutions on the (1) national level and on the (2) district level, (3) oil and gas companies, (4) traditional authorities, (5) NGOs (from the international, national

<sup>147</sup> The data is retrieved from the first question of the network questionnaire, i. e., "In the year 2014, with which of the following actors have you interacted with, by face-to-face talks, telephone, emails or any other communication means concerning matters related to Oil and Gas in Ghana? [COMPILE LIST]". See Appendix 7 (page 216) for further information.

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and local level), (6) media organizations, (7) donor agencies and (8) a residual category covering, for example, educational institutions.

Third, the figure visualizes the limitations of the following analyses. Borgatti, Carley, and Krackhardt (2006) found that centrality measures only remain robust if data collection misses a maximum of 10% of present ties in a network. If we assume that the overall network depicted in Figure 6.1 is a realistic rapprochement to existing linkages in petroleum governance (with 99 nodes), the sample of 29 nodes does not comply with this criteria. Therefore, it is pivotal to emphasize – again – that the compiled network structures depict a snapshot of *one* network at a *certain* point in time and not *the* network in Ghana’s petroleum governance. The data only capture one aspect of a complex landscape in petroleum governance.

The following chapter provides in-depth insights into this complex landscape by investigating the actors within the network embedding, their rationales to engage in petroleum governance and their relations with each other. Section 6.1 gives an overview of those actors participating in the SNA.<sup>148</sup> Additionally, the overview discusses three newly established organizations in more detail as their formation and the challenges they face help to better understand the overall network structures.

Section 6.2 tackles the second major research question: Which actors represent the interest of affected communities? Answering this question is pivotal as representation is a central mechanism to claim the legitimacy to being active in petroleum governance. In fact, “representing the voice of the people” or, at least, averting damage from them, is *the* most central justification of all actors to have a say in petroleum governance. But despite this centrality, it remains so far unclear which actors affected communities view as their representatives. In order to shed light on this research gap and to meet the complexity of representation as a concept, the empirical analysis follows the different theoretical approaches discussed in Section 3.3.1, i. e., representation as commissioning, mediation, advocacy and as a trust relationship.

Still following the conceptual approach visualized in Figure 3.1 (page 24), Section 6.3 scrutinizes the explicit goals of actors in petroleum governance. It further focusses on overlapping agendas and the question to what extent similar actors pursue similar goals as proposed by exchange theory through the concept of homophily. The last section, Section 6.4, provides insights into the general network’s structure with a focus on favorable and problematic characteristics for natural resource governance as discussed in Chapter 3 (see Table 3.1, page 38). In sum, the present chapter highlights the diversity of actors engaged in Ghana’s petroleum governance, their detachment from the communities’ level in regard to the developing petroleum industry, the diversity of actors’ agendas, and

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<sup>148</sup> The interviewed organizations are treated as individual representatives of the various institutions discussed in Chapter 5.2: For example, the interviewed Paramount Chief is viewed as a representative of traditional institutions with own agency.

their opportunities to collectively steer petroleum resources and revenues due to their interconnectivity across sector boundaries.

## 6.1 Actors in Petroleum Governance

Table 6.1 provides an overview of the interviewed organizations. It summarizes the organization's code in the SNA analyses, the year of starting to engage in the petroleum sector, the organization's focus in oil and gas as indicated by the interviewees, and background information gathered through secondary data and interviews.

As the table indicates, a number of actors emerged in parallel to the evolution of the petroleum sector for the specific purpose to become active in petroleum governance. These new organizations are small networks on their own as they are composed of different individual actors or individuals representing institutions. Understanding the rationale behind their formation is important as some of their challenges are stereotypical for other actors active in petroleum governance. Furthermore, their foundations illustrate Emerson's (1962) and Cook's (1984) hypothesis that coalition formation is the most rational means to counterbalance power dominance (see Section 3.3.3, page 33).

Among several attempts to collate organizations, the following section scrutinizes three: Localized coalition formation in the Western Region among traditional authorities (the "Platform of Coastal Communities (PCC)"), intra-sectoral coalition formation among NGOs across Ghana (the "Civil Society Platform on Oil and Gas (CSPOG)"), and inter-sectoral coalition formation between different sectors (the "Public Interest Accountability Committee (PIAC)").

### Localized Coalition Formation: The Platform of Coastal Communities

In 2010, eleven traditional councils from five coastal districts in the Western Region formed the Platform of Coastal Communities (PCC). PCC aims to act as a "mouth-piece" of coastal communities and to maximize communities' benefits from the developing petroleum sector. Therefore, PCC explicitly positions itself not as a representative of the people's voice but as the very voice of the people themselves. Implicitly, it emerged as a consequence of traditional authorities 'othering' from NGOs in Accra.<sup>149</sup> Two founding members of PCC imply this argument in their elaboration of the organization's foundation:

"[...] the reason behind the formation was that we thought that we could do it ourselves. Why do you need somebody to come and do it? With the oil finds a lot of NGOs have been formed. And unfortunately, even some of them have their offices in Accra. So we said: If they sit in Accra and can do it, then we will do it ourselves" (Interview Transcript II, page 2).

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<sup>149</sup> 'Othering' as a network practices is discussed in more length in Section 8.1, page 165.

Table 6.1: Overview of Sampled Network Actors

No.	Code	Year	Focus in O&G indicated during Interview	Background Information
<i>Public Sector – National</i>				
1	EPA-ACC	2011	Regulate environmental aspects, issue environmental permits to companies	The Environmental Protection Agency (EPA) emerged from the Environmental Protection Council (founded in 1974) and was established through the Environmental Protection Agency Act, 1994 (Act 490). As an agency of the Ministry of Environment, Science, Technology and Innovation (MESTI), its mission is to co-manage, protect, and enhance the country's environment. In 2011, the Petroleum Section was inaugurated with support by the Norwegian 'Oil for Development' Program.
2	MoE	1957	Biggest possible number of Ghanaians should participate and play an active role	The Ministry of Energy was established in 1957 and was renamed to 'Ministry of Energy and Petroleum' in 2009. The Ministry is the oversight body of all petroleum related activities in Ghana and directs the activities of the Petroleum Commission (see below).
3	MoF	2007	Sound fiscal policies, effective allocation of resources	The Ministry of Finance and Economic Planning (MoF) was established in 1957. Its Energy, Oil & Gas Unit is responsible for the management of the petroleum funds. It is further demanded to provide and process all necessary information and funding to the Public Interest Accountability Committee (see below).

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Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
4	PC	2011	Regulate petroleum sector, manage revenues' utilization, coordinate all petroleum policies	The Petroleum Commission is the sole upstream regulator of petroleum resources. It was established through the Petroleum Commission Act, 2011 (Act 821) to solve unclear regulatory responsibilities between the Ghana National Petroleum Company and the MoE (which still constitutes PC's mother body).
5	PIAC	2011	Monitor revenues' spending, provide platform for discussion, assess resources' spending independently in accordance with PRMA	The Public Interest and Accountability Committee was established under the Petroleum Revenue Management Act (PRMA), 2011 (Act 815) as an independent body overseeing the management of petroleum revenues. It consists of eleven members representing the various interest groups in Ghana, among others the National House of Chiefs, religious groups and civil society. Insufficient access to necessary information and lack of funding effectively undermines PIAC's scope of work.
<i>Public Sector – District</i>				
6	DA	since 2010	How do we at the ground benefit from oil and gas?	The District Assemblies are designed to be the highest political authority on the local level. 70% of the assemblies' members are voted for, 30% are appointed by the President in consultation with traditional authorities and interest groups. The interviewed District Assembly Man, elected in 2010, views the lacking communication and collaboration with other DA representatives as the major burden for effective petroleum governance.

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Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
7	EPA-WR	2007	Extraction in a sustainable, resource-harnessing way	The Western Region branch of the EPA was founded together with its mother body in 1994. The EPA-WR is responsible for all developmental activities within the WR including the management of the vast natural resources. With the advent of oil and gas, the WR branch is the support base for all petroleum related activities of the EPA.
8	FC-WR	2007	Address conflicts between fishing industry and oil industry	Established by the Fisheries Act, 1980 (Act 625) under the authority of the Ministry of Agriculture, the Fisheries Commission is mandated to regulate and manage the utilization of fishery resources and to coordinate related policies. It became particularly important through the alleged inverse relationship between offshore petroleum activities and the fish population / fish catches in the WR.
<i>Private Sector</i>				
9	Tullow Oil	2007	Production of oil	Tullow Oil has a share of 34.7% in the Jubilee Field. Together with Kosmos Energy (23.49%), Anadarko (23.49%), GNPC (13.75%) and Sabre Oil (2.81%), it adds up the 'Jubilee Partners'. Tullow's 'Social Performance' strategy focusses on three pillars: Education & training, water, health & sanitation, and livelihood protection. The Social Performance strategy builds upon stakeholder engagements, community demands, and the District Development Plans.

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Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
10	GNPC	1983	Lead exploration, development, production, and disposal of petroleum	Established in 1983, the Ghana National Petroleum Company is mandated to provide adequate and reliable supply of petroleum products and to reduce the dependency on crude oil imports through the development of own petroleum resources. While GNPC has its own social investment / corporate social responsibilities projects, they state that other petroleum actors overwhelmingly approach Tullow as the main operator for social investment projects.
<i>Donor Sector</i>				
11	GIZ	2009	Support institutional transparency and accountability	The Deutsche Gesellschaft für Internationale Zusammenarbeit implements projects on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). It currently focuses on decentralisation, agriculture, and sustainable economic development. In the oil and gas sector, the GIZ supports Ghana in the EITI processes and regularly finances workshops and trainings, for example for journalists on oil and gas reporting.

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Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
12	STAR-GH	2010 - 2015	Social inclusion and citizens' participation	STAR-Ghana, a multi-donor pooled mechanism coordinately funded by DFID (UK), DANIDA (Denmark), USAID (USA) and the EU, is a follow-up to similar programs (first initiated in 2005). <sup>150</sup> It aims to increase the influence of Ghanaian civil society in the governance of public goods with the ultimate goal of improving the accountability and responsiveness of public institutions, traditional authorities and the private sector. It has funded most NGOs projects in the petroleum sector.
13	OfD	2008	Capacity building in national agencies responsible for resource management (PC, MoE), environment management (EPA and MESTI), and – since 2015 – revenue management (MoF, Ghana Revenue Authority)	Since 2005, the Norwegian 'Oil for Development' program focusses on capacity development through institutional collaboration: Norwegian public institutions enter into long-term agreements with public institutions in a partner country. In December 2010, Ghana and Norway signed two Program Agreements under the OfD program to strengthen Ghana's resource and environment management in the oil sector. In 2015, the collaboration was extended to further include revenues' management until 2020.

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<sup>150</sup>The first phase ended in 2015. The second phase aims to establish STAR-Ghana as a Ghanaian owned and led entity with the “[...] core mandate [...] to function as a convener, catalyst and coordinator” (STAR-Ghana 2014: 3-4) in order to promote collective action of civil society. However, the consortium of partners only includes one Ghanaian NGO among five UK-based organizations. The network interview left out interactions with other donor agencies as these interactions completely relate to financial resource exchange only and do not specifically related to projects funded in the petroleum sector).

Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
<i>Traditional Sector</i>				
14	WR-HoC	2007	Mitigate negative impacts on the people and maximize benefits for the people	Established by the Chieftaincy Act, 1961 (Act 81), the Western Region House of Chiefs is one among ten Houses (one for each region) and headed by the National House of Chiefs. The House consists of 23 Paramount Chiefs. Its core mandate is to settle disputes from traditional councils on the sub-regional level, interpret and codify customary laws, and represent the respective region on the national level.
15	P-Chief	2007	Enhance the development of my area and ensure that future generations benefit from current petroleum wealth	Paramount chiefs head the traditional councils and lead the various sub-chiefs in their areas. Though the role of traditional authorities has changed, they remain a significant force. The interviewed Paramount Chief was enstooled some years ago and participates in the PCC (see below). He views the petroleum discovery generally positive but criticizes its fast implementation and the partnerships with several Chinese companies.
16	PCC	2010	Act as the mouthpiece of the people's voice along the coast, bridge the gap between local communities and the national discourse	Initiated by Friends of the Nation (see below) and two chiefs from the WR in 2010, the Platform of Coastal Communities consists of community members of eleven traditional councils along the coast. It situates itself not as representative of communities' voices but as the very voice of the people themselves. Some of the chiefs participating in PCC view themselves as 'jokers' in turning the petroleum resources into a blessing for the WR.

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Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
<i>Civil Society Sector – National</i>				
17	ACEP	2010	Petroleum Governance	The African Centre for Energy Policy, established in 2010, is an energy policy think tank that focusses on harnessing the potential of Africa’s vast energy resources for accelerated development across the continent. Like Friends of the Nation (see below), it is active in petroleum governance particularly through advocacy and by directly confronting the government.
18	ACET	2010	Petroleum Governance	The African Center for Economic Transformation, founded in 2008, is a economic policy institute seeking to support Africa’s long-term growth through research. It differs from most other NGOs due to its policy-/research-focus rather than advocacy orientation. In 2014, ACET compiled a survey on the impacts of Tullow’s social investment strategy with government agencies, NGOs and communities on behalf of Tullow Oil.
19	KITE	2009	Manage expectations by providing reliable information, monitor institutional transparency & accountability	The Kumasi Institute for Technology and Environment is a non-profit organization established in 1996. It focusses on promoting the effective supply and use of renewable and non-renewable energy resources for enhanced sustainability and productivity to accelerate the achievement of the MDGs and steady economic growth.

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Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
20	CDD	2008	Transparency and accountability in legal regimes, empower citizens	The Ghana Center for Democratic Development, established in 1998, views itself not at the forefront in the petroleum sector but actively pursues transparency and accountability in natural resource governance. It is most famous for coordinating and implementing the Afrobarometer Survey for Ghana.
21	CEPIL	2009	Legal help to communities and their education	The Center for Public Interest Law is a rights-based NGO established in 1998 through two other NGOs. It focusses on access to justice, research about public laws, and repeatedly represents communities in court cases. They are the first NGO explicitly targeting the communities along the Ghana Gas pipeline.
22	CSPOG	2009	Improve petroleum governance, ensure benefits for economic development and poverty reduction	The Civil Society Platform on Oil and Gas, founded in 2009, comprises around 120 organized groups, individuals and professional bodies working towards ensuring transparency and accountability in the oil and gas industry. It aims to strengthen the ability of civil society to have their voices heard on oil and gas matters. The secretariat is hosted by another NGO.

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No.	Code	Year	Indicated Focus in O&G	Background Information
<i>Civil Society Sector – Local</i>				
23	COLANDEF	2009	CSR Projects of oil companies and multi-stakeholder interactions ('CSR Dialogue Platform')	The Community Land and Development Foundation was formed in 2004 and views itself as a development oriented organization committed to contributing to poverty reduction and a improved land governance system. In the petroleum sector, COLANDEF tries to facilitate the establishment of a multi-stakeholder dialogue platform to coordinate discussions (including private companies, in parallel to the CSPOG).
24	FoN	2008	Community empowerment, monitoring social and environmental impacts, facilitating multi-stakeholder dialogues	Friends of the Nation, established in 1993, is a socio-environmental advocacy organization. It has co-initiated several other petroleum actors like WERENGO (see below) and PCC and acts as a broker for other organizations. It is most famous as an advocacy organization and often criticized for "making a lot of noise without the necessary knowledge".
25	UCSOND	2007	Communities' participation and benefits	The United Civil Society Organizations of Nzema East District, formed in 2005, is an umbrella organization of 27 organized associations and interests groups in the Nzema East District (see Map 4.1, page 51). It focuses on transparency and accountability in natural resource governance and public service delivery.

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Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
26	WERENGO	2013	Participation of community members and giving them a saying	The Western Region Development Network of NGOs was formed to act as a coordinating network of NGOs in the WR in 2002. It closed down in 2008 and was revived in 2009. Though its purpose is to act as a gate-keeper between member organizations and, e.g., donors, it nowadays seeks to act as an autonomous NGO. This traces back both to secure funding (as members fail to pay fees) and to the rationale of the new board.
<i>Media Sector</i>				
27	NP	2007	Focus on all parts of the petroleum industry	In 2011, 129 state-owned and private newspapers were registered in Ghana (National Media Commission 2014). The oldest and most widely-read newspaper, the Daily Graphic, was established in 1950 and is the only newspaper that is fully distributed across the country. Yet, its newspaper coverage remains low and, as a baseline assessment of newspaper reporting argues, “[t]he sheer number of oil and gas advertisements in the Daily Graphic [...] suggests that the paper benefits from the emerging industry through advertisements but neglects to play the critical watchdog role” (PenPlusBytes 2013: 11).

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Table 6.1 – *Continued from previous page*

No.	Code	Year	Indicated Focus in O&G	Background Information
28	Radio	2007	Bring truth to the people, provide information for the ordinary people	In 2015, a total of 412 radio stations were authorized by the National Communication Authority Ghana (2016) of which 313 stations are operational. Radio stations frequently provide citizens with oil and gas related news, for example through regular roundtable discussions or ‘Question & Answer’ sessions. JoyFM, the interviewed radio station, is particularly active in the petroleum sector. It was part of a STAR-Ghana grant agreement with media partners to increase accountability and responsiveness of key stakeholders during the 2012 election campaigns and to ensure conflict prevention through responsible media reportage (Ghana News Agency 2012).
29	PPB	2007	Train journalists, establish links between media and civil society (because media often does not even know NGOs)	PenPlusBytes, funded in 2001, seeks to empower the media through the use of Information and Communications Technology (ICT) to advance the work of journalism. It consists of a network of media organizations and journalists interested in using ICTs to advance the cause of journalism. Through their project “Empowering the media to play an active watchdog role over oil and gas revenues and resources” (funded by STAR-Ghana), PPB aimed to increase the quantity and quality of reporting on oil and gas, to build knowledge capacities of journalists on oil and gas questions, and to facilitate exchanges between media and civil society.

And the second member explains:

“[...] we realized that the various groups that talk for us [...] have their offices in Accra, like the companies themselves. Most of them who used to come and talk about oil and gas were from Accra. So they come, go to USAID or GIZ or British Something, put up a proposal, and then they want to [...] meet the local people, educate them and such things [...] But they are in Accra. And because they have to send a report, at one time, they will come and organize something and say “Sign that you are present” and then they go again [...] Meanwhile they have not made the necessary impact! Because you cannot use only one group, one day or four, five hours within that day, to say “We have all the information we need.” You can’t! So these are some of the things and operations we were thinking about. Why do not *we* have these responsibilities? *Because we are with the people and we are the leaders of the communities, so why should we delegate these responsibilities to somebody to come and do it?* That is how PCC came about. So it was a revolutionary thing. *They go and collect big moneys in Accra.* And then come and do some small seminars here. Why do not we do it and use our name? So that is how PCC came up, we decided to take these things on our own” (Interview Transcript II, page 10-11).

Whereas the first interviewee only indirectly implies some competition with NGOs based in Accra, the second respondent clearly establishes PCC as an alternative to organizations based in the capital. The practice of ‘othering’ (‘we’ against ‘them’) is used as the founding strategy of PCC (see more details in Section 8.1.2, page 168). And even though the second interviewee explains PCC’s establishment with the rationale that they are “with the people”, his wording indicates that traditional leaders in the Western Region also want to have their slice of the ‘petroleum cake’ and make “big moneys” as others do in Accra. In consequence, the coalition formation is a means to balance the power of actors perceived as more influential.

Six years after its foundation, several weaknesses exist that hamper the work, visibility and credibility of PCC. First, PCC was formed against the backdrop of the oil discovery. As discussed, such NGOs are not well received by other civil society actors. Second, PCC’s institutional set-up is very ambiguous<sup>151</sup> and cannot keep up with the reality of civil society work in Ghana, particularly in regard to self-sufficient funding.<sup>152</sup> Third, as a leading member explains, PCC lacks sufficient coordination and collaboration among its members. Fourth, their past activities – such as protesting against galamsey mining, water shortages and waste-dumping along the coast (Johnson 2012: 22) – merely occupy a niche

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<sup>151</sup> Including a General Assembly, a Steering Committee, a Secretariat and six ‘Zonal Offices’ to function as ‘Rapid Response Centers’ which monitor activities in the extractive industries within the coastal districts (Platform of Coastal Communities 2011).

<sup>152</sup> Both the funding from the traditional councils as well as member fees from individuals from coastal districts (2 Cedi per month) are not payed (personal conversations).



but are placed in the field of other, more experienced and better resourced organizations. This behavior traces back to the lack of strategic, long-term objectives. Established as a platform with a clear focus, PCC increasingly tries to overcome its organizational and financial difficulties by seeking external funding and, thereafter, turns into an ‘ordinary’ NGO rather than a ‘platform for coastal communities’ (Platform of Coastal Communities 2011).

As a consequence of these problems, PCC is not able to achieve its goal of acting as a “mouthpiece” of coastal communities. Within the sample, only 20.09% ( $n = 43$ ) of those 214 respondents who understand the term NGO, took notice of PCC’s work. Section 6.2 scrutinizes this detachment from local communities in more detail.

### **Intra-Sectoral Collaboration: The Civil Society Platform on Oil and Gas**

In preparation of the “National Conference on Oil and Gas” (see Section 5.3.2, page 89), civil society actors met in order to collate goals in regard to the developing petroleum sector (Kopiński, Polus, and Tycholiz 2013: 591-592). Since then, civil society aimed to form a joint coalition to balance government’s power with the awareness that “together we are more powerful” (Interview Transcript V, page 6). The “Civil Society Platform on Oil and Gas (CSPOG)”, the outcome of these efforts, is a merger of about 120 organised groups, individuals and professional bodies. It focuses on strengthening the ability of civil society to have its voice heard in petroleum legislation, revenues’ management and environmental protection policies. It also aims for improvements in transparent petroleum governance and for ensuring that petroleum extraction benefits ‘the people’.<sup>153</sup>

However, a lack of strategy is also troubling the CSPOG, particularly as it focusses solely on pressurizing the Ghanaian government and fails to define its relationship with oil companies (Kopiński, Polus, and Tycholiz 2013: 593).<sup>154</sup> Furthermore, the funding troubles the platform:

“The problem is that these initiatives are started as projects and they are very good. But once the project closes [...] then you cannot sustain it. So that is also the problem with the Platform, sometimes we do not even have money to react to things [...] So how to sustain these initiatives beyond the projects that gave birth to them?” (Interview Transcript V, page 6).

<sup>153</sup> The first stakeholder network, the ‘Oil and Gas Stakeholder Network’, was initiated by the Kumasi Institute for Technology and Environment (KITE) between 2007 and 2008 and, until its formalization, used to be a loose network of energy experts and civil society organisations committed to pursue ‘sound’ governance in Ghana’s energy sector. The network was merged with the CSPOG (Interview Transcript V, page 2)

<sup>154</sup> An interviewee replicates this interpretation for the relation between NGOs and the private sector: “[...] between civil society and the private sector, there seems to be some kind of grievance [...] so interaction is not that fluent [...] There is still this level of grievance if it comes to the spaces of interaction” (Interview Transcript IV, page 9).

During an unrecorded interview, a second respondent identifies three more profound problems hunting all joint collaborative efforts among NGOs: On the one hand, he argues that initiatives like the CSPOG do not deliver proper work and are unable to keep track with both their ambitions and promises. On the other hand, he criticizes that members do not commit to the Platform and that instead of investing some resources, they only want to profit from their membership. Third, he concludes that all these joint initiatives are too much centered around one single individual who heads an own NGOs.<sup>155</sup>

The CSPOG has, hence, so far been unable to use the euphoria of the oil discovery to becoming a reliable partner in petroleum governance. Moreover, attributional weaknesses such as lack of funding and inappropriate reasonings of becoming a member trouble the effort of sustaining multi-actor collaboration. Whether this translates into weaknesses in economic and social exchanges as well, is investigated in the next chapter.

### **Inter-sectoral Coalition Formation: The Public Interest Accountability Committee**

Contrary to PCC and the CSPOG as voluntary initiatives, the Public Interest Accountability Committee (PIAC) is the legal expression of the government's effort to include a wide range of actors in petroleum governance. Despite this difference, it grounds in the same assumption: that collaboration benefits natural resource governance.

PIAC was established under the Petroleum Revenue Management Act, Act 815 (PRMA) and inaugurated in September 2011 as a “[...] citizens’ based committee responsible for independent oversight of the management of petroleum revenues” (Civil Society Platform on Oil and Gas 2011: 13). It is mandated to (1) monitor and evaluate government’s compliance with the PRMA and other relevant institutions in the management of petroleum revenues, to (2) provide a platform for public debate on spending prospects of petroleum revenues in line with the twelve priority areas (see Section 5.3.2, page 89), and to (3) conduct independent assessments on the management and use of petroleum revenues to assist Parliament and the executive in the oversight and performance of their functions (Public Interest and Accountability Committee 2013: iv; Parliament of the Republic of Ghana 2011: Section 51 - 57).

PIAC consists of eleven members, each representing one institution, amongst them the National House of Chiefs, the Association of Queen Mothers, the Ghanaian branch of the Extractive Industries Transparency Initiative (EITI),<sup>156</sup> think tanks, religious groups, and

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<sup>155</sup> This interpretation is indeed valid across all merger organizations from the civil society sector: The CSPOG is headed by the chairman of ISODEC, another Accra-based organizations, and WERENGO was co-founded by the chairman of FoN in the Western Region.

<sup>156</sup> The Ghana Extractive Industry Transparency Initiative (GHEITI) is the Ghanaian branch of the international EITI between governments, extractive companies and civil society aiming to promote transparency and accountability in revenue mobilization. It was launched in 2002 at the World Summit on Sustainable Development in Johannesburg and took up the idea of the ‘Publish What You Pay’ campaign which persuades companies to publish what they pay to governments and governments to publish what they receive and how they spend these revenues (Heller 2013; van Oranje and Parham

NGOs. The various interest groups nominate one representative each and the Minister of Energy and Petroleum appoints them.

PIAC's weaknesses are diverse and predominantly institutionally induced. Instead of making it an independent monitoring institution with sanctioning power, its responsibilities are only advisory to the Parliament and the executive. Moreover, Parliament's failure to assign a committee that reviews and reacts to PIAC's annual and semi-annual reports weakens PIAC's role in petroleum governance. As members are appointed by the MoF – the Ministry the PIAC is mandated to control –, members face accusations of lacking independence, integrity and credibility. Because institutional capacity building is done by development partners (e.g., the GIZ or the Norwegian Oil for Development program), the government can further easily escape its financial and contextual responsibilities. Ultimately, PIAC's systematic lack of financial and technical resources, which members of the PIAC “keep saying that it sounds like a broken record” (Dr. Joe Amoako-Tuffour at the launch of 2013 Annual PIAC Report, see Meeting Transcript III),<sup>157</sup> is the most sincere weakness: Not only does the government regularly fail to release the legally binding funds but the PRMA, the law that founded PIAC, does not stipulate its finances and, thus, gives the government the space to evade.<sup>158</sup> A former member of PIAC notes:

“[W]hen I was on the PIAC, I realized that PIAC's work was a little bit limited in the sense that we did not have the ability to do some more independent verifications, a monitoring of the projects [...] We did not have the capacity – both human resources and financial resources – to go down down down to see it for ourselves [...] [so that we would be] convinced that the resources are spend wisely” (Interview Transcript V, page 3).

As these weaknesses are all induced by institutional failures, there is a strong suspicion that while the Government under Atta Mills was eager to include non-state actors through the PIAC, the legal framework at the same time was institutionalized in a way that ensures that the committee does not become too influential. In that regard, the PIAC is given the platform to be heard but not to have its inputs considered by those it is mandated to control. This is a strategy more often used by government representatives in petroleum governance in Ghana – and, together with the network practice of ‘othering’ –, discussed in Section 8.1 (page 165) in more detail.

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2009). As a tripartite collaboration between public institutions, the private sector and Civil Society Organizations (CSOs), it is a voluntary rather than official body in Ghana, financed by the Ministry of Finance (MoF). With its focus on revenue mobilization it complements PIAC's focus on revenue allocation and disbursement to some extent (Disch, Rasmussen, and Asamoah 2015: 32).

<sup>157</sup> Dr. Joe Amoako-Tuffour is President and Founder of African Center for Economic Transformation (ACET) and an advisor to the Ministry of Finance.

<sup>158</sup> As a consequence, the PIAC operated without funding for the greater part of 2013 and, since 2014, can only finance a secretariat with the help of the GIZ. It was only in January 2015 when PIAC moved into an own office space while it had its Secretariat at the offices of an international NGO (the Revenue Watch Institute) before moving.

In sum, this section portrays 29 actors who are active in petroleum governance in Ghana. The interviewees work for the government on the national and regional level, for the two major oil companies, donor agencies, civil society groups, the media or are part of the traditional system. While some of these organizations only emerged in the course of the oil discovery (such as PCC, the CSPOG and PIAC), others have been active before 2007. What connects them is their aspiration to ‘represent the voice of the affected people’ or – in the case of private companies and donor agencies – to make the oil ‘benefit the people’ as much as possible (or, at least, to minimize potential negative effects). But who can legitimately claim to represent the people’s interests in regard to the developing petroleum industry? The next section aims to answer this pivotal question.

## **6.2 Representation: Who Speaks with the Voice of the People?**

The necessity to scrutinize which actors represent affected communities cannot be over-emphasized as representation is highly contentious in research and much sought after among actors in petroleum governance. For example, in his assessment of the developing petroleum sector in Ghana, Gyampo (2010: 7) views civil society as “[...] the true representatives of a cross section of the ordinary citizenry [...]”. The same role is also assigned to traditional authorities who are said to mediate effectively between communities on the one hand and state authorities on the other. However, reviewing the forestry sector, Amanor (2006: 10) emphatically rejects the assumption that traditional authorities represent citizens’ interests. He rather concludes that the undermining of communities’ interests is, to a large extent, caused by the “myth” that traditional authorities represent communities as they are

“[...] intermarried with the political elites and often have their own business empires [...] Many chiefs have closer social ties and share similar mindsets with business and political contacts than with their own subjects. Yet, they are promoted as an independent civil society group standing up for the rights of the rural poor” (Amanor 2006: 4).

Literature is, hence, inconsistent about communities’ representatives in natural resource governance in Ghana. In practice, actors who are active in petroleum governance consistently claim to represent communities’ interests. “Speaking with the voice of the people” is the most central instrument to seek influence in petroleum governance, both for elected actors (such as District Assembly members), traditional authorities and civil society groups.

As Section 3.3.1 (page 29) argues, legitimacy through representation is an important resource, particularly for those actors who lack economic or human capital. The section also discusses the complexity of ‘representation’ as a concept and its association with delegation, mediation, advocacy, and trust. The following discussion gives insights into

these different aspects. In a preceding step, it is, however, first necessary to understand what communities' interests *actually are*, i. e., which problems communities perceive as most urgent in their immediate living environments and to what extent the new petroleum industry is one of them.

To identify these problems, the survey asks respondents to openly state the three biggest challenges their community is currently facing. The question deliberately dispenses with closed-end questions to provide respondents with maximum flexibility in identifying problems. Though the underlying aim was to find out to what extent respondents view the developing petroleum sector as an immediate challenge, the questionnaire abstains from a direct question<sup>159</sup> in order to not stimulate respondents' answering behavior in the direction of perceiving petroleum as a challenge. Table 6.2 summarizes the biggest challenges that respondents indicate in descending order. Out of the 999 possible answers – three challenges per 333 respondents –, 787 were stated, i. e., a return quote of 78.78%.

Table 6.2: **Communities' Challenges along the Ghana Gas Pipeline**

	<i>Frequency</i>	<i>Percent</i>
Poor sanitation	155	19.70
Insufficient water supply	131	16.65
Poor quality of schools / education	99	12.58
Poor road network / quality	94	11.94
Unemployment	85	10.80
Insufficient electricity supply	66	8.39
Lack of clinic / health center	43	5.45
Lack of community center	30	3.81
Lack of market place	29	3.69
Loss of land / fishing grounds	14	1.78
Poverty	9	1.24
Lack of development	9	1.24
Lack of community park	6	0.76
No playing ground for children	3	0.38
Flooding	2	0.25
Customary matters	2	0.25
Others	10	1.27
Total	787	100

*Source:* Own data. Answers derived from question number 13. 'Don't know' and 'refuse to answer' coded as missing.

The depicted answers support the choice of an open-ended question. In fact, none of

<sup>159</sup> For example in the format "How much does the developing oil and gas sector pose a challenge to your community?".

the respondents directly refer to the developing petroleum sector as a challenge. Indirectly, 16 interviewees (2.03%) pertain to it in the form of loss of land / fishing grounds and flooding as a consequence of the pipeline's construction. Apart from that, participants identify rather 'classical' fields of development, first and foremost poor sanitation facilities including the lack of drainage systems (19.70%,  $n = 155$ ), insufficient supply with running water (16.65%,  $n = 131$ ), the low quality of schools and education (12.58%,  $n = 99$ ), an insufficient road network or its poor quality (11.94%,  $n = 94$ ), high unemployment (10.80%,  $n = 85$ ), and an unreliable electricity supply (8.39%,  $n = 66$ ). The remaining challenges scratch amenities in communities such as a joint market place, a community park, safe playgrounds for the children and, most importantly in numbers, a clinic or health center. In order for citizens to feel represented in petroleum governance and beyond, stakeholders would, thus, have to advocate, for example, for the investment of petroleum revenues into the creation or proper maintenance of sanitation and water facilities, education, the road network, and job creation schemes.

In view of the previously discussed government activities in the sector (see Table 5.5, page 91), two interferences have to be emphasized: First, the repeated calls from civil society to limit the spending of petroleum revenues to only one or two priority areas should be critically overthought in light of the diverse spectrum of challenges citizens perceive to trouble their communities. Second, investing in road networks and other infrastructural developments is one of the four priority areas of the Annual Budget Funding Amount (ABFA) and, thus, complies partly with communities' challenges.<sup>160</sup> These two interferences drive the question to what extent respondents feel represented by petroleum actors in general and related to oil and gas in particular. As representation is a complex phenomenon, the following discussion sheds light on the four anticipated aspects of representation (commission, mediation, advocacy, and trust) and carves out contradictions and similarities.

### **Representation as Commissioning**

As discussed in Section 3.3.1 (page 29), representation can first be understood as *commissioning*: Actors can commission others to promote their interests. In order to get insights into representation as commissioning, the survey includes two questions. The first is a follow-up question to the challenges respondents anticipate in their communities. They subsequently indicated a maximum of three actors that are, in their personal opinion, helpful to address these challenges. Table 6.3 summarizes these actors in descending

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<sup>160</sup> However, a closer look into the allocation of petroleum revenues within this priority area in 2014 shows that none of these road constructions nor any of the educational infrastructure projects were built within the sampled communities. Additionally, two of the energy infrastructure projects benefited the Western Region of which one is a payment for the construction of the Aboadze coastal protection works to secure the power generation plant (Public Interest and Accountability Committee 2014: 77-82).

order. Out of 999 possible answers, 750 were given, i. e., a return quote of 75.08%.

Table 6.3: Representation as Commissioning in General

	<i>Frequency</i>	<i>Percent</i>
Government (incl. President)	165	22.00
District Assembly (Wo-) Man	158	21.07
Members of Parliament	148	19.73
Traditional Authorities	101	13.47
DCE	86	11.47
NGOs	25	3.33
Individuals / Community itself	13	1.73
Community Leaders	11	1.47
Unit Committee	9	1.2
Ghana Gas	9	1.2
Private Sector / Companies (excl. Ghana Gas)	9	1.2
Ghana Highway Authority	4	0.53
Regional Minister	2	0.27
Ghana Water Company	2	0.27
Ghana Education Service	1	0.13
Local Youth Association	1	0.13
Media	1	0.13
Other	4	0.53
Total	750	100

*Source:* Own data. Answers derived from question number 13.1. ‘Don’t know’ and ‘refuse to answer’ coded as missing.

The Government (including the President as a sub-category) is for most interviewees (22.00%,  $n = 165$ ) *the* central actor when it comes to addressing communities’ challenges. Together with state representatives on the district level and Members of Parliament (MPs), government authorities even make up 62.80%. These numbers strongly contradict the claim of both civil society and traditional authorities that they are the predestined representatives of communities’ interests because they are “with the people”. Almost two-thirds of respondents perceive government representatives as helpful in addressing challenges – contrary, this holds true for traditional authorities only to 13.47% and for NGOs to 3.33%.<sup>161</sup>

The second question narrows the question down to the petroleum sector and asks whom

<sup>161</sup> The remaining answers often directly target responsible units, e.g. the Ghana Highway Authority for road constructions or the Ghana Education Service for improving educational facilities. Another important addressee is the private sector, including Ghana Gas as the state-owned company.

respondents would commission if they had a problem in regard to oil and gas in the future. It is again an open question that provides respondents with full freedom to nominate up to three actors. Only 523 answers are generated, aggregating to a comparably low response rate of 52.36%.

Table 6.4: **Representation as Commissioning in Oil and Gas**

	<i>Frequency</i>	<i>Percent</i>
Traditional Authorities	153	29.25
District Assembly (Wo-) Man	132	25.24
Ghana Gas (incl. Liaison Officers)	86	16.44
Member of Parliament	41	7.84
District Chief Executive	41	7.84
Police	13	2.49
Community Organizations	12	2.29
GREL (incl. ROAA)	9	1.72
Friends / Family / Other Farmers	9	1.72
NGO	6	1.25
Media	6	1.25
Land Owner	6	1.25
Government	6	1.25
Lawyer	3	0.57
Total	523	100

*Source:* Own data. Answers derived from question number 32. ‘Don’t know’ and ‘refuse to answer’ coded as missing.

In direct comparison to the first question, the ranking changes considerably. The Government is at the very end whilst traditional authorities come first. District Assembly members occupy again the second place and 16.44% of respondents would commission Ghana Gas, more specifically the Ghana Gas Liaison Officers. Those respondents who perceive the Member of Parliament as potential assistance are all (despite one respondent) from the Ellembelle District, i. e., from the district the current Minister of Energy and Petroleum (who is also the MP) originates. NGOs again score low which increasingly raises the question whether they actually ‘speak with the voice of the people’.

### **Representation as Mediation**

Williams (1998) enlarges the traditional understanding of representation with the component of *mediation*. She argues that actors need to mediate their relations with constituents in a sound way in order to act as representatives. Additionally, she understands mediation



as a precondition for building trust.

Literature about Ghana frequently discusses traditional authorities, NGOs and media as mediators between communities on the one hand and state authorities on the other. To tackle representation as mediation, the questionnaire includes two questions: to what extent, on a scale from 1 to 5, non-state actors are perceived to have influence in oil and gas as mediators and how much respondents approve of such mediation.<sup>162</sup>

The idea that these actors have some form of influence in petroleum governance is widely supported by respondents. The cross-tables 6.5 – 6.8 provide an overview on respondents' anticipation of actors' influence in petroleum governance and their approval or disapproval of this influence. In regard to both paramount and community chiefs (Table 6.5 and 6.6), whether or not respondents think they are influential in petroleum governance, they very much approve of such mediation. Overall, 86% of all respondents in the case of paramount chiefs and even 88% in the case of community chiefs do approve or highly approve that traditional authorities play a role in governing Ghana's oil and gas resources. If respondents are convinced that traditional authorities influence petroleum governance 'very much', almost all respondents – 84% in the case of paramount chiefs and 83% in the case of community chiefs – highly approve of this influence. And even among those respondents who do *not* think that traditional authorities have something to say in petroleum governance, they would approve of it if they did so in the future.<sup>163</sup>

Table 6.5: Mediation by Paramount Chiefs & Respondents' Approval (numbers in percent)

<i>Influence</i>	<i>Disapproval / Approval</i>					Total
	High disapproval	Disapproval	Neither	Approval	High approval	
No influence	12	8	17	32	32	100
Little	0	14	24	29	33	100
Neither	3	0	6	52	39	100
Fairly	0	2	0	43	55	100
Very much	1	1	2	13	84	100
Total	4	4	7	28	58	100

*Source:* Own data. Numbers in percent.  $N = 285$ ,  $\gamma = .6109$ . Answers derived from question number 41 & 41.1.

<sup>162</sup> Accordingly, the questionnaire only scrutinizes the mediation abilities of actors who are not voted for in public and free elections, i. e., traditional authorities, civil society representatives, and media organizations.

<sup>163</sup> As the rank coefficient  $\gamma$  indicates, a moderate relation between perceived influence and its approval exists: At least in the case of paramount chiefs ( $\gamma = .6109$ ), it can be assumed that the more respondents are convinced that paramount chiefs influence petroleum governance, the more they give their blessing to this mediation.

Table 6.6: Mediation by Community Chiefs &amp; Respondents' Approval (numbers in percent)

<i>Influence</i>	<i>Disapproval / Approval</i>					Total
	High disapproval	Disapproval	Neither	Approval	High approval	
No influence	10	9	10	39	31	100
Little	0	8	17	25	50	100
Neither	3	0	6	32	58	100
Fairly	0	5	2	44	49	100
Very much	2	1	1	14	83	100
Total	3	4	5	28	60	100

*Source:* Own data. Numbers in percent.  $N = 310$ ,  $\gamma = .5407$ . Answers derived from question number 41 & 41.1.

The high approval of non-state actors having influence in petroleum governance replicates for both NGOs and the media. While the dropout rate in regard to NGOs remains high (119 respondents refuse to answer), more than half of the remaining respondents ascribe a high or very high influence to civil society representatives in petroleum governance. Parallel to traditional authorities, perceiving NGOs and media as influential, goes hand in hand with a high or very high approval.

Table 6.7: Mediation by NGOs &amp; Respondents' Approval (numbers in percent)

<i>Influence</i>	<i>Disapproval / Approval</i>					Total
	High disapproval	Disapproval	Neither	Approval	High approval	
No influence	12	18	18	24	29	100
Little	6	0	17	44	33	100
Neither	6	0	9	53	31	100
Fairly	0	2	0	44	53	100
Very much	0	0	1	9	90	100
Total	2	2	5	28	62	100

*Source:* Own data. Numbers in percent.  $N = 200$ ,  $\gamma = .6981$ . Answers derived from question number 41 & 41.1.

Table 6.8: **Mediation by Media & Respondents' Approval (numbers in percent)**

<i>Influence</i>	<i>Disapproval / Approval</i>					Total
	High disapproval	Disapproval	Neither	Approval	High approval	
No influence	10	6	30	32	22	100
Little	7	0	20	48	26	100
Neither	0	0	21	46	33	100
Fairly	0	1	1	50	47	100
Very much	0	0	1	21	78	100
Total	3	1	12	37	47	100

*Source:* Own data. Numbers in percent.  $N = 310$ ,  $\gamma = .5931$ . Answers derived from question number 41 & 41.1.

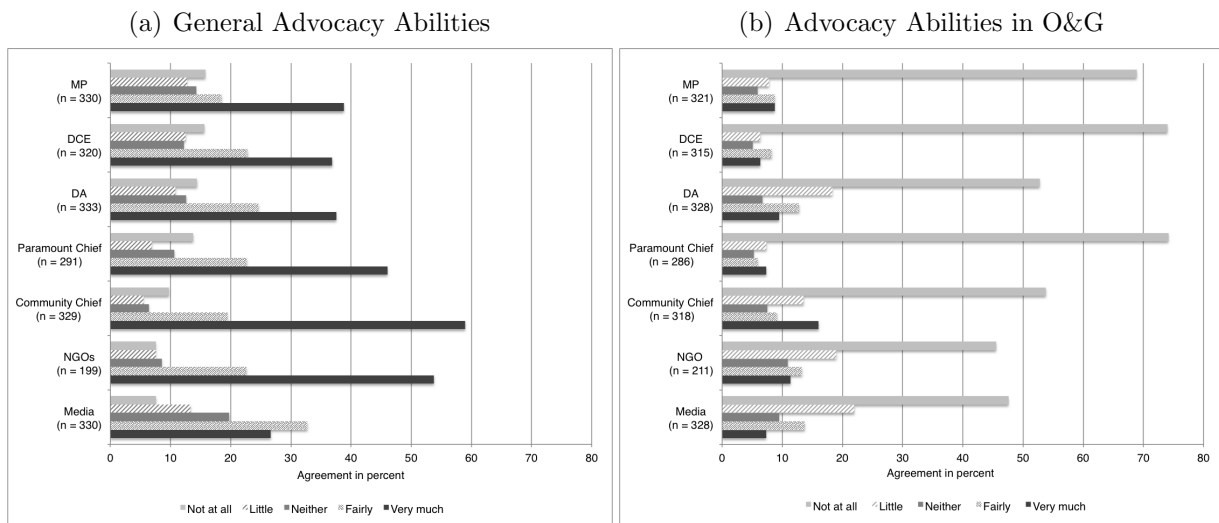
Accordingly, whereas respondents are scattered in their opinion to what extent these actors are able to mediate in petroleum governance, they cluster in their approval of this mediation. Two interpretations present themselves based on these figures: On the one hand, it could be argued that respondents disengage from state authorities and favor an active role of non-state actors in petroleum governance.<sup>164</sup> Meanwhile, the results of the first two questions – representation as commissioning – question this interpretation. On the other hand, the low variations in both influence and influence's approval may suggest that interviewees support the basic idea that other actors – besides the government – should exist in petroleum governance irrespective of whether or not this involves civil society or media or traditional authorities or any other potential actors. This could originate from the narrative that – in comparison to state authorities – non-state actors are automatically 'good' or 'better'.

### **Representation as Advocacy**

As a third component, representation may be understood as 'advocacy', i. e., that actors advocate for their subordinates and, as a consequence, these subordinates feel well represented. The questionnaire tackles this form of representation with two questions: The first question prompts respondents to indicate who pushes communities' interests into Ghanaian politics in general (on a scale from 1 to 5). The second question replicates this question with a focus on oil and gas and asks interviewees to evaluate how well – on a scale from 1 to 5 – various state and non-state actors promote communities' interests in petroleum governance. The two sub-graphs (Graph 6.2) depict their answers.

<sup>164</sup> Azarya and Chazan (1987) put forward this argument already 40 years ago.

Figure 6.2: Stakeholders' Abilities to Advocate for Communities' Interests



Source: Own data. Answers derived from question number 14 and 38.

In direct comparison, community chiefs perform best in promoting communities' interests in general (58.97%,  $n = 329$ ), followed by paramount chiefs (46.05%,  $n = 291$ ). Due to the high drop out rates in regard to NGOs, the results should be compared with caution, but NGOs are comparably popular among those to whom the term means something: 53.77% ( $n = 107$ ) think they pressurize communities' interests 'very much' into politics. Contrary to this, the media seems to be detached from the local level in the eyes of respondents.

The same question, replicated for the petroleum sector, draws an entirely different picture. Respondents do not feel that their interests are well represented by any of the actors. Whereas community chiefs again advocate best, the vast majority of interviewees (74.13%,  $n = 212$ ) is convinced that paramount chiefs are 'not at all' promoting local interests. The same replicates for the District Chief Executives (DCEs) and the Members of Parliament (MPs).

As in the case of commissioning, respondents therefore considerably differ between general representation on the one hand and representation in the petroleum sector on the other. While respondents feel comparably well represented by various stakeholders – particularly by traditional authorities (and, with some limitations, NGOs) – in general, they feel that their interests are mis- or underrepresented in the emerging petroleum sector.

Various factors may cause this difference: First, as the survey shows, respondents do, so far, not perceive any personal benefits arising from the petroleum sector and, hence, may feel ill-represented. Second, actors (intentionally) fuelled citizens' expectations after the oil discovery. As these expectations were disappointed, citizens may not feel well represented in oil and gas even though they still appreciate specific actors in general. This

observation warns against an inversion of the argument that actors who are generally well accepted as representatives in Ghanaian politics are automatically recognized as representatives in petroleum governance as well.

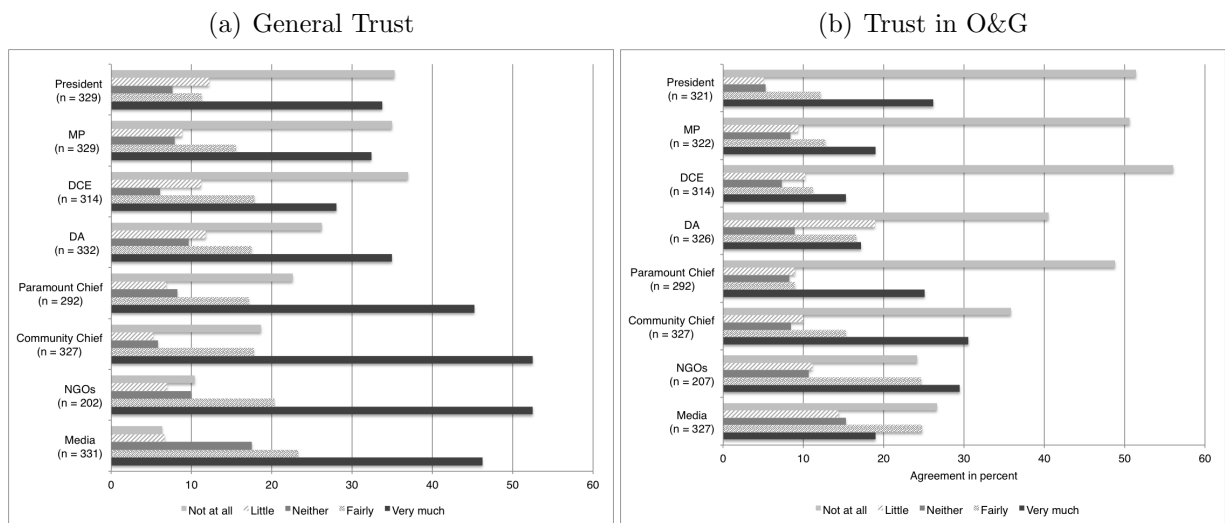
### Representation as Trust Relationship

Finally, trust is anticipated to play a decisive role in representation based on a simple logic: Citizens are assumed to feel better represented if they trust their representatives. This trust, in turn, legitimates actors to play a role in petroleum governance. Yet, so far it remains unclear whom communities trust. One interviewee explains:

“The issue of trust is a very contentious one. There can be no [single] answer that covers all [petroleum] actors [...]. Local communities have over the years looked up to NGOs to represent their interest. However, in recent years, the proliferation of NGOs in Ghana and especially those seeking to be doing interventions in the oil and gas sector, resulted in situations where some NGOs have conducted themselves unprofessionally and so receive negative reactions from the communities. In the same way, even so communities do not trust private sector companies, there are some cases where very good relationships have been cemented through well thought consultations on particular interventions. Therefore, I would say that there is generally a lack of trust by community members. However, noting their need for collaboration in addressing impacts of oil production in their lives, they are able to establish some level of trusting partnership and collaboration” (Interview Transcript VI, page 1).

To shed light on this contentious question, Graph 6.3 depicts two sub-graphs: respondents’ trust in petroleum actors in general and respondents’ confidence in regard to oil and gas.

Figure 6.3: Trust in Petroleum Actors



Source: Own data. Answers derived from question number 11 and 40.

Replicating actors' commissioning and advocacy abilities, respondents assess their trust in actors separately: General trust in actors is much higher than confidence in their work in petroleum governance. General trust in non-state actors – paramount chiefs, community chiefs, NGOs and the media – is comparably high: Around half of all interviewees place 'very much' trust in each of these actors (from 45.21% for paramount chiefs to 52.48% for community chiefs and NGOs). Yet, in the oil and gas sector, citizens' trust in these actors shrinks by around 20% for traditional authorities and NGOs, and almost by 30% for the media. The mistrust against political actors – the President, MPs, DCEs and DA members – is also much higher in oil and gas matters than in general. Consequently, respondents are much more distrusting of actors' abilities to represent their interests in petroleum governance than their general political capabilities. This inference is supported by a look at the means: For example, the general mean trust in paramount chiefs ( $\bar{x} = 3.5548$ ) falls to a mean trust in oil and gas of  $\bar{x} = 1.5258$ . Low pairwise correlations between, e.g., general trust in paramount chiefs and trust in paramount chiefs in the oil and gas sector, support the argument that respondents differ two forms of trust.

This finding revives the argument that inferences from general trust patterns to trust in the developing petroleum sector are made without an empirical foundation.

### Comparing Actors' Representation Skills

Table 6.9 summarizes the scores of each stakeholder group in regard to the different theoretical components of representation.

Table 6.9: **Summary of Actors' Representation Abilities**

	<i>Commissioning</i>		<i>Mediation</i>	<i>Advocacy</i>		<i>Trust</i>	
	General (rank)	O & G (rank)	General (mean)	General (mean)	O & G (mean)	General (mean)	O & G (mean)
MP	2	3	–	2.52	0.81	2.02	1.40
DCE	4	4	–	2.53	0.67	1.88	1.29
DA (Wo-)Man	1	2	–	2.60	1.08	2.23	1.53
Param. Chief	3	1	3.43	2.80	0.65	2.55	1.53
Comm. Chief	3	1	3.43	3.12	1.20	2.80	1.95
NGOs	5	5	3.49	3.08	1.26	2.98	2.24
Media	6	6	3.30	2.58	1.22	2.96	1.95

*Source:* Own data based on previous tables on representation.

The first two columns depict the ranks stakeholders occupy in commissioning, based on the numerical results of the open questions whom respondents would commission in regard to the perceived challenges on the one hand and in regard to oil and gas on the other

(see Table 6.3, page 117).<sup>165</sup> For general problems, District Assembly representatives score the highest rank, followed by Members of Parliament and traditional authorities. Only a small number of respondents would commission NGOs and media representatives and, consequently, they occupy the last ranks. The same replicates for commissioning in regard to oil and gas where traditional authorities rank the highest, followed by District representatives and Members of Parliament.

The approval that non-state actors – traditional authorities, NGOs and media – potentially or actually influence petroleum governance, is high among all respondents, culminating in high mean values for all these stakeholders. Differences occur, however, in regard to their advocacy abilities: Here, community chiefs represent best with the highest mean value whereas media organizations are not doing well in advocating communities' interests from the respondents' perspective. The numbers significantly drop in regard to stakeholders' advocacy skills in petroleum governance: Here, the mean values reduce to half at least. Even paramount chiefs who score high in all other representation components do not perform well.

The differentiation between general representation skills and representation abilities in oil and gas replicates for the trust respondents place in the various stakeholders. Although the results for NGOs have to be taken with caution because of the high drop-out rates, they enjoy the highest mean trust, followed by media organizations and community chiefs. The same actors outperform in regard to respondents' trust in petroleum governance. To make these results even more apparent, Table 6.10 adds up the scores for each stakeholder in descending order.<sup>166</sup>

Table 6.10: **Actors' Ranking in Representation**

<i>Stakeholder</i>	<i>Rank Score</i>	<i>Rank</i>
Community Chiefs	19.07	1
District Assembly (Wo-) Men	18.44	2
Paramount Chiefs	17.53	3
Members of Parliament	15.74	4
NGOs	13.56	5
District Chief Executives	12.27	6
Media	10.61	7

*Source:* Own data. Ranking without 'mediation' due to missing data.

Following four different ways of representing communities' interests, community chiefs

<sup>165</sup> As the answer to these two questions are not subdivided in paramount chiefs and community chiefs, they receive the same rank.

<sup>166</sup> For this purpose, the ranks were inverted so that the actors with the first rank get the highest score. For example, in general commissioning District Assembly (Wo-) Men were most frequently mentioned and hence occupy the first rank. It inverts to a score of 6.

are the most important representatives for affected communities. District Assembly (Wo) Men follow closely as do paramount chiefs. Members of Parliament occupy the fourth rank and dominate over NGOs and District Chief Executives. The media, in the eyes of respondents, are least representing their interests.

This final result has a number of consequences: On the one hand, community chiefs – and, more generally, – traditional authorities represent communities’ interest best. This is an important result not only in regard to the discourses taking place in petroleum governance but considering the immanent debate in academia as to whether or not traditional authorities can be viewed as mouthpiece of ordinary citizens in natural resource governance. If there is an actor group that can legitimately claim to represent communities’ interests along the gas pipeline, it is the traditional sector, with a priority on community chiefs.

On the other hand, the results neglect NGOs an important means to seek influence in petroleum governance. They loudly and repeatedly argue to ‘speak with the voice of the people’ and deduce their right to be listened to and to play a role in petroleum governance from this claim. The results of the survey contradict this argument. About one-third of all respondents do not understand the term well enough to state their opinion and among those to whom the term means something to, NGOs fall back behind traditional authorities and state representatives. This problem may originate from NGOs’ failure to recognize the relevance of communities’ problems in the petroleum sector. While their discussion move on the macro level and serve the ‘standard jargons’ of development cooperation, people demand for the solution of hands-on problems. Hence, if NGOs want to act as a mouthpiece of communities, they first need to lay a foundation by making their work better understandable to ordinary citizens. Second, they need to better listen to people’s needs, to understand the relevance of problems and must revert to their founding idea. Although this argument does not dispute the important role civil society plays in Ghanaian politics – particularly as a counterweight to the vast executive powers –, it brings to light a severe divide between the self-perception of NGOs on the one hand and their anticipation among citizens on the other (see therefore also Vormawor and Atuguba (2014)). Decisively, it cautions against an inversion of the argument that general representation and representation in oil and gas are transferable.

### **6.3 Agendas in the Petroleum Sector**

The argued detachment of NGOs from communities’ interests drives the questions which goals NGOs and, more generally, all other petroleum actors pursue with their engagement in petroleum governance beyond representing ‘the voice of the people’, to what extent citizens’ interests and actors’ goals overlap, and which goals actors have been able to realize so far. The subsequent section focuses on these questions.

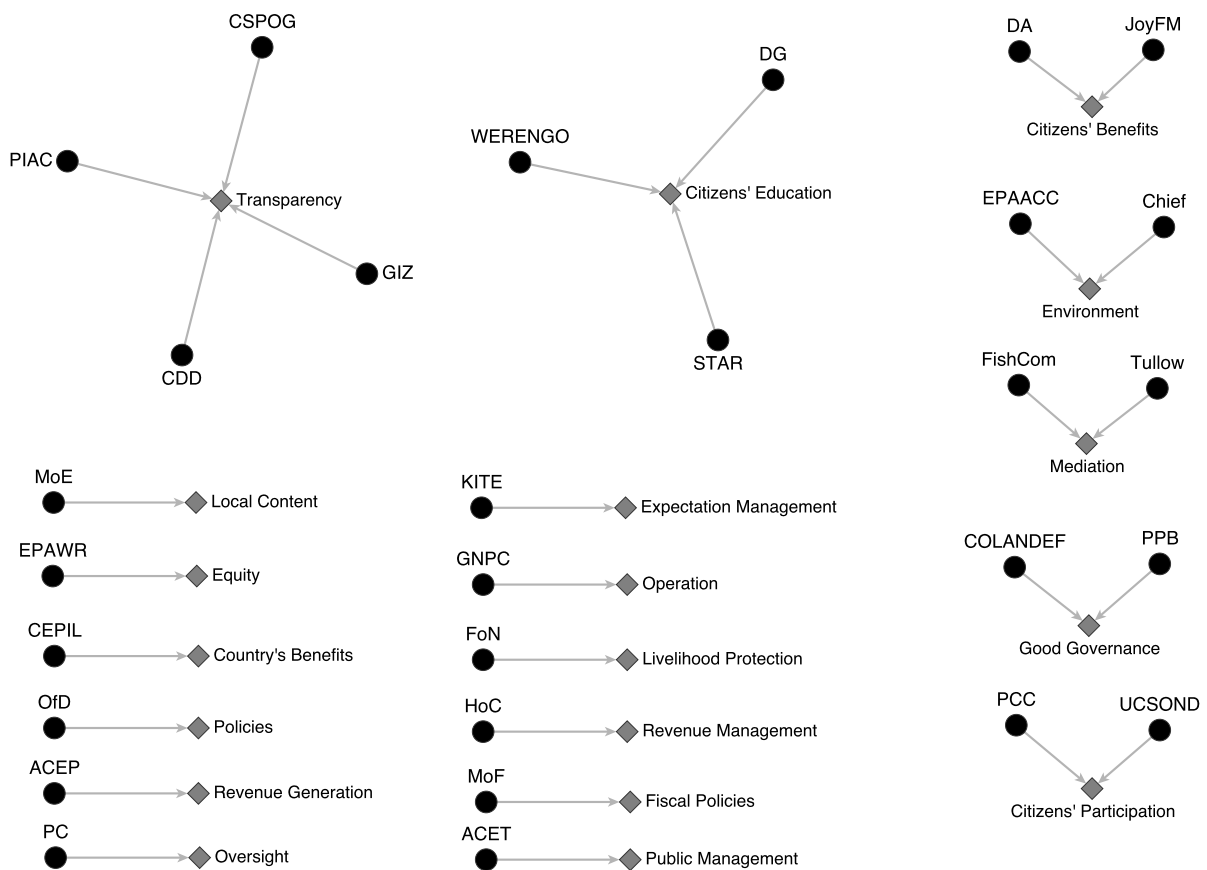


### 6.3.1 Actors' Goals

Figure 6.4 depicts a number of two-mode networks based on the first goal the 29 network actors indicated to pursue in petroleum governance. Two-mode networks (also called 'bipartite graphs') indicate how actors are tied to particular events. They derive their name from dealing with two different sets of data, here actors on the one hand and goals in petroleum governance on the other.

Overall, the 29 petroleum actors seek to realize 19 different goals. Due to this high diversity and despite the previously discussed high interconnectivity of actors, several components exist: Two bipartite graphs, five bipartite triads and twelve actors that do not intersect with others in their major goal orientation.

Figure 6.4: **Bipartite Graphs of Actors' Agendas**



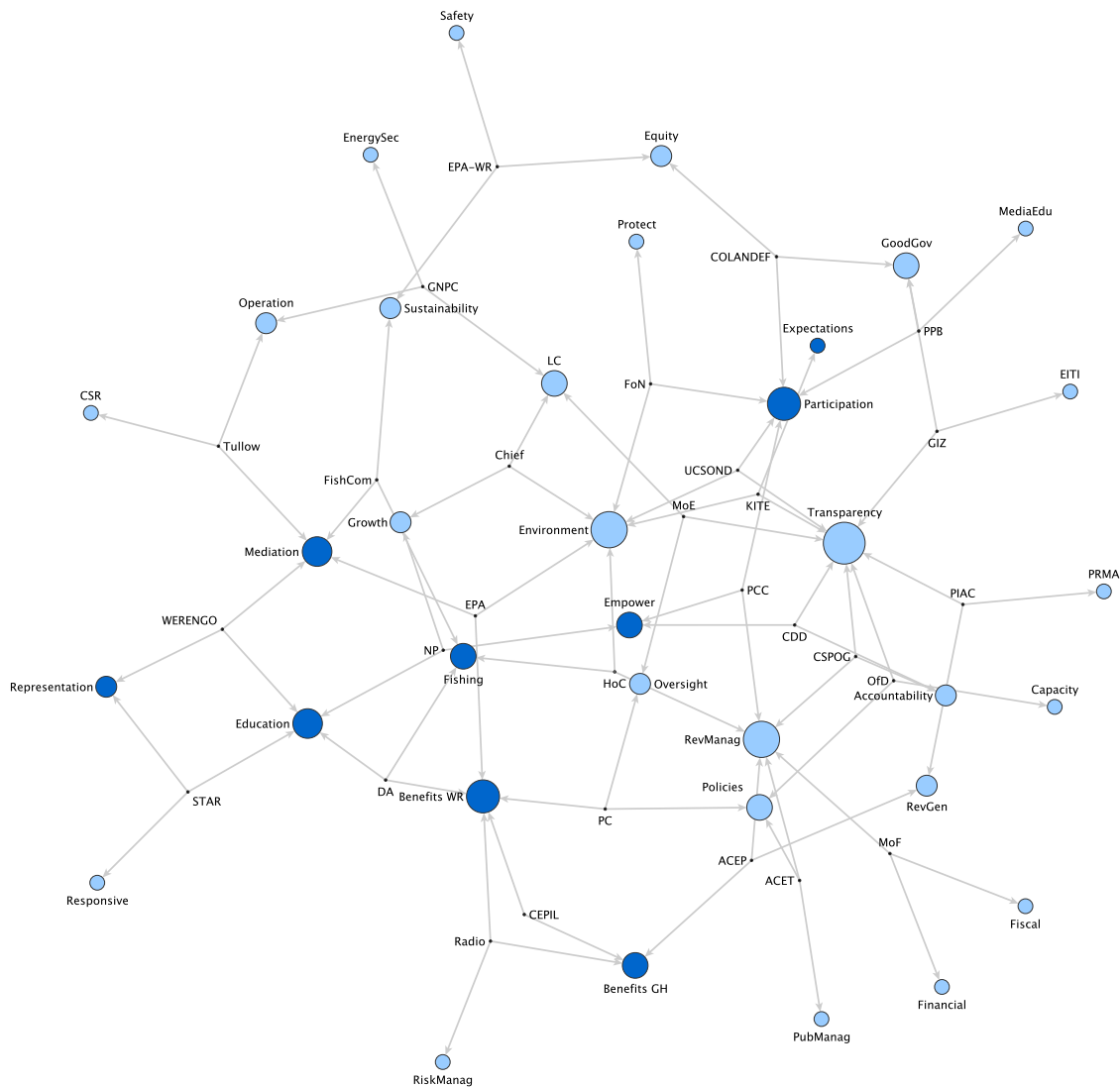
Source: Own data. Dots represent actors, diamonds actors' agendas.

The agendas range from very broad goals such as ensuring 'transparency' in the oil and gas sector to more specific goals such as citizens' 'education' or communities' 'participation'. Based on Section 3.3.1 (page 30), which argued that collaboration becomes likely if actors share the same agendas in natural resource governance, the visualization of the

first goal suggests that collaborative steering of petroleum resources among the 29 actors is rather unlikely.

This result changes when not only one but three goals are included in the network analysis. The second bipartite graph (Figure 6.5) depicts the *three* major goals the interviewed organizations are pursuing in oil and gas.

Figure 6.5: Agenda Network



*Source:* Own data retrieved from the question: “What are your three major goals in the oil and gas sector?”. Light blue nodes depict general goals, dark blue nodes are linked to the citizens’ level. Nodes’ size implicates goals’ frequency (popularity). Network layout compiled with visone’s quick layout button.

Through the inclusion of two more goals, the network becomes a fully connected bipartite graph with no isolates (i. e., no actor that does not share any goal with another actor).

Overall, the 29 actors try to reach 35 different goals in petroleum governance. Some of these goals are highly interrelated: For example, in order to reach accountability in the spending of petroleum revenues, transparency in the allocation of these revenues is necessary. Similarly, the goal of reaching ‘good governance’ in the petroleum sector unites transparency and accountability as much as ‘revenue management’ unites the goals of implementing sound fiscal and sound financial policies.

As in the first bipartite graph, achieving *transparency* remains the most popular goal and clusters eight actors: Accra-based NGOs, the German GIZ, the Norwegian Oil for Development Program (OfD), the Ministry of Energy and Petroleum (MoE), and the Public Interest Accountability Committee (PIAC). Realizing longterm *environmental protection* is the second most frequent goal. At least three factors can explain why actors put so much emphasis on these two goals: On the one hand, the Nigerian experiences of gas flaring and oil spillages are a continuous reminder for all actors of how to *not* govern petroleum resources. On the other hand, the mining activities in Ghana have led to high environmental hazards as discussed in Section 5.1 (page 73). Additionally, stakeholders in Ghana anticipate transparency as key to both environmental protection and best practices in revenues’ governance.

The assumption that actors from similar sectors cluster around similar goals has to be rejected based on these results. The argument that sector affiliation is suggestive of goal orientation simply fails to characterize petroleum governance in Ghana. For example, the Environmental Protection Agency (EPA) on the national level (EPA-ACC) and its sister on the local level (EPA-WR) do not share any goals in petroleum governance. While the EPA-WR aims to achieve intergenerational equity, sustainable harnessing of petroleum resources as well as public health and safety, the EPA-ACC aims to ensure that the petroleum sector is developed efficiently with best environmental practices, that local communities benefit and that they coexist peacefully with oil companies (‘mediation’). With these goals, the national branch is located in the middle of the network whilst the EPA-WR remains at the network’s boundaries. It only relates to the Fisheries Commission (also based in Sekondi-Takoradi) in its aim to ensure sustainable extraction of petroleum resources and with the Community Land and Development Foundation (COLANDEF), an Accra-based NGO with a regional branch in Takoradi, in the aim of ensuring intergenerational equity. It is also counterintuitive that the goals of the regional branch tackle the macro level whereas the national branch emphasizes localized goals. This explains why the Environmental Protection Agency Accra (EPA-ACC) shares ties with local agents such as the District Assembly Man, the Houses of Chiefs and the interviewed Paramount Chief.

The graph also rejects the presumption that traditional authorities pursue coherent goals. The interviewed Paramount Chief is very much focused on economic improvements: achieving economic growth and boosting local content. Optimists would interpret this as

a sign for traditional authorities' eagerness to develop their areas and to make their people benefit from the petroleum resources. Pessimists would rather interpret it as a sign of greed for financial resources. Though, as a Paramount Chief, he is part of the Western Region House of Chiefs (WR-HoC), he only shares one goal with the House, i. e., environmental protection. And PCC – of which the Paramount Chief is a member as well – is located at the opposite end of the network and does not share any common goals with the Paramount Chief. An incoherence also characterizes the WR-HoC and PCC. This result supports other authors' finding that traditional authorities fail to streamline their agendas and to coordinate their interests (Valsecchi 2007: 10-11). In turn, the outcome rejects the assumption that homophile actors share similar goals.

The same becomes apparent in regard to the ten interviewed civil society organizations. They indicate a diverse set of goals and consequently distribute across the network. The CSPOG, funded to streamline the interests of civil society actors in regard to petroleum governance in Ghana (see Section 6.1), shares more goals with donor agencies and public authorities than with NGOs. Moreover, while Accra-based NGOs are all interrelated through one or more goals, Western Regional NGOs indicate a diverse set of agendas and, thus, do not form coherent subgroups which would enable them to collectively steer their interests in petroleum governance. It further results in a divide between Accra-based NGOs on the one hand and local NGOs from the Takoradi area on the other. These observations form an important result: actors from the traditional and civil society sector fail to prioritize and coordinate their goals in petroleum governance.

Pulled together, the biggest agenda block concerns Ghanaian citizens. 19 actors indicate a goal that is related to communities: Increase citizens' 'benefits' from oil and gas, foster their 'education' about it, 'empower' them to understand the sector, increase their 'participation' in oil and gas activities, and 'represent their interests'. This focus on community-related goals re-emphasizes the overarching aspiration of all actors to either be viewed as representatives of the ordinary citizenry or as averting harm from them. Whether or not stakeholders are successful in implementing these goals, necessitates a view back to the survey's respondents.

### 6.3.2 Goal Attainment on the Local Level

First, increasing citizens' *benefits* from the oil and gas discovery is a prominent goal among petroleum stakeholders. The bipartite graph (Figure 6.5) clusters five actors, the District Assembly Man, the radio station, public authorities (the EPA-ACC and the Petroleum Commission (PC)) and the Accra-based NGO CEPIL. Within the sampled communities, anticipated benefits remain yet low. While some view the construction of small development projects like a water distribution stations or students' scholarships financed by Tullow Oil as beneficial, the hopes that the gas infrastructure would terminate in new job opportunities got disappointed. Even though direct benefits (such as employment) are

also missing because of the age bias in the sample, respondents particularly stated that they hoped for indirect benefits such as more reliable electricity, better infrastructure and benefits for the youth.

As Table 6.11 and 6.12 summarize, respondents think that Ghana benefitted partly from the oil discovery but they do not replicate this feeling to their personal level. In regard to benefits for the country, 20.42% openly state that they do not know enough about Ghana's potential benefits to give an answer. One quarter of the remaining interviewees feel that Ghana benefitted 'fairly' or 'very much' while almost one-third strongly opposes. The tendency in answering behavior is much clearer looking at personal benefits: Here, almost all respondents – 88.29% – do not perceive *any* benefits in their everyday lives due to the new resource wealth.

Table 6.11: Country Benefits from Oil &amp; Gas

	<i>Frequency</i>	<i>Percent</i>
Not at all	108	32.43
Little	34	10.21
Neither	32	9.61
Fairly	48	14.41
Very much	43	12.91
Don't know	68	20.42
Total	333	100

*Source:* Own data. Answers derived from question number 36.

Table 6.12: Personal Benefits from Oil &amp; Gas

	<i>Frequency</i>	<i>Percent</i>
Not at all	294	88.29
Little	19	5.71
Neither	8	2.40
Fairly	7	2.10
Very much	5	1.50
Don't know	-	-
Total	333	100

*Source:* Own data. Answers derived from question number 36.

Second, four network actors anticipate citizens' *education* as a major goal in petroleum governance (STAR-Ghana, the District Assembly Man, WERENGO, and the reporter of the Daily Graphic). The importance of spreading information about the oil and gas activities is anticipated by most stakeholders:

“Basically, people do not understand what is happening and that is why they get angry. And they want to fight back. But once they understand these things, I believe they will give support [...]” (Interview Transcript III, page 5).

The survey's results, however, question stakeholders' ability to reach this goal: Overall, respondents do not feel well educated about the oil and gas activities taking place in and around their communities. More than three-quarters (74.77%,  $n = 249$ ) do not feel informed 'at all' or only 'little' about the activities and when comparing different ways of gathering information, personal contacts and radio – rather than the most visible network actors – emerge as the most important channels. Newspapers like the Daily Graphic are 'never' used by the vast majority (84.11%,  $n = 254$ ). Equally, respondents do neither

approach politicians like the District Assembly Man nor NGOs like WERENGO to inform themselves. There are, hence, two interpretations to conclude from stakeholders' abilities to educate citizens about oil and gas: Either actors do not take sufficient measures to inform citizens or, if they do so, the information does not reach citizens to the degree they feel well informed.

Strengthening the *participation* of local communities is the third citizen-related agenda which only civil society actors and one media organization pursue: the three local NGOs 'Friends of the Nation (FoN)', COLANDEF, the 'United Civil Society Organisations for National Development (UCSOND)', PCC as a hermaphrodite between organized traditional authority and NGO, and PenPlusBytes (PPB), an Accra-based media organization. Although these organizations emphasize to "engage citizens in the oil and gas sector" (PPB), to "enhance their participation" (PCC and UCSOND), to "ensure communities' involvement in all decisions concerning oil and gas" (COLANDEF), and to aim for an "active citizens' participation in policy formulation and implementation" (FoN), there exists a pivotal caveat within this aim: the gap between the articulation of the goal on the one hand and a realistic strategy to implement it on the other. Promoting citizens' participation is a laudable goal but organizations cannot sufficiently explain how, for example, an "active participation in policy formulation and implementation" could take place. The field observations and interviews let conclude that most NGOs view citizens engaged if the NGOs themselves are invited and heard by the government or oil companies.

Citizens' education and participation relate to citizens' *empowerment* as a fourth goal directly linked to citizens. Empowerment is one of the highly connotated terms in development cooperation that became empty shells. To pin it down for this thesis, it is understood as 'internal efficacy' which captures respondents' assessment of potential influence due to own capacities (Diamond 1999: 161). Among all respondents, 79.87% ( $n = 236$ ) are convinced that they cannot influence petroleum governance 'at all', followed by 'little' opportunities by 15.62% ( $n = 52$ ). Considering the vast amount of power the executive has and the lacking strategies of non-state actors for goal-implementation, respondents' assessment of their own capacities to influence petroleum governance seems therefore more realistic than the goals of network actors to 'actively include them in policy formulation and implementation'.

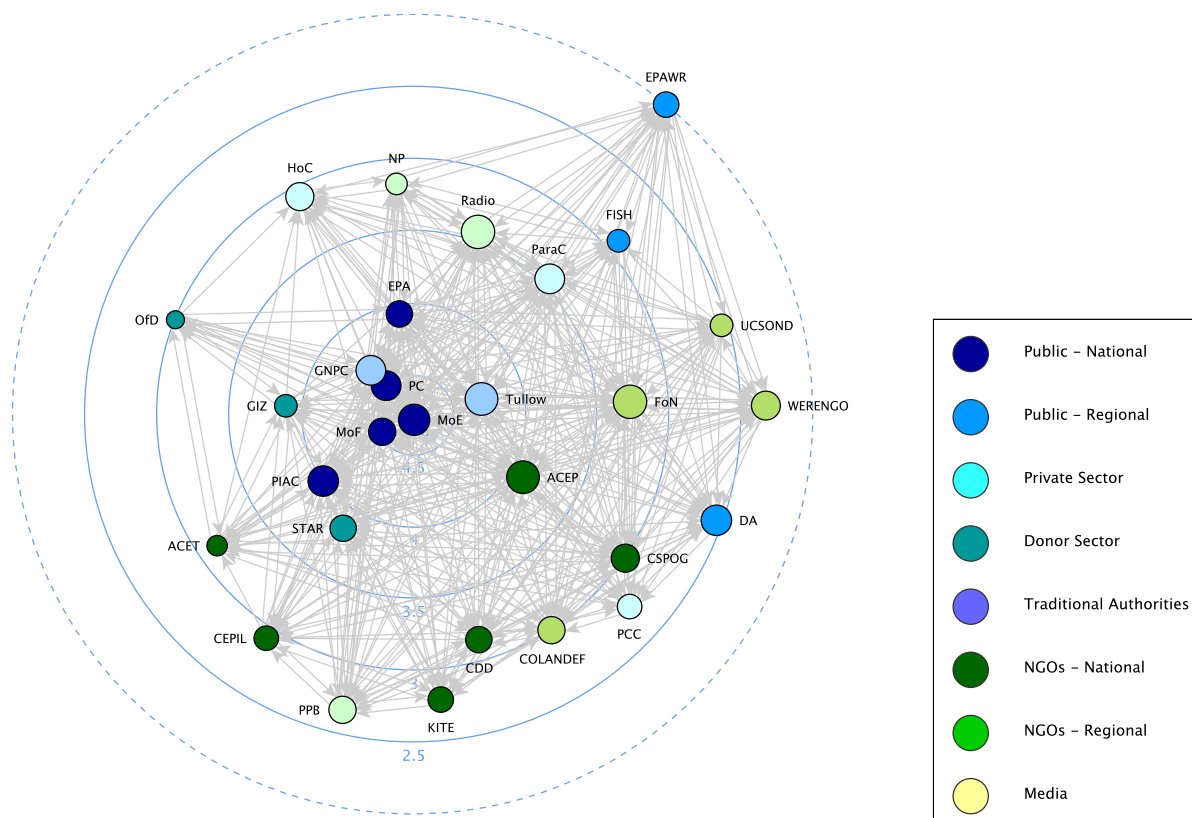
Hence, the present results suggest that there is still room for improvement in regard to actors' goal attainment on the local level. So far, respondents barely perceive any benefits from the developing petroleum industry and they do not feel well informed about the changes taking place in and around their communities. Considering the indicated goals of petroleum actors and their overarching aspiration to represent communities' interests, actors need to navigate their goals better, they need to use their relations to identify like-minded partners and they need to pursue a long-term strategy in goal steering. The chapter's last section therefore investigates whether the basic structure of their network

allows for such a navigation, identification and strategic goal steering.

## 6.4 Network Characteristics

Accordingly, this section presents an empirical description of the actors' general network ( $N = 29$ ) and affords insights into how the network's structure potentially promotes or constrains collaborative steering in petroleum governance. Figure 6.6 depicts the network with actors' degree centralities (nodes' sizes) and actors' sector affiliation (nodes' colors). The graph is arranged in a centrality layout. In centrality layouts, nodes are arranged in concentric circles according to an assigned attribute. Here, the attribute depicts actors' influence as attributed by network alters (see therefore also Table 8.1, page 175). Nodes closer to the center are viewed as more influential by their respective alters.

Figure 6.6: Actors' Network by Attributive Power



*Source:* Own data. As the nodes' size displays degree centrality, different colors rather than forms are used to represent nodes' sector affiliation. Graph retrieved with visone's centrality layout algorithm.

The main aim of this graph is to show that the overarching goal of including a wide range of different actors in the petroleum sector works. The figure shows a fully connected

network with no isolates, a dense core and few peripheral nodes. This becomes obvious not so much because of the diverse set of actors visible in the network but because of the high interconnectivity among them. Any assumption that nodes would cluster in subgroups (for example, national vs. regional organizations, or sectoral clusters) and would only connect via few brokers, has to be rejected. Against the background of redistributive justice as discussed in Chapter 2, the relations between both oil companies (Tullow Oil and GNPC), national government agencies (e.g., PC and MoE), traditional authorities, and local NGOs provide the opportunity to reduce conflict and to uptake local problems efficiently to the national level.

The second aim of this graph is to visualize differences in relational and attributive power as discussed in Section 3.3.3 (resource perspective vs. attribute approach vs. positional perspective). For example, FoN has the highest degree centrality (with 49 outgoing and incoming ties) and therefore a large node, but actors only attribute moderate influence to it as it is located between the third and fourth centrality circle in the network. In the reversed way, the MoF scores high in perceptions of its contacts but has only a low degree centrality score (with 31 outgoing and incoming ties). Table 6.13 summarizes those network measurements that are linked to natural resource governance in Section 3.3.4 and summarized in Table 3.1 (page 38).

Table 6.13: Summary of Contact Network

Network measurement	Definition	Statistics
Nodes	Number of network actors.	29
Arcs	Number of network ties.	470
Reciprocity	Fraction of reciprocated ties from all ties.	.5512
Transitivity	Percentage of edge pairs $(i,j)$ and $(j,k)$ such that $(i,k)$ is also an edge ('A friend of a friends is my friend').	.657
Density	Ratio of the number of actual ties to the maximum possible number of ties.	.746
Centralization (undirected nw)	The concentration of edges around one single node or a small group.	.3638
Diameter	Shortest path between two nodes. If the diameter is low, then all nodes are relatively 'close' to each other.	3
Average shortest path	Average number of steps along the shortest paths for all possible pairs of network nodes.	1.4261
EI-Index	Measures the relative density of internal connections within a social group compared to the number of connections that group has to the external world. Range from -1 to 1.	.6766



*Source:* Own data. For definitions and links to natural resource governance see Table 3.1 and Appendix 1.

*Reciprocated* exchanges are likely to build trust among actors and, through reciprocity, actors are able to built up their reputation of being trustworthy. In parallel, high reciprocity is argued to facilitate social control and to be helpful in monitoring deviant behavior of network actors. *Transitivity*, i. e., subgroups connecting three actors through mutual ties, works in a similar direction: High transitivity indicates consistency in network flows and the presence of collaborative groups. It is equally associated with trust as an actor is likely to adopt the trust judgments made by his trusted partners (a friend of a friend ...). In the network, both reciprocity and transitivity are slightly over the critical score of .5 (Merrill-Matzner 2006: 86, see also Table 3.1 on page 38). The relatively high transitivity (.687) is a first indication that actors in petroleum governance are connected within subgroups which affords them the possibility to collaborate.

In natural resource governance, *dense* networks are linked to fast resource exchanges and efficient diffusion of innovations but also to potential resource redundancy. In contrast, loose networks benefit from a low risk of lock-ins and diverse governance practices. In the present network, with  $D = .746$ , 74.60% of all possible ties are present and, indeed, the qualitative data suggest that information – but also rumors – spread quickly among actors in petroleum governance.

Network *centralization* measures the concentration of edges around one single node or a small group. Higher numbers of centralization ( $\geq .5$ ) indicate a greater likelihood that one node is in ‘command and control’ whereas lower scores suggest a more equal distribution of network flows.<sup>167</sup> In the present network embedding, the degree centralization is relatively low (`mode(min)`: .3638, `mode(max)`: .2725).<sup>168</sup> This low centralization poses challenges to collaboration as the network embedding lacks one or a few actors who ‘command and control’. The absence of ‘responsible’, central nodes may contribute to the dominating confusion over responsibilities and over past multi-actor agreements.

In order to understand actors’ *reachability*,<sup>169</sup> diameter and average path length are used

<sup>167</sup> Consequently, a network has a degree centralization of 1 if all nodes are linked through only one node and 0 if all nodes are interlinked with each other.

<sup>168</sup> To retrieve network centralization, it is necessary to symmetrize the edges, i. e., to generate a new network with undirected ties (present or absent) instead of directed ties (indicating sender and addressee of a tie). The `nw` command `nwsym` offers two modes: `mode(max)` forms an undirected tie when there is either a tie from node  $i$  to node  $j$  or a tie from node  $j$  to  $i$ . Contrary to this, `mode(min)` forms an undirected tie *only* in case of reciprocal ties, i. e., when there is a tie from node  $i$  to node  $j$  and a tie from  $j$  to  $i$ .

<sup>169</sup> Network density, centralization and reachability are all indicators for network cohesion but determining at which point a network is ‘cohesive’ is a “[...] tricky business [as] there is no absolute cut-off point where you can say, for example, that below a certain density value the network is lacking in cohesion and above another value the network is cohesive.” (Prell et al. 2010: 172). But in the present case, the comparably high density, the low centralization and the easiness of reaching all nodes in the network suggest that the network is comparably cohesive which, in turn, decreases the flexibility in adapting to innovative ideas (as cohesion foster homophily rather than diversity).

(see Table 3.1, page 38). In the network, all actors are apparently close to each other. On average, it takes 1.4 intermediate nodes to reach all other nodes and the longest shortest path accounts 3. This is problematic for collaborative steering as actors lack the access to distant, i. e., to new resources and information. Because the interviewed actors are more or less close with everyone who is, in turn, close with everyone else, new knowledge is hardly disseminated. In contrast, long-lasting rumors persist due to high reachability.<sup>170</sup>

Finally, the EI-Index measures the relative density of internal connections within a social group compared to the number of connections that group has to the external world (Grund 2015). The index ranges from -1 (only within-group ties exist) to 1 (only between-group ties exist) and is a mean to check for homophily patterns within a network. Here, the EI-Index is used to test the tendencies of network actors to share predominantly ties with actors from the same sector, i. e., public institutions with other public institutions, local NGOs with other NGOs in the Western Region etc. (in short, intrasectoral vs. intersectoral relating). As Table 6.13 indicates, the EI-Index is significant with a score of .6766. This score rejects any homophile tendencies in the network. The interconnectivity is high within and in-between sectors and suggests heterogeneity rather than homophily in social relations in petroleum governance.

The diversity of sectors and relations within the network embedding affords actors a number of opportunities: First, they have access to diverse knowledge and capital and can easily get in touch with actors who are disconnected to them as all actors can reach each other via a path length of maximum three. Second, due to the high number of involved sectors and their placement on different ‘scales’ (local, national and international), inter-sectoral and/or inter-scale collaboration is possible. Additionally, as government institutions are not located at the network’s boundaries but integrated in and intertwined with non-state actors, these non-state actors have the opportunity to control. Yet, the network embedding also entails a number of potential constraints for collaborative agreements: On the one hand, the low centralization indicates a potential lack of an efficient coordinator to ‘make things happen’. This lack might explain why, for example, discussions during stakeholders’ meetings, sooner or later, always reach the same few points such as decreasing fish stocks or the number of priority areas the petroleum revenues are to be spend.

Overall, the network embedding provides actors with the opportunity to collectively steer petroleum resources and revenues first and foremost due to the interconnectivity of actors across sector boundaries. The dense network structure and moderate reciprocity and transitivity can further promote collaboration. However, the network embedding lacks a coordinative core (low centralization) which can constrain collaboration. The following chapter, “*Resource Exchanges in Petroleum Governance*”, will explore to what

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<sup>170</sup> The measurement **components** validates the graph: the network consists of only one component and indicates strong cohesion or – put another way – absent network fragmentation.

extent actors make use of this social capital for collaboration.

## 6.5 Summary

In sum, this sixth chapter introduces the overall network embedding in which actors relate and – potentially – collaborate with each other. Based on 29 interviews, the overall network embedding consists of 99 nodes with 809 arcs. At least eight different sectors interconnect across sector boundaries and intersect in the agreement that systematic, collaborative dialogues between all sectors are favorable over unilateral steering of petroleum resources and revenues. The high number of actors, sectors and relations as well as their interconnectivity (visualized in Figure 6.1, page 96), shows the complexity of actors' interactions in petroleum governance in Ghana. The graph further depicts the limitations of this thesis as only 29 of at least 99 actors participated in the study.

Because of the overall network's interconnectivity, coalition formation is a feasible option to balance the power of more influential actors (or of those perceived as more influential). While differing in their composition and scope, the three coalitions discussed in Section 6.1 (page 98) share the central assumption that bundling resources leads to a more profound voice in petroleum governance. But, as one interviewee noted, the core problem lies in the fact that all start with a graceful idea without a thorough thought from beginning to end. As a consequence, all three initiatives suffer from a delicate financial situation due to outstanding membership fees or outstanding resource transfers from the government in case of the PIAC. A further joint component is the inability of coalition members to streamline their agendas within the coalitions. This becomes apparent in the two bipartite graphs (Figure 6.4, page 127, and Figure 6.5, page 128).

The aspiration to represent or, at least, to acknowledge communities' interests is a core similarity that glues the 29 network actors together. While state representatives deduce this aspiration from the electoral process, non-state actors deduce it from their anticipation as a counterweight to the executive's dominance. Moreover, donor agencies and private companies acknowledge the importance of citizens' inclusion as a result of the 'resource curse' narrative. Yet, so far, research has ignored the important role that representation plays both within actors' interactions and within petroleum governance overall. Among other things, the present survey is able to highlight a gap between general feelings of being represented and the feeling of being represented in the oil and gas sector. This novel result cautions against any inversion of the argument that actors who are generally well accepted as representatives in Ghanaian politics are automatically considered as legitimate representatives in petroleum governance. As the feeling of being misrepresented can have sincere consequences such as political deprivation or conflict, this divide challenges all actors to better acknowledge communities' interests.

Because of the importance to merge actors' views with citizens' perceptions, the chap-

ter's third section focuses on the goals actors currently pursue in petroleum governance. The section first reveals the diversity of actors' agendas and is able to show that 'sectoral' cliques, clustering around similar goals, do not exist in Ghana's petroleum governance. As much as the two branches of the Environmental Protection Agency (EPA) differ in their indicated goals, so do traditional authorities. Results also identify a divide between local NGOs in the Western Region and their sisters in Accra which share more goals with donor agencies than with local NGOs. It remains to be seen in Chapter 7 to what extent the different agendas translate into competing rather than collaborative behavior in resource exchanges.

Besides transparency and environmental protection, a majority of actors aims to factor in local communities in the Western Region or citizens as a whole, notably in terms of increasing their benefits from the petroleum industry, their education about it, their active participation in it and their empowerment. While this focus re-emphasizes the important role of representation in petroleum governance, the analysis of the survey results show that several ways exist for actors to follow up on these goals: For example, survey respondents barely perceive personal benefits resulting from the oil discovery and they also do not feel 'empowered'. Similarly – and this is a realistic point of entry for several actors –, two-thirds of all interviewees do not feel well informed about the activities taking place in and around their communities. Increasing such information, predominantly via radio as the most popular mean for gathering news, is a feasible goal for all involved stakeholders. Better inclusion could also be achieved in the course of meetings: While most respondents who have participated in oil and gas related meetings are not very much convinced about the usefulness of their participation, such meetings could be used to increase citizens' knowledge about and interest in the developing petroleum sector.

The most important conclusion for realizing the goal of enhancing citizens' engagement is, yet, actors' apparent lack of a clear strategy about *how* to increase it. Breaking it down to a number of possible mechanisms – such as radio programs, meetings, etc. – would be a necessary first step if petroleum actors really want to leave 'development buzz words' behind and include citizens in petroleum governance.

The last section shows that due to their interconnectivity, the 29 actors have the opportunity for extensive collaboration in petroleum governance. Yet, the diversity of relations and goals may evolve problematic if few actors are able to provide resources that are valued by others. Even if the network is highly connected by knowing each other and even if actors can identify like-minded partners, if network alters cannot provide others with desired resources for exchange, such an exchange will not take place. This argument forms the foundation for the following chapter which scrutinizes actors' interactions based on resource exchanges.

## 7 Resource Exchanges in Petroleum Governance

Up to this point, the study looked at actors' relations from the outside: It starts with discussing favorable preconditions for collaboratively steering the petroleum sector including the argument that Ghana's past experiences in mining drive today's petroleum rapprochement. The thesis then argues that the institutional setting and the policy environment implemented in the petroleum sector give actors the opportunity (and legal mandate) to collaborate, even in the institutionalized shape of the Public Interest Accountability Committee (PIAC). Yet, the structural embedding also manifests vast executive powers, dual roles and resulting unclear responsibilities of public institutions (e.g. between GNPC and the MoE), and a lack of funding and knowledge of the latter (e.g., within the LVD).

Besides public institutions, the existence and institutionally embedded role of non-state actors contribute to a diverse network embedding that is coined by high interconnectivity and density. Whilst such interconnected, dense network structures are theoretically favorable for the aim of collaborative steering, the lack of goal prioritization, the absence of a coordinating core and non-existing cohesive subgroups may undermine this aim to a large degree. The fact that actors' self-perception and communities' attitudes in regard to representation on the one hand, and actors' agendas and communities' interests on the other diverge massively, further complicates the picture tremendously.

Analogous to the second box within the network embedding in Figure 3.1 (page 24), the following chapter scrutinizes the third major research questions, i. e., to what extent actors collaborate in petroleum governance through exchanging resources. The discussion follows Blau's (1964; 1968; 1977) definition of exchange as social actions that are contingent on rewarding reactions from others and his differentiation between economic and social exchanges.

The following means of collaboration in petroleum governance are investigated: inviting others to meetings to discuss matters related to oil and gas, exchanging contacts, undertaking joint advocacy activities in the petroleum sector, giving / receiving advice, signing written agreements in regard to oil and gas, and exchanging material resources. Whilst these forms of collaboration are not exclusive, they cover frequent collaborative means indicated by petroleum actors. Moreover, they are a genuine attempt to unravel the content of 'collaboration' in the petroleum sector.

## 7.1 Relating Through Meetings

As discussed in Chapter 6, the diversity of actors in the petroleum sector and their inter-connectivity afford actors with a number of opportunities: Access to diverse and distant resources, inter-sectoral and inter-scale collaboration, and the formation of collaborative subgroups to establish and foster systematic dialogue and trust. Within this embedding, meetings are a popular means to interact in petroleum governance. Actors regularly use meetings to discuss matters related to oil and gas, either in one-by-one meetings, small groups, large conventions, or public forums such as the “National Forum on Oil and Gas” scheduled directly after the oil discovery.

The following three networks give thorough insights into the exchange of meeting invitations by petroleum stakeholders. The first network (Figure 7.1, page 141) investigates how often actors invited each other to discuss matters on oil and gas in 2014 (outgoing ties). The second network (Figure 7.2, page 142) sheds light on the number of times interviewees were invited to such a meeting (incoming ties).<sup>171</sup> The third network (Figure 7.3, page 145) depicts a network with confirmed ties only (i. e., only ties indicated by both sender and addressee) as suggested by Prell (2012: 77).<sup>172</sup>

In the first network, arrows’ direction depicts the flow of meeting invitation and arrows’ thickness indicates the frequency of invitations. Nodes’ color assigns sector affiliation, nodes’ weight out-degree centrality (sending invitations) and nodes’ height in-degree centrality (receiving invitations). The first meeting network consists of one fully connected graph and a fuzzy set of interconnections with 251 arcs among the 29 network alters. The network’s density is moderate with  $D = .485$  which means that 48.50% of all possible ties are present in the network. The network’s centralization reaches, with  $C_{max} = .4418$ ,<sup>173</sup> almost the critical benchmark of  $\geq 0.5$  and indicates a moderate chance to coordinate and synthesize flows of resources.

The Ministry of Energy and Petroleum (MoE) has the highest degree centrality<sup>174</sup> and is therefore best able to coordinate multi-stakeholder meetings in petroleum governance. Contrary to this, the dense network leaves no space for brokering in-between unconnected actors, visible in the very low betweenness centralities of all actors.<sup>175</sup> These low betweenness centralities neglect actors to control the diffusion of meeting invitations or to navigate potential conflicts between disconnected actors.

<sup>171</sup> The questionnaire explicitly asked interviewees to indicate the number of inviting network partners independently of whether they accepted such invitations.

<sup>172</sup> All upcoming graphs are visualized with visone’s stress minimization method. The layout represents graph-theoretic distances (i. e., shortest-path lengths) between nodes as well as possible with more weight placed on representing error with respect to shorter distances than larger ones. Metric MDS layout were first obtained as recommended by visone (Visone Team 2011).

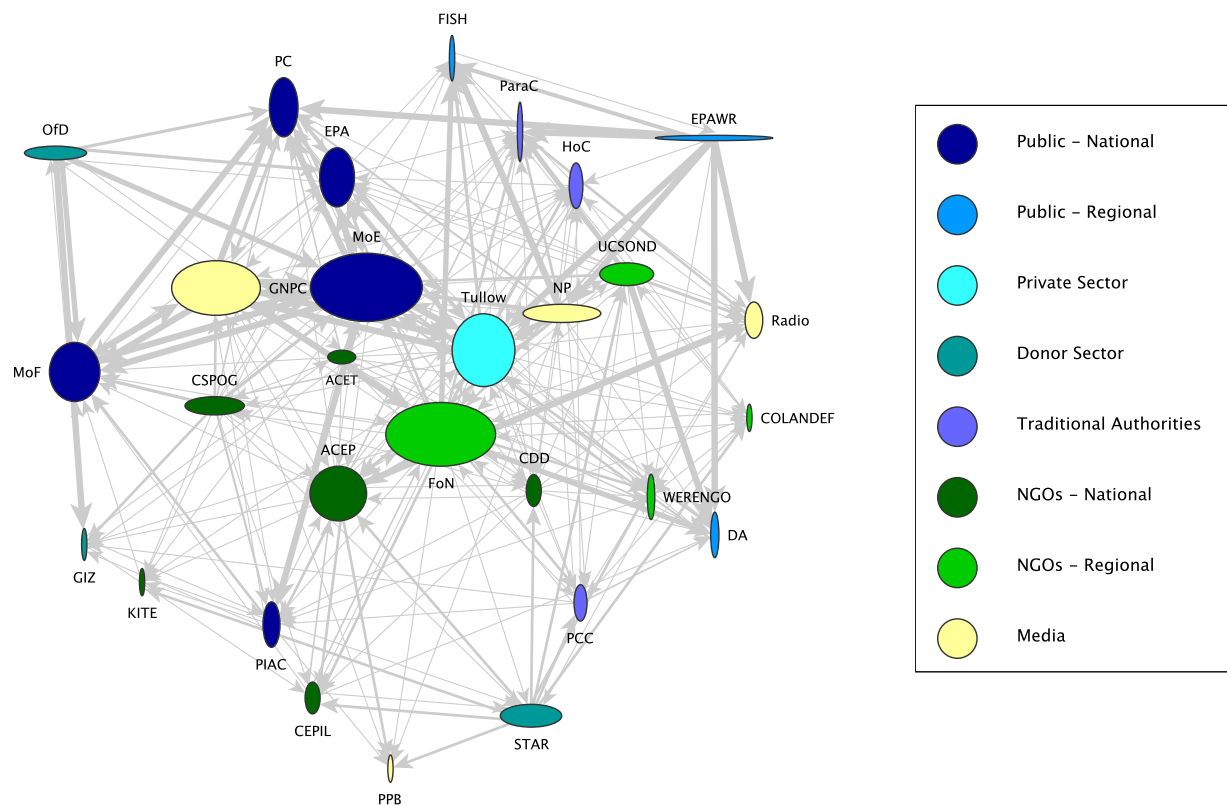
<sup>173</sup> To retrieve the network’s centralization, it was necessary to transform the directed links (edges) into undirected links (arcs). See page 135 for an explanation.

<sup>174</sup> For a definition of actors’ centrality measures see Appendix 2, page 198.

<sup>175</sup> Tullow and FoN have, with  $c_B = .116$  each, the highest standardized betweenness centrality.

Obstructive for natural resource governance is also the low level of reciprocity as reciprocity is said to produce trust and to facilitate control and the monitoring of deviant behavior, for example whether promises made during past meetings are met: From the 251 arcs, only 54 are mutual, whereas 143 ties are asymmetric ( $R = .2741$ ). As the nodes' heights in regard to public institutions on the national level show, all of them (the MoF, the PC, the EPA and the PIAC) have higher in-degree than out-degree centralities, i. e., they receive (much) more ties than they send out. An exemption is the MoE with its ability to coordinate. The same can consistently be observed for traditional authorities: they receive much more invitations than they send out.

Figure 7.1: Relating By Inviting Others to Meeting



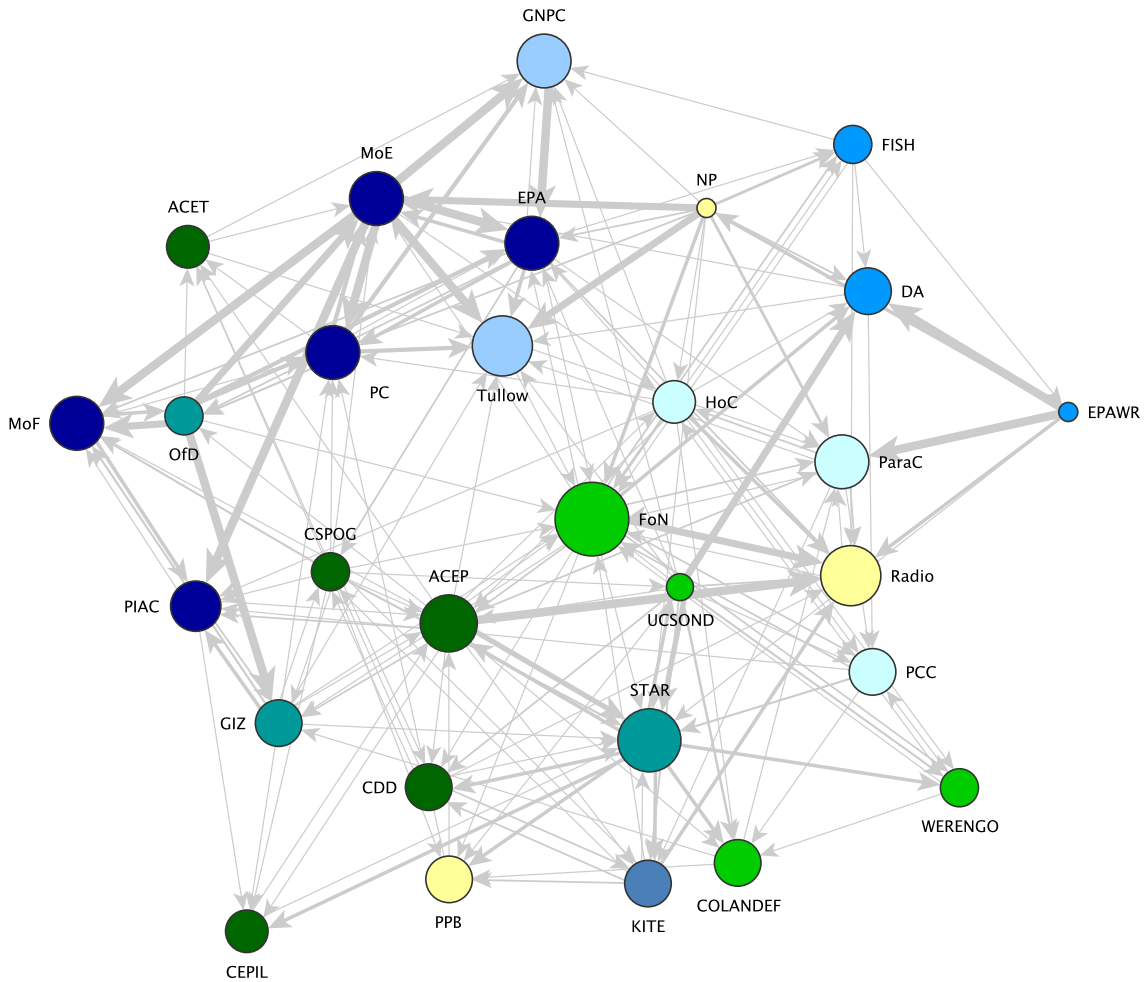
*Source:* Own data visualized with visone's stress minimization method. Arrows' direction depicts flow of meeting invitations and arrows' thickness the frequency of invitations. Nodes' color assigns sector affiliation, nodes' weight indicates out-degree centrality (from  $\min = 0$  to  $\max = 23$ ), i. e., actors' expansiveness in inviting others, and nodes' height indicates in-degree centrality (from  $\min = 1$  to  $\max = 16$ ), i. e., actors' popularity as a meeting partner.

As the nodes' size indicates, FoN expands – with 23 outgoing ties – as most active actor across the network. Contrary to this, two actors – the Paramount Chief and PPB – do not initiate any relation through meetings. But this does not mean that they are inac-

tive: In fact, the Paramount Chief receives 13 meeting invitations and PPB at least six. When it comes to popularity (in-degree centrality) and being connected to well-connected alters (eigenvector centrality), the oil companies together with public authorities on the national level dominate the picture and none of the NGOs scores high. Thus, while NGOs are highly active through expansion, they are excluded from an ‘exclusive circle’ of the most important decision-makers in petroleum governance. As the ties’ strengths indicate, inviting others to meetings is a very frequently used form of exchange. The MoE and the Environmental Protection Agency Western Region (EPA-WR) indicate most frequent meetings with all of their alters.

The difference between expansiveness and popularity becomes more explicit in Figure 7.2 which visualizes the receipt of meeting invitations.

Figure 7.2: Relating By Receiving Invitations to Meetings



Source: Own data visualized with visone’s centrality layout. Arrows’ direction depicts flow of receiving meeting invitations, nodes’ sizes in-degree centrality (from  $\min = 1$  to  $\max = 15$ ), i. e., actors’ popularity, and nodes’ color assigns sector affiliation (see legend Graph 7.1).



The network resulting from being invited to meetings is less dense with 187 arcs but still consists of one fully connected graph. Due to the fewer number of links, the network's density reduces to  $D_{in} = .379$ . While it is argued that less dense networks are more likely to include a central coordination authority, the network's centralization minimizes to  $C_{max} = .3402$ . In consequence, meetings are unlikely to be coordinately planned and initiated as no coordinative actor exists that could navigate and monitor the different flows of invitations. Considering  $R = .2143$ , the chance to built trust due to reciprocated exchanges is also low. The actor that views itself most prominent in receiving meeting invitations is FoN. Contrary to this, public institutions on the regional level and other local NGOs are rather excluded from meetings.

A problem that emerges from a comparative look on both networks is that source and target of an invitation often do not merge: For example, PCC reports in the first network that it never invited WERENGO to a meeting to discuss petroleum matters but in the second network, WERENGO indicates that it was invited by PCC. The same is true for other (alleged) dyads. Generating both outgoing and incoming ties during network interviews allows to crosscheck the flow of invitations in the network. Whilst the resulting network will also not represent the 'true' network structure, taking into consideration the answers of two respondents (back and forth) instead of relying upon single answers increases the likelihood that the indicated exchange actually occurred (and, methodically, the reliability of networks as discussed in Chapter 4.4).

To confirm the flow of sending out and receiving invitations, both valued networks are turned into unvalued networks (i.e., with binary variables) and compared with each other. The procedure results in a correspondence of answer of 33.47%.<sup>176</sup> In the resulting network (Figure 7.3, page 145), ties are only present if both the convener *and* the invitee confirmed the alleged invitation. Table 7.1 summarizes how important network statistics vary between these three networks.

The table clarifies the changes that occur if outgoing and incoming ties are crosschecked with each other. From 251 allegedly issued invitations and 187 received invitations, only 83 invitations overlap. The corrected network therefore is frankly loose ( $D = .1022$ ) and the low centralization ( $C_{max} = .1111$ ) indicates that no actor exists that could efficiently coordinate the network flows. The reciprocity stays more or less stable across all three networks on a low level and triads, which are theoretically argued to be particularly useful for collaboration as they constitute effective subgroups, even reduce to one (consisting of the EPA, the PC and the MoE).<sup>177</sup> Yet, the amount of inviting each other across sector boundaries – visible in the high *EI*-Index (see page 136) – stays stable.

<sup>176</sup> From the 251 alleged invitations in Network 7.1 (page 141), 83 are confirmed by alters in Network 7.2 (page 142), i. e., 33.47%.

<sup>177</sup> Triads are here understood as mutual, positive ties linking three actors together (Prell 2012: 145). This work abstains from differentiating between transitive intransitive or vacuously transitive triads. For a discussion on such differences see Holland and Leinhardt (1971).

Table 7.1: Summary of Collaboration Through Meeting Invitations

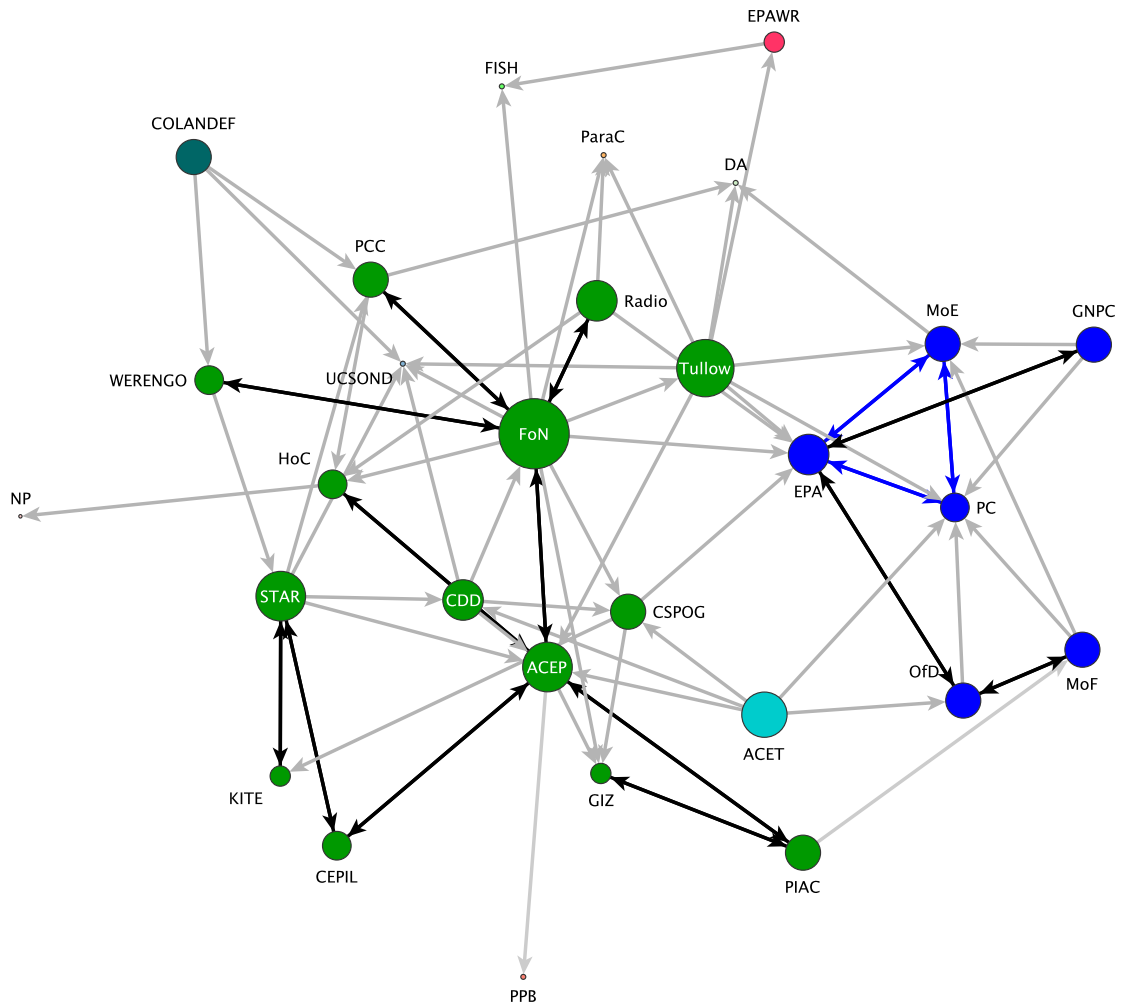
	Outgoing	Incoming	Confirmed Ties Only
Directed	true	true	true
Nodes	29	29	29
Ties	251 arcs	187 arcs	83 arcs
Density	.3091	.2303	.1922
Centralization	.4418	.3402	.1111
Reciprocity	.2741	.2143	.2388
Triads	32	8	1
<i>EI-Index</i>	.8079*	.7926*	.7833*

*Source:* Own data.

Figure 7.3 illustrates the tremendously changed structure of the meeting network with confirmed ties only. Besides the different network measurements, it visualizes two additional details on graph level: Actors' belonging to a so-called 'strong network component' (nodes' color) and reciprocity in relations (black ties). In a *component* all actors are connected to one another by at least one path. A *strong* component recognizes the directionality of ties and considers only reciprocated links for component formation. Strong components are viewed as forming cohesive subgroups that adjust the behavior and values of their members and are said to benefit collaboration (Prell 2012: 151ff). The network entails two big 'strong components', one large green component with 14 actors and a smaller blue with six actors (including the triad).

The blue component strongly supports the previous assessment that even though public institutions *relate* with other actors, they still form a subgroup that is exclusively accessible for the 'big players': the MoF, the MoE, the PC and GNPC. The component also visualizes the importance of ensuring environmental protection for these players through the inclusion of the EPA in this 'elite circle'. As the MoE, the PC, and the EPA form a triad, the network re-clarifies the effort of these three institutions in working together to evade the Nigerian experiences of resource mismanagement, corruption and environmental destruction. With its focus on institutional capacity building, the OfD supports these efforts. Because of the restriction to six nodes, the component actors have the opportunity to effectively coordinate themselves through meetings in which they synchronize goals and interests.

Figure 7.3: Meeting Network (confirmed ties only)



*Source:* Own data visualized with visone's stress minimization method. Arrows' direction depicts flow of meeting invitations, black ties highlight reciprocated invitations, blue ties a triadic structure. Nodes' color indicates strong components, nodes' size out-degree centrality (min = 0, max = 12).

The second green component mixes local with Accra-based NGOs, donors, traditional authorities, and includes Tullow Oil as the most important contractor of the Jubilee Field. With Tullow Friends of the Nation (FoN), the subgroup gets steered by the two most active actors in issuing meeting invitations.<sup>178</sup> With 14 actors, the component is much bigger than the blue component. Both the size and the different agendas (see Figure 6.5, page 128) make coordination in this component more complex. Contrary to

<sup>178</sup> FoN indicates to have invited 23 of the 29 actors (with differing frequencies) to discuss matters on oil and gas in 2014. 12 actors confirmed such an invitation. As only about half of the indicated invitations got confirmed by invitees, it is feasible to assume that the FoN respondent tends to overestimate FoN's involvement in petroleum governance throughout all networks.

the blue component in which actors pursue 13 relatively closely connected goals, actors of the green multi-actor component aim to realize 22 goals which reach from revenue management over corporate social responsibility to citizens' education. The complexity further grows as component members pursue opposing goals such as increasing benefits for the whole country and promoting benefits exclusively for the Western Region.

While, for now, the fact that only 19.22% of all possible ties are present in the network ( $D = .1922$ ) sounds low, inviting others to meetings will emerge as the most important means to collaborate in the following. This result supports the argument that holding meetings is an important form of exchange in petroleum governance that serves at least two distinct goals: To inform a diverse set of actors with the hope that they will broker the information to their subordinates or their own networks; and to satisfy stakeholders' demands of showcasing themselves.<sup>179</sup> Whilst the latter goal emerged as a routinized behavior (see Section 8.1.3, page 170), the first goal has not been reached as the poor information and knowledge level of the survey's respondents show.

Overall, the high interconnectivity among petroleum stakeholders in the general network ( $D = .5788$ , see Table 6.13, page 134) and the 87 confirmed invitations to meetings in the present network, may enable other forms of exchanges as petroleum actors have the necessary social capital to collaborate with each other across sector boundaries. Whether they also make use of this social capital is discussed in the following subsections.

## 7.2 Social Exchanges

The third chapter defines exchange as voluntary social interaction that is contingent on rewarding reactions from others and that ceases when expected returns are not forthcoming. Resources are defined as capabilities – possessions or behavioral skills – that are valued by others and that unfold their potential ('operating force') only in a relation to others who value them. Social exchange refers to two norms rather than an explicit understanding of the 'terms of trade' as in economic exchanges: reciprocity, i. e., the norm to get back to someone who has been beneficial in the past, and fairness.<sup>180</sup> The following section discusses three different forms of social exchanges separately and then uses several network measurements to draw parallels and/or opposites between the three networks. The network measurements are comparable as they refer to same-sized network (i. e., with the same number of nodes).<sup>181</sup> Yet, this step is taken at the expense of valued ties: The corrected networks 'only' include directed, non-valued ties.<sup>182</sup>

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<sup>179</sup> This practice is further discussed as 'eyes service' in Section 8.1, page 165.

<sup>180</sup> As fairness is, yet, subjective and difficult to elaborate empirically with SNA, it is excluded in the following.

<sup>181</sup> For problems of comparing networks with different sizes see Prell (2012: 99ff).

<sup>182</sup> Deriving and validating also valued ties was simply impossible due to time constraints.

### 7.2.1 Keeping the Gate: Contact Exchanges

Exchanging contacts to approach unknown third parties (i.e., actual or potential resources provided by social relations) was identified as a first aspect of social exchanges in the pre-testing phase. Social capital has been discussed as an important source of influence in the context of scarce tangible resources. Furthermore, providing others with a requested contact can increase the recognition as a reliable and helpful collaboration partner. Most importantly, such exchanges are able to boost the likelihood of triad formation which are theoretically defined as a productive space for collaboration through increased trust and better ways of intra-group control and norm compliance.

In order to scrutinize whether petroleum actors collaborate by exchanging contacts, interviewees indicated the number of times they received a contact from their alters, related to oil and gas, in the year 2014. To validate these answers, the subsequent questionnaire item requested each respondent to replicate the number of times they provided others with contacts. The first question leads to 131 ties while the second reveals 118 ties.

Figure 7.4 visualizes the 38 confirmed links among 22 actors, retrieving a correspondence of answering behavior of 29.07%. Contrary to the general network and the meeting networks, we find seven isolates.<sup>183</sup> The set of isolates is intermixed with the MoF, PIAC and the DA as public institutions, the GNPC as an oil company, KITE and UCSOND as NGOs, and the Western Region House of Chiefs (WR-HoC).

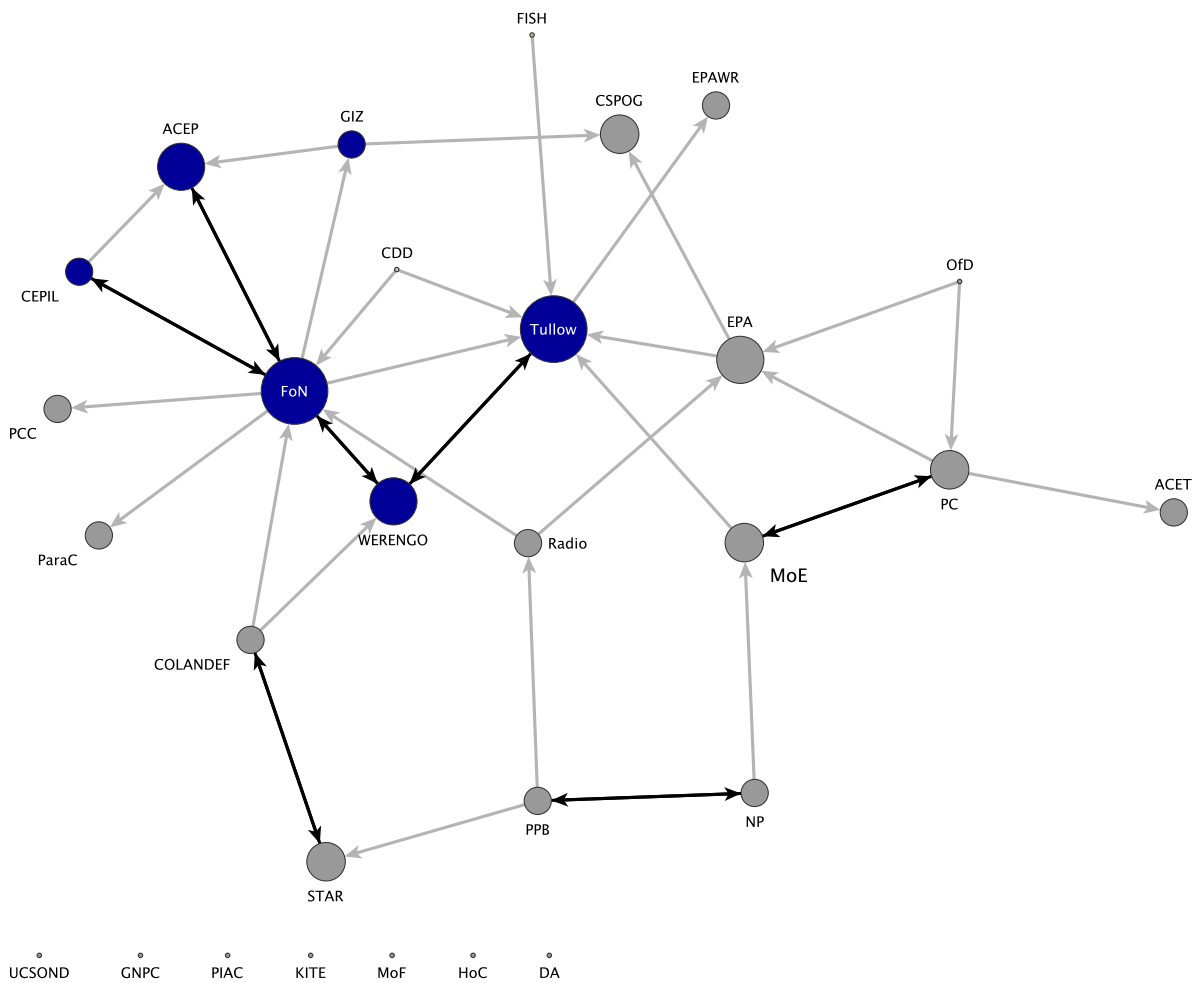
In this network, nodes' size shows the number of times an actor was asked to broker between two disconnected actors by providing the necessary contact (in-degree centrality). With six incoming ties each, Tullow and FoN are most central in providing contacts. Hereby, FoN seeks out for contacts with the same amount of outgoing ties and, thus, demands reciprocity from its alters.

Together with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and three NGOs, Tullow and FoN form a strong network component.<sup>184</sup> This component is interesting from several points of view: On the one hand, it unites the four most popular actors when it comes to sharing social capital. On the other hand, it relates NGOs on the local level (FoN and WERENGO) with NGOs on the national level (ACEP and CEPIL) as well as actors from the private and donor sector. Thirdly, these actors constitute a subgroup of the strong component in the meeting network (Figure 7.3, page 145). While 14 actors composed the strong component in the meeting network, the present component reduces to a more efficient number of six. However, the component does not include any triadic structure that could further boost trust and compliance. Qualitatively assessed, the component members are those actors most engaged and visible in interactions.

<sup>183</sup> Whilst all of the isolates indicated a request and / or provision of contacts by / of others, the respective alters did not confirm this action.

<sup>184</sup> Additionally, three components with two actors each exist: COLANDEF and STAR-Ghana, PPB and the newspaper, as well as the MoE and the PC. For the sake of clarity, they were not colored separately.

Figure 7.4: Gatekeeping Network (confirmed ties only)



*Source:* Own data visualized with visone's stress minimization method. Arrows' direction depicts flow of gatekeeping. Black ties highlight reciprocated exchanges of contacts. Nodes' size depicts in-degree centrality and nodes' color the affiliation with strong components.

Overall, the petroleum actors exchange contacts only to a limited degree and barely use it to collaborate with each other. Although all network actors exhibit considerable or even high social capital (see Figure 6.1, page 96), they provide it in only 38 'confirmed' occasions. The few links translate into a low density of  $D = .079$ . Of the 38 links, seven are reciprocal and 24 asymmetric. The relatively balanced ratio of edges' concentration keeps the network's centralization low with  $C_{max} = .0966$ . When they need to get in touch with someone they have not been in contact before, the most promising actors are the local NGO FoN – which more and more emerges as a strong exception of simply being 'a local NGO' – and Tullow Oil, the most important Jubilee Partner in Ghana's developing

petroleum sector.

### 7.2.2 Advocacy: Acoustic Cotton Candy

The idea of scrutinizing potential collaboration through advocacy activities emerged during the time in the field. Observing the interactions and dialogues among various stakeholders (beyond the ones represented here) necessitated to investigate to what extent actors actually team up for advocacy and to what extent it only remains ‘acoustic cotton candy’. It was also hoped to get a better understanding of what advocacy actually *means* in Ghana’s petroleum sector: In this regard, while discussions about how to define it remain blurry during interviews, stakeholders’ diverse perceptions intersect in the goal of ‘speaking with the voice of the oil-affected people’.

Inquiring whether others want to participate in advocacy activities results in 124 arcs and the same number of relations exists in being asked to join an advocacy activity by others. Figure 7.5 illustrates the confirmed network. The corrected advocacy network consists of one large graph with 41 arcs (of which eleven are reciprocated) and nine isolates.<sup>185</sup> Accordingly, 33.06% of the original number of links are confirmed if checked with both sender and addressee of a tie.

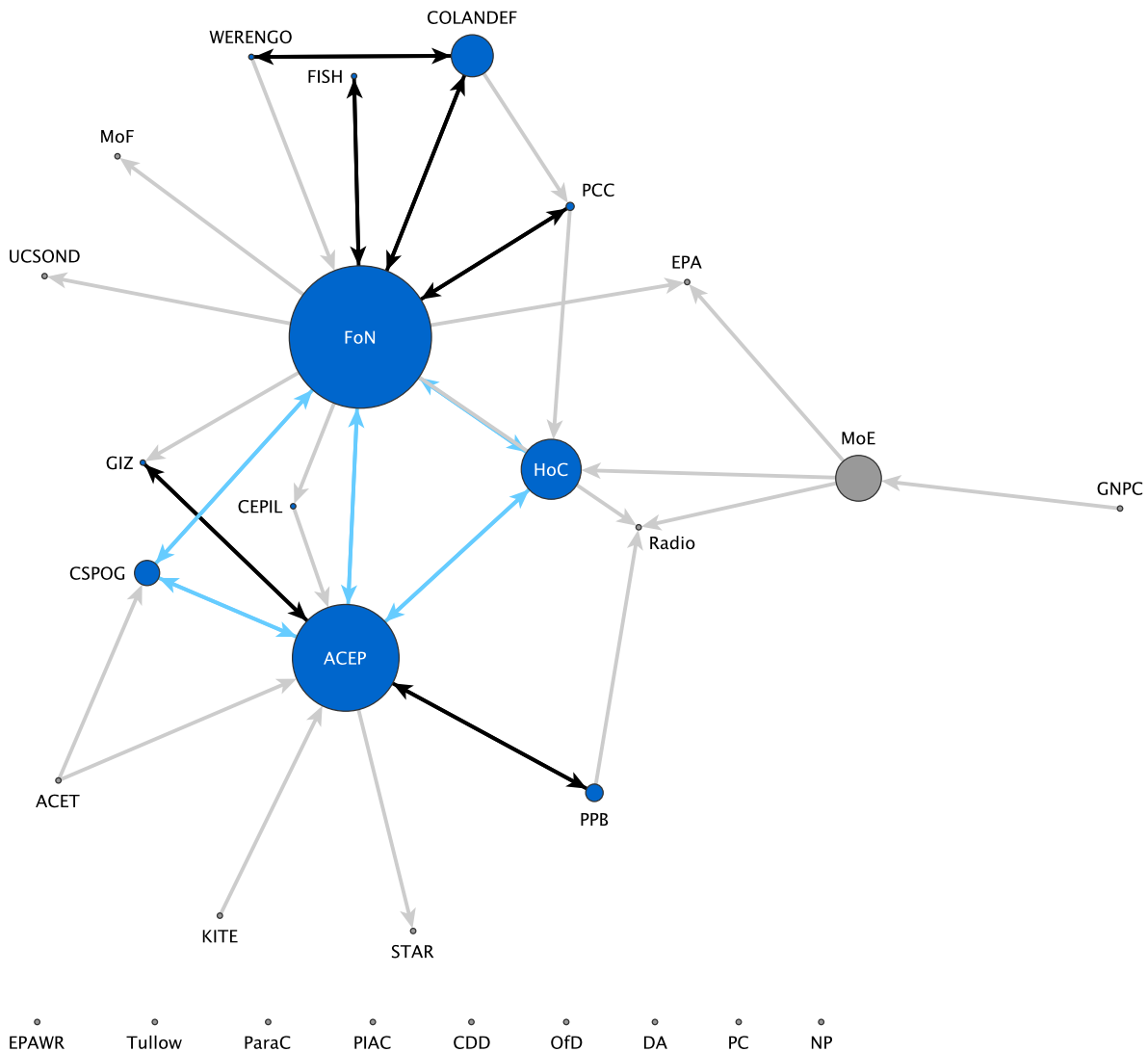
The density remains, again, low with  $D = .0704$  but due to the centrality of FoN and ACEP, the network’s centralization increases ( $C_{max} = .2010$ ) and give both actors the possibility of coordinating advocacy activities at least a bit. While the figure only depicts actors’ betweenness centrality – and shows that FoN, ACEP, and the WR-HoC are the most central actors –, the same actors top all others also in regard to in-degree centrality and degree centrality.<sup>186</sup> Additionally, it was so far only assumed that these actors are most central when it comes to advocacy activities but network measurements bring proof. Indeed, it seems that if actors want to initiate advocacy activities, there is no getting around ACEP and, more importantly, FoN.

FoN and ACEP are also part of two triads which helps them to increase control over advocacy in petroleum governance. The third actor is the WR-HoC in the first triad and the Civil Society Platform on Oil and Gas (CSPOG) in the second triad. But as the different centrality measurements indicate, the strength of FoN and ACEP marginalizes particularly the CSPOG in its effort to establish itself as an independent entity. This re-emphasizes the problem that even though NGOs value the potential benefits of forming coalitions, in the context of scarce resources and high self-esteem the (founding) members of such coalitions still act as autonomous entities.

<sup>185</sup> Three of the seven isolates indicated during the interview that they “do not do advocacy”: the PC, OfD and the newspaper reporter. PIAC and the paramount chief are – as in the previous network – isolated from all other nodes which may suggest potential flaws in the respondents’ answering behavior.

<sup>186</sup> In regard to out-degree centrality, the MoE follows FoN and ACEP as most central actors before the WR-HoC.

Figure 7.5: Advocacy Network (confirmed ties only)



Source: Own data visualized with visone’s stress minimization method. Arrows’ direction depicts flow of advocacy, black ties shows reciprocated advocacy initiatives, blue ties indicate a triadic structure. Nodes’ size depicts actors’ betweenness centrality.

These results confirm what Vormawor and Atuguba (2014: 62) call “no culture of corporate philanthropy” and what Section 6.1 discussed in regard to the challenges of coalition formation in petroleum governance. And as the marginal betweenness centralities of other coalition actors such as WERENGO (the coalition of civil society groups based in the Western Region) or PCC (the coalition of Paramountcies of the eleven coastal districts in the Western Region) show, this marginalization is not a singular problem to the



CSPOG: All of these initiatives – founded to merge individual talents, to pool resources and to represent ‘one voice’ – (so far) do not work out.

### 7.2.3 Advice: Obstacles to Aggregating Human Capital

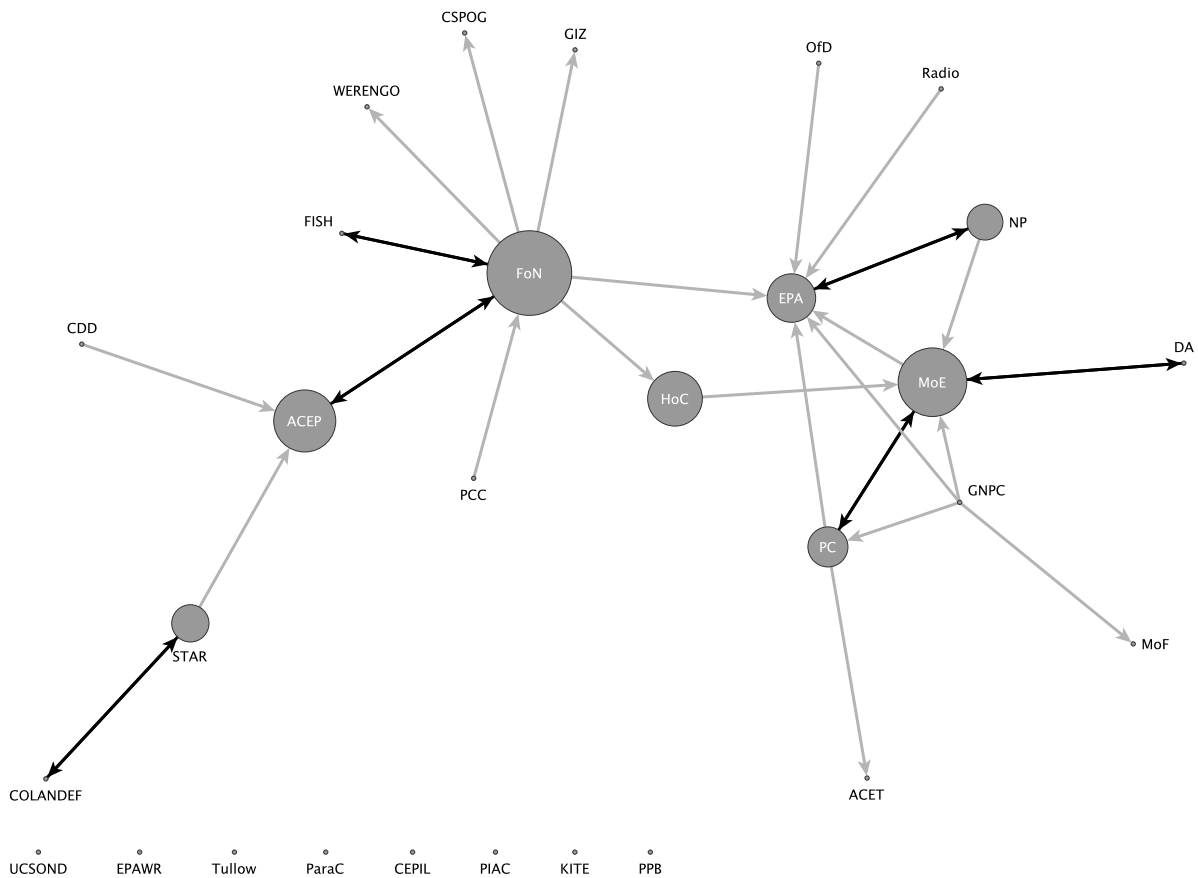
In the context of scarce financial resources, diverse agendas (see Figure 6.5, page 128) and distrusts induced by non-reciprocated or failed economic exchanges in the past, the exchange of advice can perform several tasks. On the one hand, if tangible resources are not available or not expedient, intangible resources through social exchanges can build trust and productive alliances in a dyadic, triadic or larger structure. On the other hand, advising each other can form the basis for future collaboration. Through exchanging advice, actors can appropriate each other – even in the case of divergent or contradicting interests –, or, at least, make their intentions clear to foster predictability of their behavior. Finally, exchanging advice is imperative considering the short time of petroleum extraction in Ghana and the complexity of governing natural resources as discussed in Section 2.1 (page 9). Whilst differing in their contents, all these factors have the potential to promote collaboration in petroleum governance.

To find out whether petroleum stakeholders exchange advice, the network questionnaire prompted respondents to indicate whom of their partners they asked for advice in regard to oil and gas in the year 2014. Subsequently, and in order to validate the retrieved information, interviewees memorized how often they were asked for advice by each of their oil and gas contacts. As in the other networks, the singular networks (‘handing out advice’, ‘receiving advice’) vary tremendously from the network that reviews answers. Whereas the original networks consist of 101 arcs in handing out advice and even 126 arcs in receiving advice, the revised network is much more lucid with 31 arcs. Figure 7.6 visualizes the network.

The network comprises one large graph and eight isolates.<sup>187</sup> With  $D = .038$ , the network’s density is very low: Of all possible ties among network actors, only 3.8% are used to collaborate through exchanging advice. This low density suggests a very limited spread of advice and drives the argument that actors barely make use of their social capital to foster their human capital. Of the 31 arcs present in the network, six arcs are reciprocated, resulting in a reciprocity measure of  $R = .24$ . If reciprocity leads to trust, trust is unlikely to form on the basis of advice exchanges in petroleum governance. Moreover, the very low centralization ( $C_{max} = .06$ ) indicates challenges in solving simple tasks although the high reachability gives actors the opportunity to access distant resources. Furthermore, there are no triads that could boost the formation of trust.

<sup>187</sup> While these isolates indicated to have handed out advice and receive it, the targets / senders of such advices did not reciprocate.

Figure 7.6: Advice Network (confirmed ties only)



*Source:* Own data visualized with visone's stress minimization method. Arrows' direction depicts flow of advice, black ties show reciprocated advices. Nodes' size depicts actors' betweenness centrality.

Hence, even though actors have diverse sets of knowledge and are highly interconnected with each other, (new) information and explanations barely diffuse through advices in the petroleum sector. While this is at least disadvantageous for petroleum governance, the low level of advice exchanges might explain the various knowledge gaps that have manifested themselves particularly among less powerful actors. Such knowledge gaps appeared, for example, during the 'Gas Flaring Education and Awareness Engagement' for both traditional authorities and local NGOs (see Table 4.1, page 46). The need to flare gas caught massive attention and anger among non-state actors as the Jubilee Partners committed to a no-flaring policy before oil production started in 2010. Even though Tullow Oil explained the reasons for the flaring in detail and emphasized the third-party responsibility,<sup>188</sup> a great number of NGOs continued their agenda of "making

<sup>188</sup> Building the gas infrastructure necessary to transport gas from the Jubilee Field onshore lies in the

noise” (personal conversation) rather than being open to the information disseminated. Besides limited resources to inform themselves, a proactive attitude towards absorbing necessary information often lacks, even though they could make use of the diverse links they possess, for example to Tullow Oil.<sup>189</sup> Hence, although all stakeholders seem to be aware of the fact that they have different knowledge, different channels to communicate this knowledge and, thus, could benefit from learning from each other, advice is rarely used for collaboration.

On actors level, the EPA is the most prominent actor with the largest in-degree centrality and was asked to give advice seven times. The MoE, ACEP and FoN follow, but only with three times each. Contrary to this, important petroleum actors by law, for example the PC or the MoF, are not central in advice exchanges. Similarly, Tullow Oil is isolated as none of its indicated outgoing and incoming ties were confirmed by the respective targets. This is surprising as Tullow actively invites others to ask for advice or information about oil and gas. The most active actor in the network is – again – the local NGO Friends of the Nation (FoN) which indicates to have reached out for advice 14 times, reduced to seven after the validation with the respective addressees’ answers. The NGO also has the highest closeness centrality ( $c_C = .19$ ) and highest betweenness centrality ( $c_B = .089$ ). FoN is only defeated when it comes to having influential advice partners as it predominantly seeks advice from non-central actors. Here, the EPA stands out by exchanging advice with important actors as does the MoE. On the ‘meso level’ (between graph and actors level), the advice network falls apart into two groups: NGOs on the left and public institutions on the right side. This result is further discussed in Section 8.1.2, “*Othering*” (page 168).

### 7.3 Economic Exchanges: Written Agreements and Resource Sharing

Contrary to social exchange, economic exchange is understood to ground in an explicit agreement about the ‘terms of trade’, negotiated before the exchange takes place. Economic exchanges are therefore conceptually characterized by clarity and – as clarity reduces the necessity of trust – they are argued to be most likely among actors who have not exchanged resources in the past.

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responsibility of Ghana Gas / the Ghanaian state as the sole owner of gas resources. As they failed to finish the gas pipeline on time, the Jubilee Partners were forced to flare gas to stabilize the oil fields. See Meeting Transcript IV for further information.

<sup>189</sup> Another characteristic common to such meetings is the fact that during the three-days information meeting neither Ghana Gas (as the contractor) nor the Petroleum Commission (as regulator) or representatives of the Ministry of Energy (as the owner of Ghana Gas) were present. The Jubilee Partners, notably Tullow Oil, took the responsibility to inform the other stakeholders about consequences of gas flaring *even though* the gas resources are solely owned by the Ghanaian state. See Meeting Transcript IV for further information.

To investigate economic exchanges in petroleum governance in Ghana, the network interview includes two questions: On the one hand, interviewees indicate those actors with which they “officially worked together”, based on a memorandum of understanding or contract (i. e., a written agreement about the terms of trade).<sup>190</sup> On the other hand, they enumerated the number of times they formally handed out tangible resources (money, staff, or office space) to each of their contacts and the number of times they received such resources for activities in the petroleum sector from others.

The following two sections discuss the resulting network relations. They start with some general remarks before focussing on important characteristics of each network. Again, the discussion investigates ‘confirmed’ interactions and only refers to the ‘original’ networks (incoming vs. outgoing ties) for background information. This step is necessary for a purposeful analysis and for an increased reliability of statistics. It is also caused by the deviation in the previous network and due to the lack of space.

### 7.3.1 Lack of Clarity in Agreements

The first network of economic exchanges support one major argument of this thesis: That actors only *relate* rather than *collaborate* with each other. Figure 7.7 visualizes this argument based on relations in written agreements. The network is fragmented in three subgraphs, one dyad and eight isolates. The density of  $D = .047$  shows that only 4.7% of all possible relations rest upon agreements which clarify rights and obligations of a partnership and which ensure predictability of expectations and responsibilities

The biggest subgraph is composed of several national and local NGOs that cluster around the funding organization “Strengthening Transparency, Accountability and Responsiveness in Ghana (STAR-Ghana)” in a star graph. The graph exemplifies the order of STAR-Ghana to coordinate funding to NGOs in the petroleum sector. Due to the location in the middle of the graph, STAR-Ghana has – with  $c_D = 18$ <sup>191</sup> the highest degree centrality.<sup>192</sup>

STAR-Ghana’s high degree centrality, the inclusion of the GIZ in this subgraph and the observation that only two NGOs (KITE and ACEP) uniformly indicate a joint agreement, precipitate two important arguments: Firstly, it suggests that NGOs only enter written agreements to gain funding and not to establish the exchange of other tangible or intangible resources on such agreements. Either, they trust each other enough in the obligation to reciprocate, they do not see the necessity to settle collaboration on agreements or they are not able to reach such agreements.

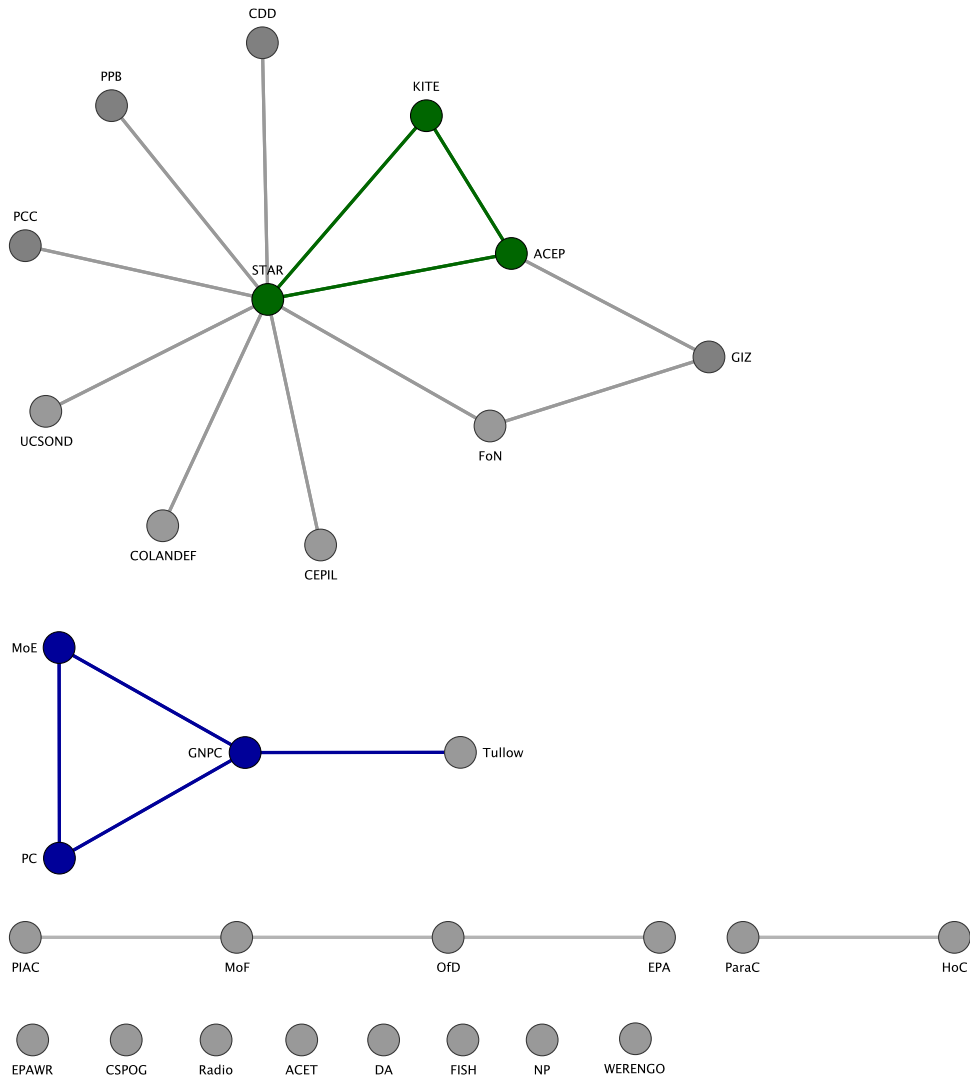
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<sup>190</sup> ‘Informal’ was defined as closed and invisible rather than open and transparent in Chapter 3.

<sup>191</sup> These are 22.5% of all ties.

<sup>192</sup> As the graph is undirected, out- and in-degree centrality are not calculated.

Figure 7.7: Written Agreements (confirmed ties only)



Source: Own data visualized with visone’s stress minimization method. The links are undirected as written agreements, by definition, are reciprocal. Similar colored nodes and ties indicate a triadic structure. The extent of space between subgraphs is randomly generated.

Secondly, NGOs do not view their membership in intrasectoral, pooled organizations (here, WERENGO and the CSPOG) as a form of formal agreement. This implication is drawn from the *lacking* ties between NGOs: As the graph shows, both WERENGO and the CSPOG – two organizations that were founded with the purpose of merging civil society interests and that predefine an official membership structure including membership fees – are isolates in the network, even though all NGOs are members of one or the other coalition (or even both). The same interpretation occurs in regard to PCC as the merger of traditional authorities and the Paramount Chief. A purely institutional analysis based on desktop studies would have resulted in links between PCC, the Paramount Chief (who’s

a member of PCC) and the Western Region House of Chiefs (WR-HoC). Yet, the network analysis contradict such a result.

Combined with the assessment in the previous chapter, it is suggested that due to internal weaknesses, these merged organizations are not rewarding enough for members to indicate them as economic exchange. This lacking sense of belonging perpetuates the failure to lift these multi-actor initiatives on an institutionalized, self-funded level and to put them in an effective stage for acting and interacting.

The second network subgraph is composed of the ‘big players’: the MoE as the oversight body of all petroleum activities, the PC as the sole regulator of the industry, GNPC as the national oil company and – connected through the GNPC – Tullow Oil. This is natural insofar as their relations are formalized in the petroleum policies discussed in Section 5.3.2 (page 89). As shown in the meeting network, the organizations form again an ‘elite circle’ of important decision-makers and exclude non-state actors. An interviewee, representing one of the smaller NGOs, confirms the problem of pinning down the ‘big players’ to sign written agreements:

“What happened with them was: At the stadium of discussions, they suggest to us that they needed to do consultations with their boards. Because for them signing the memorandum of understanding – even though we had indicated earlier that the memorandum of understanding was not necessarily legally binding – they still felt that signing the memorandum means that they have committed themselves. So they needed clearance of their respective boards [...] and that is still pending (Transcript VIII, page 4)”.

The two remaining subgraphs depict a formal agreement between the Norwegian OfD, the EPA and the MoF – visualizing the institutional capacity building programs of the OfD (see Table 6.1, page 99) – and the membership of the Paramount Chief in the WR-HoC.

The observation of non-reciprocation of ties reoccurs in this network. While the ‘original’ network retrieves 99 ties, we only find 20 agreements that are confirmed by both sender and addressee of a tie. This is particularly challenging for an economic exchange that inherently builds upon reciprocity. It implies either inaccuracies in answering behavior or different understandings about what constitutes a ‘formal agreement’ by interviewees – even though the question was limited to memorandums of understanding or contracts. It follows that even though economic exchanges are theoretically characterized by clarity about the ‘terms of trade’, this clarity lacks among petroleum actors in Ghana. One step further, it could suggest that it is not clarity that is missing but that rewards are not forthcoming, which causes a number of actors to forget about or choose to deny written agreements with others.

Overall, the first form of economic exchange remains low and is limited around those actors that can provide financial resources. Whilst this is a self-explanatory cause, the

normative discourses about merging capacities and collaboratively steering petroleum resources and revenues draw a picture that clearly goes beyond financial resources. Considering the high interconnectivity and the proclaimed goal of all actors to collaboratively govern the sector, raising interactions to a written level is either not a favorable or a feasible option for the majority of actors.

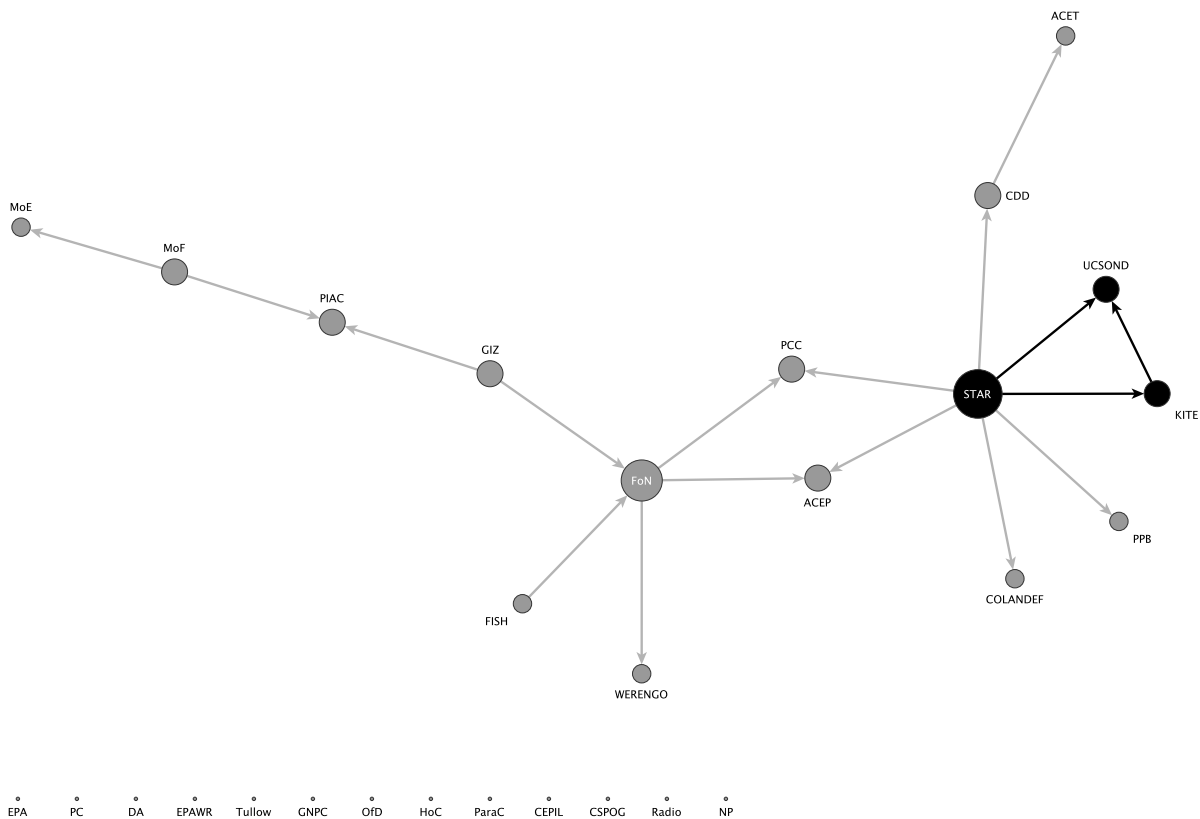
### 7.3.2 Unilateral Transfers in Tangible Resource Exchanges

In order to investigate potential collaboration through the exchange of tangible resources, respondents reported about the frequency of handing out and receiving such resources from their partners in regard to oil and gas activities. In order to take local circumstances into consideration, the term ‘tangible resources’ comprises financial resources as well as staff or office space.<sup>193</sup>

The network in Figure 7.8 depicts directed, non-valued, confirmed ties: For example, the interviewee of the MoF indicates that the MoF provided tangible resources to the PIAC *and* the PIAC representative confirms that PIAC received resources from the MoF. The high number of isolates (13 actors) vividly depicts the deviation of respondents’ answering behavior about handing out and receiving resources. Compared to the interconnectivity of the original networks ( $D_{out} = .187$ ,  $D_{in} = .135$ ), the revised network scatters with a very low density ( $D_{cc} = .042$ ). From the 17 existing ties, no relation is mutual and neither triads nor strong components exist. The network is only connected through two nodes (PCC and ACEP) which receive resources but do not hand out any material to other petroleum actors.

The figure highlights the central role of STAR-Ghana in economic exchanges and manifests its successful role of providing NGOs with funds for development-related projects in the petroleum sector. FoN is insofar interesting as its representative indicated a high expansiveness of his organization in terms of handing out resources (in the ‘original’ network the interviewee indicated 14 outgoing ties) but as the present network shows, only three organizations – WERENGO, PCC and ACEP – confirm the receipt. The same is apparent to the Accra-based NGO ACET: none of the indicated beneficiaries confirm the receipt of resources and, consequently, the node is isolated at the network’s boundary. Again, public institutions on the national level do not exchange with Ghanaian non-state actors and are only connected via the GIZ. Another similarity to the preceding networks is the exclusion of public institutions on the regional level.

<sup>193</sup> Such tangible exchanges are frequently in use, for example in the form of local NGOs in the Western Region ‘handing out’ their staff to conduct work for an NGO based in Accra. Just as frequently, smaller NGOs use the office space of larger ones.

Figure 7.8: **Tangible Resource Exchanges (confirmed ties only)**

*Source:* Own data visualized with visone's stress minimization method. Nodes' size depicts degree centrality, i. e., an actors overall involvement. Ties' direction indicates the source and target (with arrowhead) of tangible resources.

Overall, the network of exchanging tangible resources is characterized by unilateral (asymmetric) resource transfers rather than reciprocated exchanges. As *none* of the 17 ties is reciprocated, the network's reciprocity is 0. The very low density ( $D = .042$ ) is disadvantageous for natural resource governance as resources are able to spread in a very limited way. The longest shortest path (diameter) between two nodes is 8, indicating that all nodes are relatively far away from each other. Together, these two statistics suggest a low cohesion: Particularly if STAR-Ghana dropped out as resource provider, the network would implode.

Comparing both observed forms of economic 'exchanges'<sup>194</sup> – written agreements and material resource sharing – leads to a number of overlapping patterns, particularly in regard to the outgoing ties of the donor organization STAR-Ghana.<sup>195</sup> This result emphasizes the previously stated argument that economic exchanges in Ghana's petroleum

<sup>194</sup> Due to lacking reciprocity, it is better to use the term 'transfers'.

<sup>195</sup> Only two actors from the formal agreement network – FoN and CEPIL – are missing in the cross-checked resource sharing network.



sector build only on exchanging financial resources. At the same time, the SNA results barely confirm the theoretical assumption that economic exchanges mainly occur between actors who have not exchanged in the past. Even though STAR-Ghana was only formed in 2010 and, thus, is a comparably young actor with which others have not exchanged in the past, it seems more appropriate to trace the economic exchanges back to financial resources and not the clarity about the terms of exchange.

Compared to the qualitative assessments in the field where actors recurrently emphasized their strong collaboration based on resource exchanges, the network results draw a completely different picture. The amount of tangible resource transfers are very limited with only 4.2% of potential channels used to transfer and/or exchange material resources – even though the question explicitly included non-financial resources considering the poor financial situation of most petroleum actors. While the meeting network was still quite dense, the number of ties and, consequently, networks' densities gradually declined in the following means of collaborating. The following section summarizes the amount of collaboration through exchanges with a comparative look on all networks.

## 7.4 Summary: Collaboration Through Exchanges?

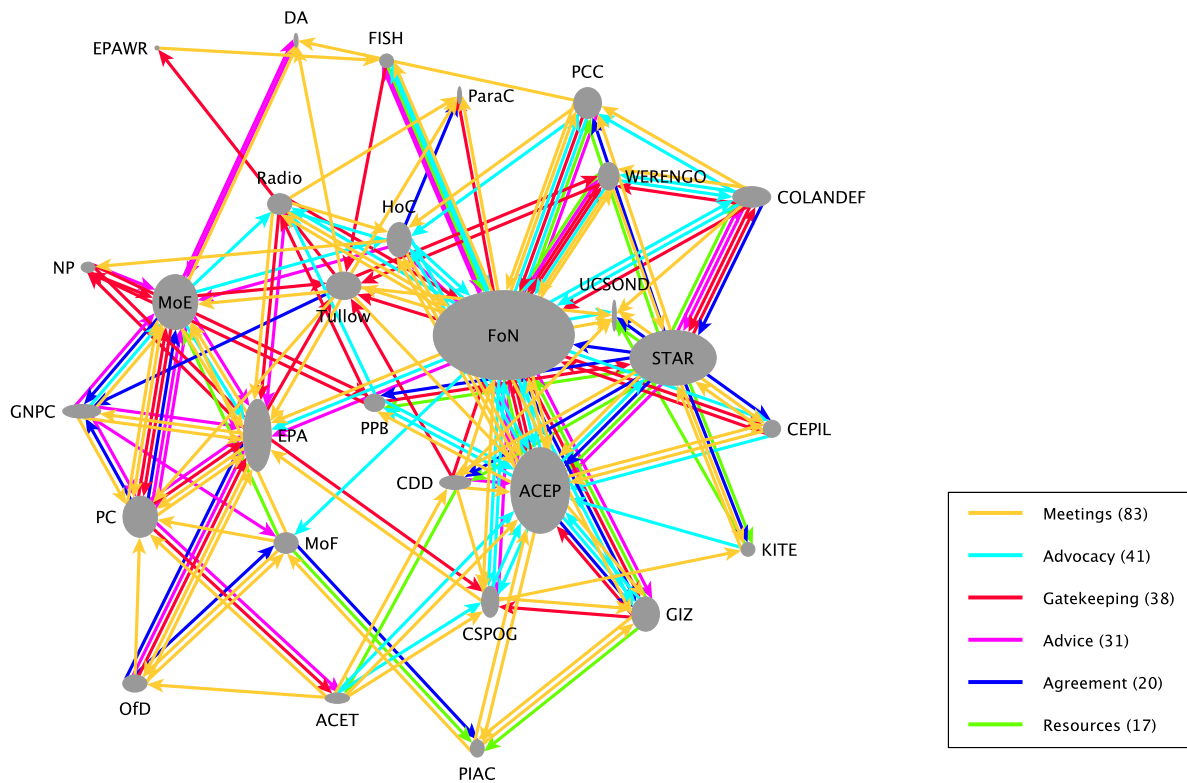
Overall, the goal of regular interactions between different sectors is realized in Ghana. Across all networks, actors relate with each other irrespective of sectors' boundaries. The network concept of homophily – “birds of a feather, stick together” – cannot be confirmed according to the present data.<sup>196</sup> The question remaining is how effective they exchange in terms of their proclaimed goal to steer natural resource governance collaboratively. A conclusive argument suggests that interactions among stakeholders in petroleum governance have to be understood as *relating* rather than *collaborating*.

To understand this central argument, the chapter's last section summarizes the previous results and sets them in relation with qualitative data gained by observations and qualitative interviews. The discussion first compares the number of links, then discusses the role of reciprocity and cohesive subgroups, and ends with three important network measurements (density, centralization, and reachability). Table 7.2 (page 161) provides an overview of these measurements across the different networks while Figure 7.9 (page 160) visualizes the multiplex relations among network alters.

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<sup>196</sup> The E-I Index is nearly one in all networks.

Figure 7.9: Means of Collaboration (confirmed ties only)



*Source:* Own data visualized with visone's stress minization method. Arrows' direction depicts flow of resource exchanges (except for agreements as reciprocal exchange by definition). Arrows' color visualizes means of collaboration. Nodes' weight indicates out-degree centrality (from  $\min = 0$  to  $\max = 40$ ), i. e., actors' expansiveness in collaboration. Nodes' height shows in-degree centrality (from  $\min = 1$  to  $\max = 25$ ), i. e., actors' popularity in collaboration.

The meeting network entails the highest quantity of links (83), followed by advocacy-related interactions (41 links), gatekeeping activities (38 links), advice exchanges (31 links), written agreements (20), and flows of tangible resources (17 links). The frequent scheduling of meetings to discuss matters on oil and gas was a striking experience during field research. Almost no week went by without such a meeting. Scheduling meetings provides the opportunity to disseminate information, to literally 'network' and to *relate* to each other. But collaboration goes beyond relating. This means that none of the meetings attended culminated in sincere collaborative efforts on which participating stakeholders jointly agreed. Rather, the meetings were used to stage claims and to accuse each other of failures or mismanagement (see Section 8.1, page 165).

The survey's results question the success of these meetings in regard to brokering information to local communities as well. The vast majority of survey's respondents (74.77%,  $n = 249$ ) do not feel informed 'at all' or only 'little' about the activities taking place

in their immediate living environment. And if affected communities access information, they use radio or personal contacts rather than seeking contact with petroleum actors. Therefore, the use of meetings to accelerate collaboration among actors seems very limited even though it is the most frequently means of actors to ‘collaborate’.

Table 7.2: Comparison of Means of Collaboration

	Links	Isolates	Dyads	Triads	D	C	Dm	ASP
<i>Contact</i>	470	0	167	334	.746	.3638	3	1.43
<i>Meeting</i>	83	0	16	1	.165	.1111	5	17.218
<i>Advocacy</i>	41	9	11	2	.070	.2010	4	9.289
<i>Gatekeeping</i>	38	0	7	0	.079	.0966	5	52.9
<i>Advice</i>	31	0	6	0	.062	.0606	7	62.83
<i>Agreem.</i>	20	7	20	2	.049	.2938	3	2.236
<i>Resources</i>	17	3	0	0	.042	.	8	.

*Source:* Own data retrieved from network data.  $N$  (number of nodes) = 29.  $D$  = networks’ density,  $C$  = networks’ centralization,  $Dm$  = Diameter,  $ASP$  = Average Shortest Path indicating cohesion.

In contrast, advocacy as a means to collaborate plays a strong role: The network’s structure confirms the central role of FoN, ACEP and the WR-HoC as the single most important players. To the contrary, new organizations like the CSPOG and PCC – both founded with the purpose of challenging public authorities in petroleum governance – remain in the shadow of these organizations. The advocacy interactions further divide the network into Accra-based and Western Region-based organizations along questions of redistributive matters (see Figure 7.5). This remark supports the argument that national actors focus on the country level while regional actors strive for benefits exclusively in the Western Region (see Figure 6.4). On the other hand, it supports the argument that civil society actors compete rather than collaborate with each other.

Contrary to the two previous networks, the gatekeeping network is more dense due to the absence of isolates: Each actor has received or distributed a contact related to oil and gas. It is also the only network in which the CSPOG and WERENGO stand out a little bit. Gatekeeping mainly takes place among those actors who share advocacy activities and, consequently, tends to diverge between state and non-state actors.

Advice is barely used as a means to collaborate in the petroleum sector. Due to scarce resources and the complexity arising from the ‘wickedness’ of natural resources, advice is yet argued to be particularly fruitful for understanding opposing agendas, for building trust particularly among those actors who do not share the same goals and, hence, for the chance to collaborate. Another serious challenge is the fact that even though one large

component exists, the network (see Figure 7.6) divides into two parts: NGOs on the left side and public institutions, oil companies and media representatives on the right side. Combined with results from the advocacy network, this not only means that NGOs only share advice within their sector but they share advice only with those alters with whom they engage in joint advocacy activities (or vice versa). They barely ask for advice from those actors who are highly respected for their expertise in petroleum governance. This lack of engagement could be the reason for the false rumors buzzing around the petroleum sector and are repeatedly resumed by NGOs.

Written agreements are a relatively scarce form of exchange among petroleum actors as well. Only 20 agreements exist of which nine are with STAR-Ghana, two with the German GIZ and two with the Norwegian OfD program. Hence, 13 agreements (65%) are unilateral transfers of financial resources by international donors. Topped with the agreement between PIAC's funding by the MoF, such financial transfers make up for 70% of economic exchanges. The remaining dyads are contract relations among central public authorities that manage the petroleum sector as well as one dyad between the interviewed Paramount Chief and the WR-HoC. It came by surprise that none of the members of multi-actor initiatives (the CSPOG, PCC or WERENGO) mention their memberships in these initiatives. It underlines a low sense of belonging, competition rather than collaboration and the problems of such multi-actor initiatives to demonstrate their usefulness. These challenges, of course, hinder collaborative steering, not only because the authority of these multi-actor initiatives is undermined but as it shows that while members want to benefit from collaborative arrangements, they fail to contribute to them.

The few tangible resources exchanged among petroleum actors is comprehensive considering the few resources most actors have at their disposal. Yet, stakeholders' dialogues and statements draw a completely different picture. While the 'true' amount of exchanging tangible resources lies probably somewhere in the middle of both extremes, it necessitates researchers to use multiple data collection methods if the research interest lies upon multi-actor collaboration.

Besides the number of ties, reciprocity was argued to be inherent to exchange as a social action that is contingent on rewarding reactions from others and that ceases when these reactions are not forthcoming. Exchange theorists further argue that every relation mediated through exchange carries three obligations: the obligation to give, the obligation to receive and the obligation to reciprocate. The latter obligation, however, is seldom the case in the present networks.<sup>197</sup> While reciprocity is, with 167 ties, high in the general ('contact') network, a clear distinction between 'givers' and 'takers' exists in, for example, exchanging tangible resources (zero mutual ties). Though it could be argued that this is caused by the scarce resources actors from the civil society or traditional sector have at their disposal, tangible resources explicitly include offices or personnel. Moreover,

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<sup>197</sup> The network of sharing written agreements is an exception by definition.

reciprocity stays much below the critical benchmark of  $\geq 0.5$  in all other networks. These low levels make the assumption that reciprocity causes trust, increases social control and helps to monitor deviant behavior in Ghana's petroleum governance very unlikely. Hence, the mediate levels of trust that all actors are enjoying ( $\bar{x} = 3.30$ , see Table 8.1, page 175) is likely to result from personal assessments and perceptions rather than from reciprocated or non-reciprocated exchanges as suggested by exchange theory.

In relation to that, the lack of collective steering may also result from the absence of triads that are, by definition, the minimum precondition for cohesive subgroups. As Table 7.2 summarizes, only five triads exist across all confirmed networks and none of these five triads reoccurs in the same constellation in two or more networks. Consequently, the triads are neither coherent nor pervading. This absence hampers the realization of collective and collaborative steering in at least two ways: On the one hand, triads or cohesive subgroups across various forms of economic and social exchanges could ensure more reliability, more trust and more effective pursuit of joint agendas. But so far, network alters seem to act in a too erratic and too opportunistic way to engage in long-term collaborations. On the other hand, the strong executive dominance as well as the ever-changing agendas of donor institutions complicate the existence of such subgroups. Because of that, particularly NGOs do not even have sufficient time to form subgroups, to work within them and to perpetuate them if rewards are forthcoming. This problem occurred, for example, in the case of the CSPOG: After a very successful start, funded by several donors, it has remained inactive after resources depleted. Because of the larger structure of the international donor system, NGOs are forced to act reactively (demand-driven) rather than proactively.

The hypothesis that actors use the dense network structures – 74.50% of all possible ties are present in the general 'contact' network – for fast and multiple resource exchanges and the diffusion of knowledge or information, has to be rejected as well. In all networks (see Table 7.2, page 161), the density lies below the critical benchmark of  $\geq 0.5$ .

Moreover, the low centralization scores explain the difficulties of collaborative steering in the absence of one or a few central actors who could coordinate agendas, past promises and future scopes of action. This absence denies network alters the ability to solve simple tasks such as keeping track with meeting outcomes and referring back on preceding meeting conclusions. It further goes hand in hand with a lack of responsibility assignment and accountability.

Finally, also the assumption that actors use their closeness to other actors (reachability) for collaboration has to be rejected. Neither does the assumption that low reachability would lead to the formation of efficient subgroups find confirmation.

In sum, an answer to the question if actors steer petroleum resources and deriving revenues unilaterally, collaboratively or contentiously lies somewhere in the middle. Due to the institutional design, state authorities collaborate with each other. However, the

results also show that they limit the access to this 'elite circle' to companies and exclude civil society and traditional authorities. The PIAC tries to do its best to collaboratively steer petroleum resources and revenues but is constrained by the policy environment which denies secure funding. This lack of funding has a negative effect on its agency to position itself in the middle of network interactions. Traditional authorities are perceived as weak actors by most stakeholders and are relatively inactive in network interactions. However, they represent the interests of communities directly affected by the petroleum sector best. This representation is a powerful resource for claiming and for taking influence in petroleum governance, which traditional authorities, so far, do not sufficiently exploit. NGOs steer overwhelmingly unilaterally and fail to streamline their agendas. Besides their own failures, they pursue this rationale due to the lack of sustainable funding, which forces them to compete rather than collaborate with each other. Moreover, the lacking sense of belonging towards multi-actor initiatives undermines NGOs' credibility in network interactions. Finally, regional state and media representative are too absent from network interactions to allow empirically funded judgements. In any case, as indicated by the survey's results, they do not fulfill their mandate to be local representatives and to broker information.

## 8 Network Practices and Exchange Outcomes in Petroleum Governance

The network analyses show how seldom the 29 actors use their interconnectivity to exchange resources such as advice, tangible resources or collaborative agreements. While exchange theory would argue that exchanges do not occur due to the lack of desired resources within the network, some network researchers argue that destructive network practices may prevent such resource exchanges. As cited in Section 2.1.2 (page 13), scholars such as Fuhse (2009), Hauck (2010) and McLean (1998) urge SNA researchers to look beyond networks and include actors' practices for a broader understanding of resource governance.

Accordingly, the thesis' last chapter identifies such network practices and puts them in relation to the six different means of collaboration. In a subsequent step, this chapter sheds light on the last box within the network embedding, i. e., power and trust as potential exchange outcomes (see Figure 3.1, page 24). The chapter closes with a summary in regard to unilateral, collaborative or contentious steering.

### 8.1 Network Practices: Knocking, Othering and Eye Service

The relational perspective on natural resource governance prompts researchers to identify and investigate practices across group boundaries (see Section 2.2, page 17). Practices, Section 3.3.2 (page 32) argues, are routinized types of behavior and are meaningful because they shape actors' network interactions. A great variety of practices exist in Ghana and Section 5.2.1 (page 77) provides insights into the effects of increasing partisan politics and the 'gratitude' practice of acquiring political offices. Here, I want to focus on three concrete trends that shape actors' interactions in the petroleum sector: 'knocking', 'othering' and 'eye service'.

#### 8.1.1 Knocking

Although the petroleum sector is certainly not the only sphere which embraces the practice of 'knocking', it is a critical resource for traditional authorities in petroleum governance. One interviewee summarizes the practice of 'knocking':

“[T]o acquire land, you have to 'knock'. What we mean by 'knock': You send

some schnapps to the chiefs [...] [and] when you go to the North we use kola.<sup>198</sup> When you do the knocking, the elders will listen to you. The elders and the royal family will meet and think about whether you can acquire the land. Because the land is also distributed among the family. Maybe you and I are from the royal family. And then my brother holds this land, your mother holds that land – so all of our lands are taking together, but the chief will act on behalf of you and me to do that. So when you knock, they listen to you and they give you time and after the time they have met and thought about the type of land they can give to you [...] you have to compensate them” [...] (Transcript I, page 5).

Hereby, ‘knocking’ is not only necessary to acquire land but more generally to raise a concern in front of a chief. What can happen if the protocol of ‘knocking’ is not followed – or, at least, if traditional authorities perceive or claim that it has not been followed – became evident in the Ghana Gas pipeline project and has contributed to a mutual distrust between public authorities and non-state actors including traditional authorities.

As previously discussed, the project was conflict-ridden from the start, including a delay over 18 months. Besides the change of location, legal proceedings between the Omahen of the Eastern Nzema Traditional Area (in trust of Atuabo and neighboring lands) and Ghana Gas caused the delay. According to the Tufuhene,<sup>199</sup> Ghana Gas only paid an initial visit to the Traditional Council of the Eastern Nzema Traditional Area but did not pay the necessary compensation:

“[...] we were happy [that] such a project was coming to our land. We knew Dr. Sipa Yankey [CEO of Ghana Gas] and most especially the Energy Minister, Armah Kofi Boah, were coming from the Nzema Land [...] We gave them that respect. We told them they should finish with the first phase of the project, then come to sit down with us for the due processes to begin, but now the project is at the completion stage and nobody seems to care. The akpeteshie<sup>200</sup> they gave to us cannot guarantee their ownership of the land” (Business World 2014).

The resulting court proceedings revealed “[...] non-transparent business conduct among the Ghana Gas leadership that the judges described as ‘shameful, extremely damaging to our economy and ultimately unpatriotic’ ” (Fritsch and Poudineh 2015: 9). The judges’ description corresponds with the view that “[...] Ghana is going through dark hours of politics. Mahama has a greed for power – both politically and electrically” (personal

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<sup>198</sup> ‘Kola’ is the fruit of the kola trees and used to welcome guests in various African countries.

<sup>199</sup> The Tufuhene is a divisional chief who used to have oversight responsibilities on arms and war matters in former times. Today he is often the next authority to the Omahen.

<sup>200</sup> Akpeteshie is a local gin that visitors provide to chiefs – most often together with an envelope of money (token) – in the southern parts of Ghana. The amount effectively paid is based on the financial or social standing of the visitor. An interviewed Omahen once said that from a company everything less than 500 GHS (around US\$ 130) “is an insult” (personal conversation).



conversation). The case took a dramatic turn when three sub-chiefs within the Eastern Nzema Traditional Area also claimed ownership of the land against the Paramount Chief. In the end, the Government expropriated the land and until today, the Paramount Chief has not filed for a revision of the court's decision (personal conversation).

The case is only one example in which traditions and oil business – both often accused of being open to bribery and corruption – collide. A decisive detail is that 'knocking' takes place behind closed curtains and consequently leaves room for (un-) justified accusations and speculations. Accordingly, a bystander has the following opinion about what actually happened between the Omahen of the Nzema East Traditional Area and Ghana Gas:

“[...] when the government came to construct the gas project, definitely the government – or whoever – went to the chief and gave money and said: “Go to your people and talk to them”. But the chief maybe did not extend that money or whatever to the people. So the people will see that the progress is going on and the chief may tell them “Oh it is for the benefit of the country and government will bring money later”. Meanwhile he has taken the money for a long time. So when the people rise, they rise against the government while the government thinks they have settled everything through the chiefs. So traditional authorities are part of the problem – but secretly.” (Interview Transcript I, page 17).

While only the involved parties know the actual events, the example reveals the complexity in actors' relations in petroleum governance: Secret arrangements, contradictions over past exchanges, mistrust towards traditional authorities, and competition instead of coordination or collaboration among traditional authorities themselves. Examples like the apparent or actual misbehavior of the state-owned company reproduce distrust and restraint on behalf of political and civil society actors to partner with each other in petroleum governance.

In consideration of this practice, it is better understandable why the interviewed paramount chief remains at the boundaries or an isolate throughout the network graphs. Contrary to this, the Western Region House of Chiefs plays an important role in the advocacy network in which it partners with the two most central NGOs in a triad and brokers to the MoE. The House further is important in the advice network in which it provides the necessary link to the MoE. Indeed, most chiefs in the Western Region are aware of the narrow ridge they are moving on and especially the House's leadership is eager to sustain good relations with public authorities. But the House cannot impede each dyadic interaction between private investors and traditional authorities and as discussions take place behind closed curtains, 'knocking' automatically inserts stakeholders' interactions with a cloud of rumors, accusations and mistrust.

### 8.1.2 Othering

A second practice coining actors' interactions in petroleum governance is the strategy of 'othering', in particular the 'othering' between actors from the Western Region against actors based in Accra. A thorough look back to the advocacy network (Figure 7.5, page 150) visualizes this othering as actors from the Western Region are located on top of the network and actors from Accra are placed on the bottom.

'Othering' first explicitly emerged in the course of a petition initiated by eleven Paramountcies in the Western Region in 2010 in which the paramount chiefs claimed 10% of all petroleum revenues for their region. As an "act of desperation" (Nana Kobina Nkethia, Spokesman of the Western Region House of Chief) due to the longstanding marginalization of the Western Region, the paramount chiefs tabled the petition to Parliament to ensure "direct benefits for the people in the Western Region" from the oil discovery. The petition attracted much attention and despite its neglect by Parliament, it still encourages disputes about whether or not such regional claims are justified. Objectors particularly fear a potential divide of the country and that leaders from other regions would follow, resulting in claims, e.g., from the Brong Ahafo Region to receive revenue from the forest resources, the Upper West Region from the country's millet earnings or the Volta Region from fishing revenues.<sup>201</sup>

In a personal conversation with one of the chiefs who initiated the petition, he identifies three reasons for the failure of the petition that replicate the arguments of the network models: (1) lacking communication and coordination among chiefs within the Western Region, (2) no previous preparations and consultations with other stakeholders including the government before the submission of the petition, and (3) wrong wording of the petition which led to the rumor that the initiating chiefs claim the 10% for their own stools rather than for the development of the Western Region as a whole.

The motivation for tabling the petition arose from the perception of traditional authorities in the Western Region that – in contrast to other actors outside the region – they are not treated fairly:

"I would not say there is no fairness at all [in revenues' spending] but government has not been fair with the Western Region [...] Before the discovery of oil, the [Western] Region contributed close to 60 percent to the national income. Because almost every resource is here. So with the oil discovery, the region is feeding the nation [...] But if you see that this region is feeding the nation, if you do not give us the 10 percent, at least, we expect that there should be development! [...] In 2011 and 2012, what the Western Region got, was insignificant as compared to some

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<sup>201</sup> The underlying problem is, however, often overlooked: The fact that traditional authorities simply followed an idea initiated by then Vice-President John Mahama himself. In his electoral campaign for the NDC in 2008, he promised that an NDC-ruled government would follow upon the idea of ensuring 10% of petroleum revenues to the Western Region.

other regions. The Eastern Region got 38 percent! 38 percent of the ABFA [Annual Budget Funding Amount] (Interview Transcript I, page 14-15).

A second interviewee puts the ‘othering’ in regard to the government in Accra and describes the thought that the central government does not even *want* the Western Region to develop:

“The difference is that the Western Region is rich in resources but poor when it comes to infrastructure. Money that should come to develop does not come [...] We need to see whether it is our people who are representing us who are not good or [whether] it is because the Government does not want us to develop. We need to look at those things. We have not been able to understand why things are not getting better. But one thing is for sure: That we do not have people who speak for us” (Interview Transcript III, page 12-13).

Both citations explicitly frame the practice of ‘us’ (in the Western Region) vs. ‘them’ (in other regions or in Accra). It shapes network interactions insofar as it divides network actors into two groups: Those who advocate for a special treatment of the Western Region considering its natural resource wealth (including petroleum resources) and those who defend natural resources as the property of the whole country, vested in the president on behalf of the people of Ghana (as stipulated in Article 257, 6 in the Constitution).

Yet, the practice alienates only actors from the Western Region as Accra-based organizations do not see themselves as competitors. One representative of an NGO based in Accra explains:

“What we have tended to do, anytime we have a project, is to collaborate with our NGO friends [in the Western Region] [...] For example, when it has to do with data collection, we collaborate[d] [...] And when we are going to the communities [...], we outsource it [local NGOs], too. Because they do understand the thing. So it should not be a problem if you see their roles as complementary and collaborative” (Interview Transcript V, page 7).

Considering these statements and the emergence of the Platform of Coastal Communities (PCC) (see Section 6.1, page 98), ‘othering’ has to be understood as a power balancing practice by actors in the Western Region who perceive themselves less connected and, hence, less influential than actors in the capital who have a strategic advantage of being geographically close to donor organizations and state institutions. The financial conditions of most NGOs in Ghana, as it is the case with NGOs worldwide, highly depend on their ability to win projects mostly financed by international donor agencies. While various NGOs in Accra are well equipped with human and social capital, the NGOs in the Western Region compete both with the bigger NGOs in Accra and their sisters in the Western Region. Hence, the practice of ‘othering’ hampers collaborative steering in

petroleum governance as it artificially infuses network interactions with a dynamic that produces more problems than it solves and that distracts from more vital tasks like, for example, acknowledging the challenges communities are facing.

### 8.1.3 Eye Service

Thirdly, the practice of ‘eye service’ helps to understand why overall, actors’ exchanges have to be understood as relating rather than collaborating. ‘Eye service’ emerges from at least two factors: The (superficial) eagerness of the government to include non-state actors into petroleum governance from the start (see Section 5.1, page 73) and civil society’s failures to have a long-term, joint strategy within petroleum governance. An NGO employee brought up the term:

“With the institutional arrangement, mostly NGOs but also other stakeholders are given the platform just to be heard and not necessarily have their inputs considered [...] The platform given is just part of what I call ‘*eye service*’, something you do just to please but not because you really care [...] The main idea behind *is just to be seen*, giving stakeholders a chance [to be seen] and [as government] to be seen as carrying out due consultations” (Interview Transcript X, page 1).

Though not using the same term, a second interviewee traces weaknesses in stakeholder interactions back to the same practice:

“Actually, the true picture of the matter is: On the paper, you will see that there are various stakeholders. But on the ground *they are not well organized*. That is the true picture. For example, the local content idea was introduced so that Ghanaians can participate fully in the oil and gas activities. So that we do not experience what has happened in Nigeria and other oil producing countries [...] On the paper, you see that maybe the traditional authorities have this role and the District Assemblies have that role and so forth. But the control is solely from the central government [...] On paper something like [collaboration] appears to exist. But in practice [...] I do not see that” (Interview Transcript I, page 4-5).

The practice of ‘eye service’ is key insofar as it helps to understand the argument of ‘relating vs. collaborating’. Although actors are highly interconnected and claim to collaboratively steer petroleum resources, the government lacks the necessary will and non-state actors lack the necessary strategy to collaborate. This interpretation is supported by the results of the meeting networks which argued that even though NGOs do invite and are invited by public authorities and oil companies, they are not part of the ‘elite circle’. Moreover, the practice prompts state representatives to question the seriousness of civil society and traditional authorities and, consequently, state actors are content with providing a platform instead of really acknowledging and considering non-state actors’ inputs. In this regard, the practice of ‘eye service’ has perverted stakeholders’ interactions

to a degree that, for example, participants in multi-actor meetings often do not expect any outcomes.

In sum, the practice of ‘eye service’ has at least three causes and, in turn, consequences for actors’ exchanges: First, it evolved from the public sector’s inability to act upon NGO’s inputs and requests. This is the most visible on the district and regional level where public authorities are ill-funded to such an extent that they are practically unable to interact with other stakeholders sufficiently. Second, the NDC government since gaining power has been particularly keen on staying the ‘golden boy’ of foreign aid and this necessitates the inclusion of non-state actors. But below the surface, the inclusion does not implicate that these voices are actually listened to. Third, non-state actors’ inability to effectively coordinate themselves perpetuates the practice. The analysis of agreement exchanges demonstrates that NGOs do not dedicate themselves to multi-stakeholder initiatives like WERENGO or the CSPOG. This lacking dedication limits the credibility of such organizations. And on the assumption that reciprocity in relations leads to mutual norms and trust, norms and trust are unlikely to form among petroleum actors as they barely reciprocate exchanges. The network models, combined with qualitative data, rather suggest that non-state actors find themselves in fierce competition and try to seek influence by excelling themselves individually. This undermines collaborative efforts of non-state actors, their role as reliable partners and, in turn, the effort to collaboratively steer petroleum resources.

### **Insertion: Field Notes about ‘Knocking’, ‘Othering’ and ‘Eye Service’**

The subsequent text box, written in the field in November 2014, implicitly discusses all three practices. The notes are the result of attending a ‘community consultation workshop’ in November 2014 in regard to the ‘Ghana 1000 Project’ in Aboadze (see Map 4.1, page 51). The ‘Ghana 1000 Project’ is an initiative to develop, construct and operate a gas power plant from a offshore gas processing facility. The main investor is ‘Endeavor Natural Gas’, a private company from the US. The text box is an extract of the notes taken during my field research stay and aims to provide insights in how such ‘consultation’ workshops proceed. The notes are deliberately maintained without changes.

#### **Trample on Institutions and Citizens**

*(written in November 2014)*

*Dumsor* – that is how Ghanaians call their daily electricity experiences these months. Simultaneously it is a verbum non grata for President John Mahama and its Government. Dumsor means ‘on-off’ in Akan, one of the local Ghanaian dialects, and describes the on-going power-cuts hampering Ghana’s economy and citizens. Notwithstanding the discovery

of offshore oil and gas resources in Ghanaian territory in 2007, the power-cuts have gotten worse over the years. As natural gas can be used to produce power, it comes as no surprise that President Mahama called the gas resources a ‘game-changer’ in the aim to become a middle-income country by 2020. Unfortunately, in the Government’s ambition to raise the nation’s welfare, institutions are often buried. The graveyard of institutions is prototypical in Aboadze, an urban fishing community with about 10,000 inhabitants, located 20km away from the new oil-city Takoradi. A report published by the Coastal Resource Center [a local NGO] in 2010 identifies several challenges within Aboadze: environmental hazards such as coastal erosion and declining fish catches, social pressures such as lack of capital, low school enrollment and prevalence of teenage pregnancy as well as infrastructural problems, most prominently an inadequate waste disposal.

What the report does not mention but what can be experienced by spending some time in the community, is the high level of disappointment, deprivation and aggression among community members and especially among young men. Although the community hosts several facilities such as the Takoradi Thermal Power Station of the Volta River Authority (VRA) since 1997 and the Aboadze Gas Plant of the Ghana National Gas Company since 2011, jobs, business opportunities and overall ‘development’ have not trickled down to the community itself.

Consequently, without big surprise, emotions boiled over during ‘just another’ information meeting at Aboadze on November 20. The host, a conglomerate of four different companies mainly from the US, informed the community about the takeoff of another gas facility, the Ghana 1000 Project, right next to Aboadze. Ironically, the investors called the event a ‘Public Consultative Workshop’ in which the Aboadze citizens ‘Have [their] Say!’. However, being present at this meeting proved these words to be empty platitudes and taught us a lot about what is currently happening in the natural resource sector of Ghana. Three observations stand out as they happen, one way or the other, repeatedly at these kind of meetings:

Firstly, there is the whitewashing of what is actually happening at such meetings. Calling it a ‘consultative workshop’ appears ridiculous as ‘consultative’ includes at least a minimal form of interaction between the one advising and the one being advised. However, during the meeting, the nameless speaker simply read out a power point presentation. He for sure did not fail to praise the benefits of the project: A ‘timely solution of power shortfalls’ as the new power plant is planned to start operation in 2016; a ‘comprehensive fuel solution’ as the plant will use and then re-gasify imported liquid natural gas (LNG) stored at an offshore floating station; and an ‘economic boost’ by powering the plant with liquid natural gas instead of more expensive light crude oil. These are, of course, macro-economic benefits. They seem rather unimportant for the audience of the meeting: most people probably do not understand the technical terms thrown at them and as the already existing Volta River Authority and Ghana Gas infrastructures have proven, the citizens in the town will not benefit from the ‘economic boost’ and its ‘multiple positive impacts on Ghanaian economy’.

Questions from the audience, for example where the liquid natural gas is imported from and how this import affects the local gas production industry, were not granted the floor.

Secondly, the power of traditional authorities became obvious. After cutting off the speaker in the middle of the presentation, the two Paramount Chiefs of the area took the floor. Besides evaluating the content of their speeches, the most impressive thing to observe was how they were able to direct the feelings of the audience, especially those of young men. They took on when the chiefs allowed them and immediately stopped when they were told to do so. However, the chiefs even-handedly failed to inform the audience about their plan to meet the investors the next day behind closed curtains. “Even the most notorious simpleton can imagine what happens on such off-the-record meetings”, the man next to me comments.

Thirdly, the government and its respective regulation bodies such as the Ghana Environmental Protection Agency (EPA) and the Petroleum Commission (PC) were absent. Like they almost always are. By law these two bodies are commanded to regulate the oil and gas sector whereby the EPA (founded in 1994) is responsible for environmental protection in Ghana, prescribing standards and guidelines, issuing environmental permits and enforcing compliance (see Act 490 for further details). Of particular importance are the Environmental Assessment Regulations, 1999 (L.I. 1652) which outline the legal regulations of Environmental Impact Assessments (EIAs) by providing a list of ‘undertakings’ that require registration and environmental permits (Schedule 1) and those of which an impact assessment report is mandatory (Schedule 2). The process of evaluation and guidance normally takes between 12 and 18 months.

Unfortunately, environmental impact assessments are often more illusion than reality: when juxtaposing the aim of the Ghana 1000 Project to produce power in 2016 with the lack of necessary on- and offshore infrastructure, it becomes obvious that rules and regulations will be stretched yet again. One of the investors even confessed this violation in an off-the-record talk: the government urges the companies to finish the EIA by the end of February 2015 to start the construction process. As a consequence, the process is effectively reduced to four out of the necessary nine to 15 months. He traces this back to the government’s “desperate greed for power”, which – so they hope – will secure their success at the general elections in 2016. The possible breach of law will entail particularly detrimental consequences for the nearby Anlo Beach Wetlands covering the estuary of River Pra. Its mangroves, lagoons and tidal salt are famous for their richness in bird and fish species. The wetlands are already threatened by degradation resulting from over-exploitation of mangrove wood for fish smoking, dumping of solid waste and bad fishing practices, and – as a local researcher emphasizes – will further be damaged by the neighboring industries.

What can we learn from these three observations? On the one hand the ‘workshop’ was the perfect location to study the main actors on the natural resource game board and their engagement with each other: Foreign investors, traditional authorities, affected communities and – despite their absence – state regulation bodies. The whitewashing exemplifies the

inability of all tokens to call a spade a spade: On the other hand, the meeting shows that most of the current developments in the gas sector take place under a veil of ignorance. Both media and civil society actors seem to focus more on procedures within the oil rather than the gas sector. The main focus of the discussion in Ghana still lies on how to prevent the resource curse in terms of the offshore oil resources. This focus might be explained by close-by Nigeria which is repeatedly used as a bad reference point, most of the times without accounting for the several differences between both countries. As most Ghanaians know few details about Nigeria's oil industry in order to put its negative impacts into perspective, actors from the public, private and civil society sector easily exploit the Nigerian failures to hide their own ignorance and inabilities.

So who is to blame? Foreign investors who are trying to make profit? And who are both legally and (more or less) normatively forced to preach the Corporate Social Responsibility alphabet during such meetings just because they happen to operate in an African country? Or are the traditional authorities the ones to blame because they frequently use their historical legitimacy to get rich at expense of their protégés? Or are the people themselves to blame as they allow companies and traditional authorities to exploit them and seemingly fail to challenge what is happening behind closed curtains? Or civil society actors who get carried away using their advocacy buzz words, their one-sided call upon companies to make it up to those who are 'negatively' affected, and who paint a wrong picture of companies as development agencies instead of acknowledging the main purpose of companies (i. e., making profit)?

It is probably a mixture of all. Maybe it is time to start with the remaining token: The government allows investors to come to the country while almost urging them to break the country's laws. The government seems to be the one incapable of properly managing the ongoing economy and electricity crisis and the one fooling its own people. There is a famous proverb in Fante: *Ason ebien kô a, nchea na wɔbrɛ* – *When two elephants are fighting, it is the grass that suffers.* It almost fits to what is currently happening in Aboadze, just that there are at least four elephants trampling on the grass.

## 8.2 Network Patterns

So far, it can be maintained that exchanges remain low among actors who aim or, at least, claim to steer the petroleum sector collaboratively and that several network practices employed by actors hamper collaboration. Beyond exchanges and practices, exchange theorists and other scholars widely acknowledge the role of power and trust as potential outcomes of and, in turn, input to economic and social exchanges. The question arising is whether central actors in Ghana's petroleum sector are actually perceived as more powerful and well trusted.



Table 8.1 summarizes network alters' perceptions on different variants of these relational patterns on a scale from 1 (low) to 5 (high). As interviewees only rated their network contacts (and not actors they did not interact with), the scores are standardized by the number of assessments received to make results comparable.

Table 8.1: Relational Strengths

	Consult	Coordinate	Represent	Liaison	Influence	Trust
EPA	3.67	2.29	2.29	2.57	4.07	3.53
PC	<b>4.44</b>	3.29	2.82	2.41	4.50	3.67
MoE	4.26	3.53	2.67	2.47	<b>4.74</b>	3.65
MoF	3.46	2.87	2.85	2.21	4.53	3.67
PIAC	3.68	3.05	3.35	3.37	4.00	3.84
DA	2.74	2.37	2.28	3.30	2.55	2.20
Fish Comm.	3.09	2.36	2.30	2.90	2.91	2.45
EPA-WR	2.50	3.00	2.00	2.50	2.00	<b>(4.50)</b>
Tullow	4.05	3.25	2.00	3.19	4.29	3.64
GNPC	4.24	3.50	2.69	3.18	4.35	3.78
GIZ	3.10	3.70	3.30	2.45	3.89	3.82
OfD	3.00	3.20	3.17	2.43	3.00	3.83
STAR-GH	4.07	<b>4.27</b>	<b>3.69</b>	2.92	3.85	3.73
House of Chiefs	2.87	2.53	2.21	3.31	3.07	2.56
Param. Chief	3.06	2.75	2.44	3.33	3.44	2.88
PCC	2.86	2.69	2.85	3.75	2.77	3.17
ACEP	4.00	3.39	3.16	2.75	3.90	<b>4.05</b>
ACET	2.86	3.29	3.14	2.86	3.14	3.25
CEPIL	3.33	3.00	2.90	2.64	2.92	3.33
CDD	3.36	3.08	2.83	2.38	3.15	3.54
CSPOG	3.63	3.20	3.38	3.20	3.00	3.44
KITE	3.75	3.25	3.18	3.08	2.79	3.21
COLANDEF	3.31	3.00	2.69	3.63	3.00	3.13
FoN	3.55	3.36	3.30	<b>3.83</b>	3.27	3.22
UCSOND	2.56	2.64	2.30	3.82	2.55	2.73
WERENGO	2.78	2.88	2.56	3.56	2.33	2.44
PPB	2.94	2.80	3.00	2.87	2.67	3.07
Radio	2.74	2.67	2.65	3.82	3.43	2.74
Newspaper	2.55	2.63	1.92	3.27	3.17	2.73
<i>Mean</i>	3.33	3.03	2.56	3.03	3.35	3.30

*Source:* Own data retrieved from attributional network data.  $N$  varies according to the number of actors' alters. The attributions to the EPA-WR should be cautiously interpreted as  $n = 2$ .

(1) *Consult* indicates the ability of actors to answer questions about oil and gas with the necessary expertise. The attributional data identifies, in descending order, the Petroleum Commission (PC), the Ministry of Energy and Petroleum (MoE), GNPC, STAR-Ghana, Tullow, and ACEP as actors who are valued for their expertise in oil and gas matters.

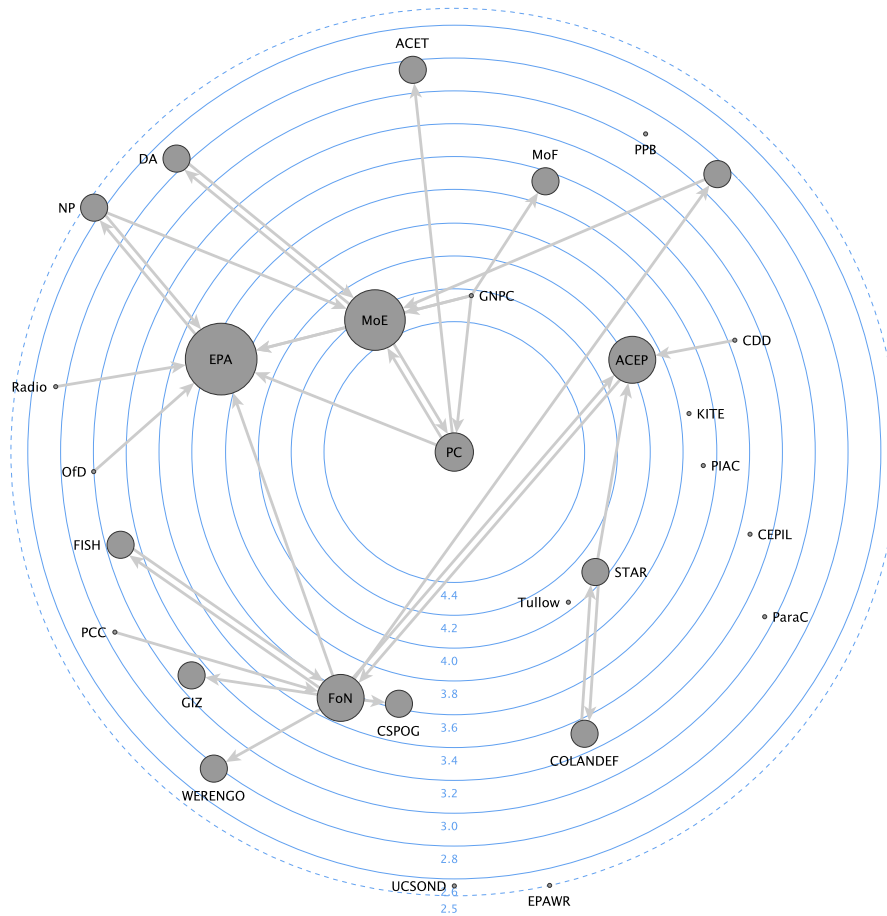
However, in the advice network (see Figure 7.6, page 152), they are inconsistently the most popular actors (i. e., those with the highest in-degree centrality). For example, the PC is the most reliable actor for consultations but has only two incoming ties in the advice network ( $c_I = .071$ ). Besides the PC, the Ministry of Energy and Petroleum (MoE) as a central network actor and GNPC as another unobtrusive player in the network analysis are viewed as useful to consult.

The PC and the EPA visualize the most obvious contrast between relational and attribution network data. Among all 29 network actors, the PC has the highest scores to consult on questions about oil and gas (and, hence, is located in the middle of the network) but only two actors, the MoE and GNPC, asked the PC for advice in the year 2014. In stark contrast, six actors consulted the EPA to give advice in oil and gas but the EPA is midrange on perceived expertise.

On the one hand, this suggests that even though the petroleum industry is comparably immature in Ghana, key state actors in petroleum governance were able to acquire a high level of expertise from the perspective of their exchange partners. On the other hand, the result raises doubts to what extent exchanges led to these perceptions (as argued in the theoretical chapter) and, in turn, to what extent stakeholders predicate their decision to ask for advice on the assessment of alters' competences. As Figure 7.6 (page 152) shows, none of the three most valued actors are asked for advice with any distinction.

Figure 8.1 (page 177) expands this graph and graphically depicts differences between relational and attributional data. The graph is arranged in a centrality layout which locates actors with high perceived competence for giving advice in the middle of the network. Nodes' size depicts the number of incoming ties, i.e. the popularity of an actor to give advice.

Figure 8.1: Advice Network By Consultation Skills



*Source:* Own data visualized with visone's centrality layout method. Arrows' direction depicts flow of advice, nodes' size indicates actors' in-degree centrality. The reference category of the centrality layout are actors' scores on their usefulness to consult about questions on oil and gas.

(2) *Coordinate* measures the ability of each network actor to coordinate (opposing) interests among all others. Only due to their funding idea, the multi-actor pooling Public Interest Accountability Committee (PIAC), the Platform of Coastal Communities (PCC), the Civil Society Platform on Oil and Gas (CSPOG), and the Western Region Network of NGOs (WERENGO) should outperform others in regard to this attribute as the whole idea of initiating them was to coordinate interests. The network results in the previous section, however, do not replicate this mission. If these actors are not isolated from network alters, they have low to very low scores in betweenness centrality across all networks. With 13.65%, WERENGO has the highest betweenness centrality in the gatekeeping network.

Table 8.1 confirms the failure of these initiatives as all of them are not particularly valued for their coordinative skills. The CSPOG still manages to do best among these four actors but if compared to all other stakeholders, it is only midrange. A purely

institutional assessment would have resulted in a strong coordinative role of the CSPOG – given its right to nominate new civil society representatives for the PIAC – but the network results cast doubts. The PCC, initiated by eleven traditional councils along the Western Region’s coast to coordinate and represent the interests of coastal communities and, implicitly, the interests of these eleven traditional leaders, is even located at the lowest range. Both the relational and attributional data therefore support the previously made inference that these multi-actor initiatives, so far, fail to meet their mandate. In the context of scarce resources and high competition, it is still the ‘mother bodies’ that are in tune in petroleum interactions.

STAR-Ghana dominates the perception of network actors as a useful coordinator. While STAR-Ghana is another multi-actor initiative, it deviates insofar as it was able to detach itself from its ‘mother bodies’ and to emerge as an independent organization highly valued across all sectors. Even though it was initiated by external actors, this external relation does not demolish actors’ trust in STAR-Ghana.

This assessment might explain why STAR-Ghana ranks first when it comes to (3) *representing* others’ interests. On average, respondents perceive STAR-Ghana to perform best in neutrally representing their interests (e.g., during a meeting they cannot attend themselves). Similarly, the PIAC is valued for representing others’ interests which supports the argument that if PIAC is able to overcome its financial difficulties, it could emerge as a strong and unique actor in petroleum governance.

A more critical assessment is, yet, necessary in regard to the CSPOG: Although it ranks on the third place in representation, the qualitative interviews and comments during the network interviews suggest that here it is not an actual assessment by respondents but rather wishful thinking: Even though most member organizations still stand behind the general idea of one organization representing all member NGOs, they are aware that the CSPOG has been inactive since years. As the formal agreement network vividly shows (see Figure 7.7, page 155), they hence lack the necessary sense of belonging.

So far, those actors that dominate the network interactions have not been identified as well consulting, coordinating or representing. This observation is particularly striking when it comes to FoN as the dominant actor in most networks. But it changes in regard to (4) *liaison* skills, i. e., to what extent actors are able to mediate resources (for example information) to local communities in the Western Region. As expected, NGOs located in the Western Region, together with radio stations, outperform all other actors. But combined with the results of the survey along the Ghana Gas pipeline, this observation creates more questions than it answers. In the survey sample, one-third of all respondents do not feel able to answer questions about NGOs, either because they do not understand the idea behind or as they do not perceive themselves knowledgeable enough to answer questions about them. And if they answer, they neither use NGOs to gather information nor were they contacted by them to receive information. Contrary to this, network alters

view them as singly most important brokers to reach out to local communities. As already discussed in Section 3.3.1, this contradiction, again, suggests a detachment of petroleum stakeholders from the citizens' level including those organizations who claim to represent communities' interests in petroleum governance. Moreover, while radio is the single most important reference point to gather information about oil and gas for local communities and traditional authorities the most trusted actors, this representation is not acknowledged by network actors. Thus, actors' opinion on the macro level deviate decisively from those they target on the micro level.

The various networks also do not comply with the (5) *influence* that actors assign to others. In the eyes of the interviewed network alters, the MoE, the MoF, the PC and the two leading oil companies (Tullow and GNPC) are the most influential actors in petroleum governance. In their judgement of actors' influence interviewees, thus, follow the institutional design rather than their network involvements with these actors .

This finding is important in three consecutive ways: *Theoretically*, it brings the 'attributive' approach to power closer to the 'resource' than to the 'positional' perspective (see Section 3.3.3, page 33). While the different centrality measures almost exclusively identify NGOs and donors as powerful actors, the institutional analysis and now the attributive assessment suggest the various ministries and oil companies as most powerful. *Methodologically*, it means that different ways of measuring power result in different outcomes. The overlapping of the resource and attributional power approach challenges the measurement of power in network analysis. *Empirically*, the contradiction between attributional and relational power provokes the question to what extent the investigated networks really bargain over governing the petroleum sector. In combination with the practice of 'eye service', the results suggest that even though the public and the private sector grapple with NGOs and traditional authorities, they do so superficially and within their pre-defined arenas.

This conclusion first originates from state authorities' agency to balance hierarchical steering in the light of the executive dominance on the one hand and the necessity to include non-state actors (to keep them and international donors on board) on the other. And, second, the conclusion arises from non-state actors' inability to better coordinate and unify their interests to succeed in power balancing. Coalition formation is, so far, the only strategy applied to balance power. As petroleum is the 'new kid on the block', most NGOs lack the knowledge and expertise to balance power through making themselves more attractive as exchange partners ('giving status'). 'Withdrawal' is not an option as too many (financial) resources exist which secure the survival of a lot of NGOs. To be able to use 'network extensions', the overall network structure still rests too much on the old 'giver-taker-syndrome' of top-down development approaches, making NGOs too passive to extend their networks proactively. And if they get proactive, they lose the necessary resources – time, money, motivation and conviction – along the way as discussed in relation

to the several multi-actor initiatives. NGOs therefore lack a long-term strategy to apply other potential means of power balancing that would better position them against the executive's dominance.

Finally, if (6) *trust* is a precondition for entering social exchange relations, actors can select trustworthy partners from almost all sectors that are engaged in petroleum governance: From the public sector, the Environmental Protection Agency (EPA) in the Western Region and the PIAC emerge as most trusted actors. While the results in regard to the EPA-WR should be cautiously considered as their rank is based on the judgement of only two former exchange partners, the PIAC is well-trusted across all actors. If actors look for reliable partners among civil society actors, the Accra-based ACEP offers itself. In parallel, all donor agencies are well trusted (in descending order: the OfD, GIZ and, close behind, STAR-Ghana). From a development cooperation perspective, this finding is particularly striking for STAR-Ghana, which was only founded in 2010 and which has proven to be an important player in petroleum governance across networks. This should push donors and multilateral agencies closer to the idea of investing in and particularly of sustaining such multi-donor pool organizations instead of acting unilaterally.<sup>202</sup> Because of its tumultuous past and its comparably low engagement in different forms of collaboration, it is finally unexpected that GNPC is more trusted than Tullow Oil. The fact that Tullow Oil is a foreign company while GNPC is the national oil company might have primed respondents' answering behavior to a certain degree.

### **8.3 Summary: Relating vs. Collaborating in Petroleum Governance**

Overall, the three network practices hamper collaboration in the petroleum sector and perpetuate superficial relating. The practice of 'knocking' leads actors to treat traditional authorities with caution and it sustains their reputation of being corruptible. The practice of 'othering' artificially complicates collaborative steering between Western Region based and Accra-based organizations. Though economic and social exchanges do exist, local actors' gaze whether they receive 'fair' outcomes often prompts local actors to focus on attacking rather than attracting potential collaboration partners. The dominant role of 'eye service' has perverted stakeholders' interactions. The futility to reach binding agreements with state authorities which are sanctionable in case of defection, the delicate financial situation of non-state actors and the fear of coming off badly, provokes an unproductive space for collaborative steering.

The mismatch between relational data on the one hand and attributive data on the other is worth more investigation in future network studies. In sum, the combination of relational and attributional data helps to understand the diversity of actors' relations in petroleum governance in more depth. Besides providing economic resources, donor

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<sup>202</sup> This step could also improve coherence in donor policies and strategies.

organizations establish their participation in petroleum governance through coordination and representation. They are viewed as neutral intermediaries by network alters and, hence, are particularly powerful in social exchange networks. Civil society groups are viewed as important liaison to local communities and are active in network bargains over petroleum revenues in the first place. Yet, the survey data raise major doubts whether NGOs are able to do justice as liaison managers. This disparity should not only prompt NGOs to reconsider their strategies (particularly when it comes to “ground work” on the community level) but should prompt *all* network alters to critically assess the gaps between their perceptions and the perceptions of those immediately affected by the developing petroleum industry.

Above all, relational and attributional data diverge to a large degree in the present thesis. Actors that are particularly active in handing out advice to others are not seen as useful partners to consult over oil and gas matters. Equally, high degree centralities across all networks do not replicate in assignments as influential actor.





## 9 Concluding Remarks

This thesis set out to understand collaboration in Ghana's petroleum sector. The interest in this topic was stimulated by development countries' high stake in natural resources in general (Barbier 2003; Collier and Hoeffler 2004; Lockwood 2010; Ostrom 1990) and in petroleum resources in particular (Heilbrunn 2014; Ross 2001, 2006). In conveying a relational perspective on natural resource governance, the thesis abstains from romanticizing how natural resource governance *should* work, but rather investigates *how* it works in the concrete example of Ghana's newly developed petroleum sector.

Conceptually, the thesis aims to contribute to the current lack of literature that asks why actors collaborate in governing natural resources. In order to fill this gap, this study uses arguments put forward by exchange theory which maintains that exchanges forge relations, maintain social bonds, and consequently are the core element of collaboration.

Methodologically, the thesis adds to the application of Social Network Analysis (SNA) in development research. According to literature, SNA provides the possibility to target a wide spectrum of development-related questions: Scholars use SNA to track international trade networks (Mahutga 2006; Walther 2014); investigate migration patterns (Vertovec 2003); understand international relations (Hafner-Burton, Kahler, and Montgomery 2009; Kahler 2009; Maoz 2011); study the spread of epidemics (Wonodi 2012); scrutinize international terrorism (Brams, Mutlu, and Ramirez 2006; Everton 2011; Perliger and Pedahzur 2011); or investigate the reactivity of social systems in disaster management (ODI 2009). The present thesis is situated at the intersection of natural resource governance and multi-actors approaches. Most importantly, the study advances SNA research by extracting both outgoing and incoming ties and, by that, raising doubts about the validity of network data. It further accelerates the discussion of ethics in network research and agitates the benefits of mixed-methods approaches by combining structural network measurements with the investigation of network practices.

Empirically, the study is set against the backdrop of a growing interest in Ghana's petroleum industry (Boohene and Peprah 2011; Eduful and Hooper 2015; Osei-Tutu 2012; Sakyi et al. 2012; Veit and Excell 2015). It advances existing studies by examining the chances and challenges of horizontal governance through multi-actor approaches (Biermann et al. 2008; Buchanan 2013; Sreide and Truex 2013; Warner 2005). To this end, the thesis presents novel primary data that were collected during a ten month research stay in Ghana's Western Region which neighbors the offshore petroleum fields. The data combines qualitative information gathered by observations and semi-structured interviews

with quantitative data gained through survey questionnaires and network interviews.

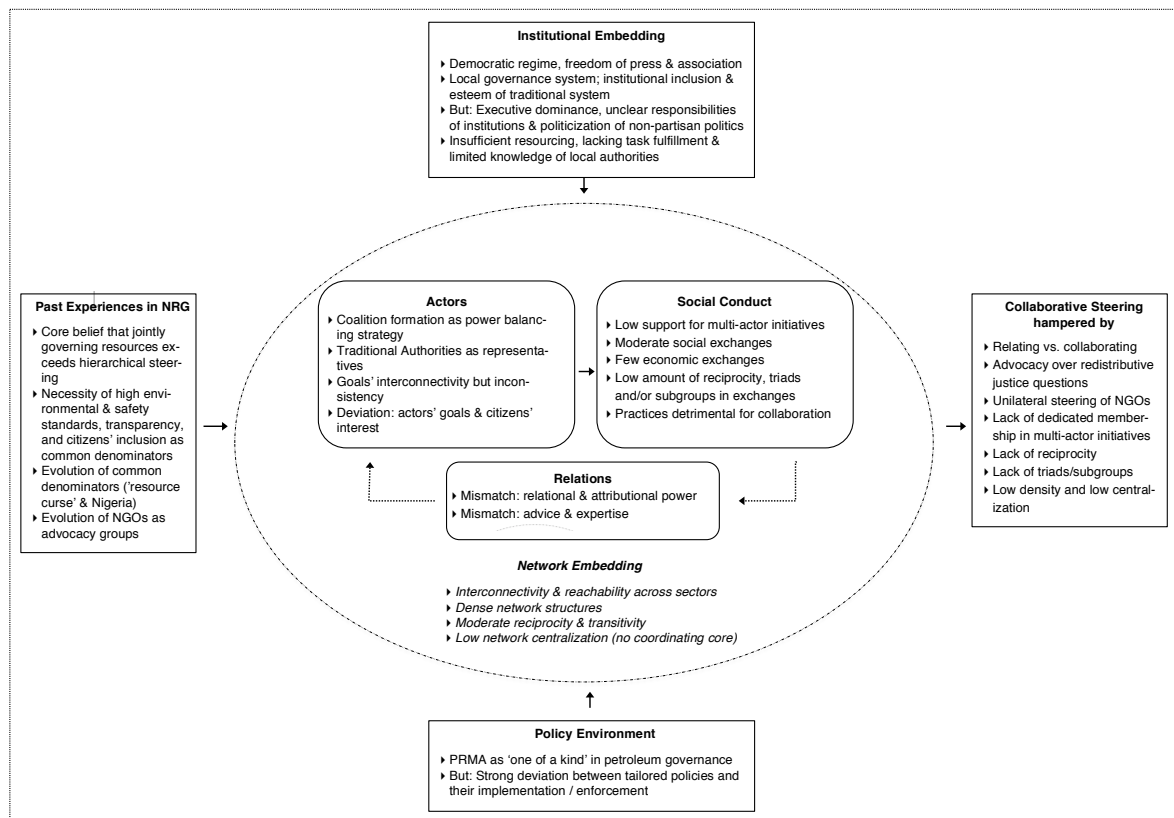
These data are novel in two distinct ways: The survey data give unique insights into the anticipation of representation by people directly affected by the developing petroleum industry. The network data are the first empirical reflection of different means of collaboration among those actors who aim to steer petroleum resources and revenues. Contrary to other network data sets that either tackle collaboration as a binary variable (Prell, Hubacek, and Reed 2009) or focus on collaboration within distinct governance sectors (for example state authorities, Wonodi 2012), the present network data include six different means of collaboration across eight different sectors.

Through this novel research design, the thesis answers three main research questions: (1) Which actors in Ghana's petroleum sector (aim to) steer petroleum resources and revenues? (2) Which of these actors do affected communities perceive as representatives of their interests? And (3) to what extent do these actors attain their proclaimed goal to collaboratively govern the petroleum sector? The subsequent section summarizes the key answers to these questions based on Graph 9.1 (page 185).

### 9.1 Summary of Key Results

Ghana combines several characteristics discussed as favorable for collaborative steering by literature: On the one hand, all actors share the core belief that jointly governing the petroleum sector exceeds vertical steering. This core belief became apparent shortly after the oil discovery when the government scheduled the "National Forum on Oil and Gas" and when the Petroleum Revenue Management Act, Act 815 (PRMA) institutionalized the Public Interest Accountability Committee (PIAC) as a multi-actor platform entitled to control and advise the government in managing the petroleum sector. On the other hand, actors share the opinion that high environmental and safety standards, transparency in revenues' allocation and distribution, and citizens' inclusion in the sector are pivotal pillars of successful petroleum governance. To a large degree, this opinion is a consequence of the collateral consequences of mining for the environment, the lack of law enforcement in the mining sector, the failure to integrate the mining supply chain into the national economy, and the exclusion of key stakeholders (most importantly, mining communities) from governing processes. Moreover, the proclaimed goal to avoid the infamous 'resource curse' unites all actors. Being confronted with environmental destruction, civil rights violations and rampant corruption in other resource-rich countries such as Nigeria, Equatorial Guinea or the Democratic Republic of the Congo, the need to avert the 'resource curse' is the lowest common denominator for all actors in petroleum governance. These shared experiences and beliefs favor the collaborative governance of the petroleum sector by all actors involved.

Figure 9.1: Summary of Empirical Results



Source: Own graph.

In addition, the institutional framework that embeds actors' relations and interactions features a number of characteristics discussed as advantageous for multi-actor collaboration by literature: The democratic regime and Ghana's reputation as a 'role model' democracy play a decisive role in petroleum governance as they define the legal margins of public institutions; back the role of traditional authorities; provide civil society with scopes of action; enable the media to freely report about advances and challenges in the petroleum sector; provide private investors with stable political conditions; and attract donor agencies wanting Ghana to be the positive exception of an 'African oil state'. With the legal transfer of decision-making power to the regional and local levels, development literature further suggests that Ghana is better able to use the petroleum wealth inclusively and to better enforce rules than centralized state.

In contrast to these characteristics, the empirical results suggest that day-to-day exchanges in petroleum governance are marked by executive dominance, an increasing politicization of non-partisan local elections and lack of awareness among local communities about the functions of civil society. The executive dominance constrains horizontal collaboration in the petroleum sector as state institutions on the local and regional level as well as non-state actors often remain at the boundaries of those networks that make decisive petroleum-related decisions. It appears that these exclusive networks are reserved

for state institutions on the national level and the private sector. The politicization of non-partisan elections infuses petroleum decisions with party affiliations and divides both petroleum actors and citizenry along the two dominant party lines. The ignorance about the role of civil society among local communities challenges collaborative petroleum governance as it queries the assumption that through the inclusion of civil society, citizens are included in petroleum governance. In consequence, even though Ghana is evading the ‘resource curse’, actors’ daily interactions scratch at the smooth image the institutional setting is drawing in regard to the petroleum sector.

The ambitious policy environment further complicates actors’ interactions: Although Ghana is deservedly praised for the policies put in place to govern the sector, these policies are often unclear about institutional responsibilities, lack implementation and give the executive the opportunity to steer resources and revenues unilaterally rather than collaboratively. In particular, the Petroleum Revenue Management Act, Act 815 (PRMA) suffers from several weaknesses such as loopholes for the government to withhold information, arbitrary fiscal standards and – most importantly for actors’ networks – unclear financial backing of the PIAC as the multi-actor platform that is entitled to advise and control the government. The lack of economic and human capital, *de facto*, neglects the PIAC to fulfill its tasks and gives reason to believe that the government pushes superficial relating rather than horizontal collaborating.

The overall network structure that embeds actors’ relations is diverse and complex but actors’ general interconnectivity across sector boundaries affords the opportunity to collaboratively steer petroleum resources and revenues: Based on 29 interviews, the overall network consists of 99 nodes with 809 arcs from at least eight different sectors. This interconnectivity produces a dense overall network in which resources can spread rapidly across sector boundaries. Besides the interconnectivity, moderate reciprocity and transitivity as well as high reachability within the network embedding favor actors’ collaboration.

Within this network embedding and in accordance with Emerson (1962) as well as Cook and Gillmore (1984), coalition formation was then identified as the most popular means to balance power by actors who perceive themselves as less influential in petroleum governance, and discussed in regard to the formation of three new coalitions (the Platform of Coastal Communities (PCC), the Civil Society Platform on Oil and Gas (CSPOG) and the Public Interest Accountability Committee (PIAC)). While different in composition and scope, they all arise from the belief that bundling resources leads to a more profound voice in petroleum governance. However, the PCC and the CSPOG (and older initiatives such as the Western Region Network of NGOs (WERENGO)) suffer from a lack of dedication of their members who compete rather than share the scarce resources they have, and who fail to streamline their agendas in petroleum governance. This behavior damages their reliability as exchange partners and hampers collaboration.

All network actors scrutinized in this thesis aim and claim to ‘speak with the voice of the people’ or, at least, to govern the petroleum sector ‘for the benefits of the people’. The investigation of representation contributes to research in three main ways. The survey results firstly suggest that traditional authorities, most importantly community chiefs, represent the interests of communities best. This finding is important not only in regard to the discourses taking place in petroleum governance but also concerns the immanent debate in academia whether or not traditional authorities can be viewed as mouthpiece of ordinary citizens.

Secondly, this finding questions the legitimacy of civil society groups’ claims to represent the interest of communities. Aggravated by the lacking awareness of communities about the function of NGOs in general and the work of individual NGOs in particular, this novel insight calls into question the means of NGOs to seek influence in petroleum governance as ‘they are with the people’. In combination with the investigation of NGOs’ goals in petroleum governance on the one hand and affected communities’ interests on the other, the thesis argues that NGOs have so far failed to recognize the relevance of communities’ problems. While their discussions move on the macro level and serve the ‘standard jargons’ of development cooperation (e.g., transparency and accountability), affected communities still face hands-on problems such as access to proper sanitation and – in light of such challenges – do not perceive the petroleum as a distinct burden they are facing.

Thirdly, the gap between general feelings of being represented and the feeling of being represented in the oil and gas sector is a novel result of this thesis. This divide cautions against any inversion of the argument that actors who are generally well-accepted as representatives in Ghanaian politics are automatically considered as representatives in petroleum governance.

In light of the decisive role of claiming representation, it comes as no surprise that a majority of actors identify citizen-related goals as a desirable achievement in petroleum governance. In fact, the majority aims to factor in local communities in the Western Region or citizens as a whole, notably in terms of increasing their benefits from the petroleum industry, their education about it, and their active participation and empowerment in it. Although these goals re-emphasize the articulated goal of including citizens in the developing industry, the analysis of the survey results show that respondents barely perceive any personal benefits in the oil discovery and that they also do not feel ‘empowered’. Similar, most interviewees criticize lacking information about the petroleum activities. Based on these results, the study maintains that actors were so far unable to realize citizens-related goals.

Overall, collaboration through resource exchanges differs according to the exchanged resource: meetings and joint advocacy activities are the most frequently exchanged resources. Advocacy makes NGOs and the Western Regional House of Chiefs to central players within the networks. Contrary to this, new organizations like the CSPOG and

PCC – both founded with the purpose of challenging public authorities in petroleum governance – remain in the shadow of these organizations. The advocacy interactions further divide the network into Accra-based and Western Region-based organizations along questions of redistributive matters. This structural observation finds support in the network practice of ‘othering’ which troubles collaborative steering through the infusion of rivalry between Accra-based and Western Regional organizations.

Exchanging advice is barely used to collectively steer petroleum governance. Due to scarce resources and the complexity that arises from the ‘wickedness’ of natural resources, advice is yet argued to be particularly fruitful for understanding opposing agendas, for building trust and, thus, for the chance to collaborate. Written agreements are barely used as well. Among the 20 agreements, 14 are enforced institutionally or agreed upon with donor agencies. While such agreements are not particularly beneficial to collaborative steering, the non-mentioning of the various actors who are members of multi-actor platforms (such as WERENGO or the CSPOG) underlines the little sense of belonging to such collaborative initiatives and the competition rather than collaboration among actors. This, of course, hinders collaborative steering, not only because the authority of these multi-actor initiatives is undermined, but also because it shows that while members want to benefit from collaborative arrangements, they are not able or willing to contribute to them.

On network level, the various exchange networks show very low levels of reciprocity and transitivity as well as a lack of subgroups. These three measurements are indications for the trouble of governing the petroleum resources collaboratively. Moreover, the networks’ low centralization scores explain the difficulties of collaborative steering in the absence of one or a few central actors who could coordinate agendas, enforce past promises and coincide in future scopes of action. This absence denies network alters the ability to solve simple tasks such as keeping track with meeting outcomes and referring back on preceding meetings’ conclusions. It further goes hand in hand with a lack of responsibility assignment. Moreover, the assumption that low reachability would lead to the formation of efficient subgroups lacks confirmation in the data gathered for this thesis.

In the end, the combination of relational and attributive data reveals a mismatch in regard to power and trust: On the one hand, while NGOs dominate networks as the most central actors according to network measurements, state institutions are viewed as most powerful actors by network alters. On the other hand, actors who enjoy the highest trust as reliable advisors are not prominent in the advice network. And third, while civil society are viewed as most important intermediaries to broker information to local communities by network alters, they do not do justice to this assigned role in the eyes of communities.

In conclusion, the thesis identifies several network factors that hamper the collective steering of petroleum resources and revenues in Ghana: Firstly, incongruent advocacy activities over redistributive questions split civil society in Accra-based and Western Region-

based organizations. Secondly, NGOs compete for the scarce resources available rather than collaborate effectively. This divide and competition hamper collaborative initiatives like the CSPOG and undermine NGOs' credibility as reliable exchange. Thirdly, actors lack the ability to transform their social capital, i. e., their interconnectivity, to enhance their human capital, i. e., their knowledge about oil and gas matters. Fourthly, the lack of reciprocal relations minimizes the chances that actors enhance their trust in each other. Fifthly, actors lack cohesive triads and / or subgroups across exchange networks which would provide trusted environments to facilitate collaboration; and sixthly, the low density and centralization of networks complicate effective resource diffusion and the coordination of joint strategies.

## **9.2 Limitations of Empirical Results**

Even though the thesis provides a first systematic assessment of collaboration in Ghana's petroleum sector with the help of primary data, it has some caveats that are necessary to consider in regard to the just summarized findings. At first, my status as an outsider limits the validity of this work as it coined the quality and quantity of the data gained in the field. Most importantly, it might have primed the answering behavior of respondents towards keeping past exchanges secret, overemphasizing their role in petroleum governance or giving insincere answers.

Further, the question why I had deemed it necessary or at least, valuable, to research natural resource governance in Ghana and the feeling of being betwixt in multiple roles made me increasingly weary of my work and of the way I interpret and communicate results. For example, the paradigm that NGOs are automatically 'good' or the hospitality of interviewees during field research made me hesitant about discussing the more critical results of the survey and network data.

The survey results first and foremost picture the situation in the sample communities along the Ghana Gas pipeline and voice the concerns of the 333 survey participants. As every survey that works with sampling, the present study does not cover all parts of the population equally. The discrete definition of 'being affected' further led to a strong age bias induced by the fact that most farmers in Ghana are elderly people. This bias should caution against transferring central results, e.g. the role and work of NGOs, to a general anticipation of them across Ghana. Moreover, the Western Region is a unique case with its long history of natural resource extraction and the comparably high density of development projects and actors.

Even though providing unique insights into the structure and organisation of actors' day-to-day collaboration in the petroleum sector, the collection of social network data also entails some caveats. As the sixth chapter shows, the empirical results build upon interviewing only 29 actors of at least 99 actors active in Ghana's petroleum sector. Hereby,

the near impossibility to gain complete network ties is a problem that troubles most network studies in development research because of the complexities of development itself. Consequently, the results of the different networks give only a snapshot about relations, processes and practices in petroleum governance in Ghana. Moreover, the network nodes represent organizations and not individuals. As the present study shows, interviewing organizations increases the likelihood of contradicting answers and it is impossible to estimate the chance of identifying the most appropriate interview partner. At the same time, the contradictory answers may originate from respondents' tendency to make themselves more involved (more 'important') in network interviews, potentially guided by the idea that "[g]iving is, indeed, more blessed than receiving" (Blau 1968: 453), or by the fallacy that interviewees (intentionally or unintentionally) fail to report about receiving resources. These caveats trouble the sensitive network data in this research. Finally, the research design was not able to capture negative ties adequately. This problem may result from SNA's general bias towards positive ties and implicates that SNA's explanatory power is very limited in understanding contestation among actors. Yet, such contestation is as much as obvious in interaction as it is the case for collaboration.

Besides challenges in the data collection process, the SNA falls short on investigating the networks on actors level in detail. Such a focus on the actors level would have contributed to a more pronounced picture of specific actors who facilitate or constrain collaborative steering in Ghana's petroleum sector. Additionally, most network analyses forego valued ties. The unexpected deviations in the answering behavior of respondents in regard to the (non-) exchange of resources made it necessary to resort to using unvalued ties. Finally, this thesis treats unreciprocated ties as a methodological problem rather than a theoretical phenomenon. This opposes the approach of researchers such as Thurner, Stoiber, and Weinmann (2005) and Pappi, Knoke, and Bisson (1993) who argue that unreciprocated ties arise from power imbalances between actors and are, hence, interesting while investigating networks.

### 9.3 Contribution to Current Research

Despite these limitations, the thesis contributes both to research about the developing petroleum industry in Ghana and the study of social networks. With its relational research design and the unique data sets, the thesis adds to literature about oil and gas in Ghana in five distinct ways: Firstly, the focus on relations illuminates petroleum governance from a completely new angle. Contrary to the various studies that portray the potential dangers of the 'resource curse' in Ghana (Kopiński, Polus, and Tycholiz 2013; Mitchell 2012; Ross 1999), the focus on relations extracts what *is* going on in petroleum governance (rather than what *should* (not) be going on).



Secondly, the thesis cautions against normative arguments that civil society is an automate counterbalance to the ‘resource curse’. Hardly any recent publications tackle the role of civil society critically, i. e., go beyond the rather simplistic argument that civil society is important in avoiding the ‘resource curse’ (Heller 2013). Contrary to this, the present study identifies several challenges that civil society groups need to overcome if they want to play a proactive role and become a reliable partner in petroleum governance. In this regard, the present findings add new data and supporting empirical observations to Vormawor’s (2014: 93) argument that civil society organizations in Ghana fall short of strategic thinking and action and rule out collaboration through competing with each other.

The focus on relations thirdly moves the attention away from the socio-economic and ecological changes taking place in communities along the coast in the Western Region (Boohene and Pephrah 2011; Eduful and Hooper 2015; Osei-Tutu 2012; Sakyi et al. 2012). Rather, it provides a link between communities’ and petroleum actors’ levels through the mechanism of representation. By scrutinizing representation, the thesis provides novel insights into the experiences of communities and particularly cautions against the inversion of the argument that actors who are generally well accepted as representatives in Ghanaian politics are also able to represent well in the petroleum sector.

Fourthly, while many studies ask how actors can theoretically collaborate in natural resource governance (Ansell and Gash 2008; Bodin and Crona 2008; Davies and White 2012; Sreide and Truex 2013) or whether or not actors do collaborate (Lienert, Schnetzer, and Ingold 2013; Prell, Hubacek, and Reed 2007; Ramirez-Sanchez 2011), the conceptual approach of this thesis establishes arguments why actors should collaborate and the empirical data show how actors collaborate across six variants of exchange. In this regard, the thesis is able to show the necessity to go beyond simple ‘yes’ or ‘no’ questions in collaborative settings.

Fifthly, the collection of a primary network data and the application of SNA visualizes the complex reality of actors’ relations and interactions much beyond the analysis of institutional arrangements. Contrary to the various studies that target the legal framework institutionalized to govern Ghana’s petroleum sector (Banful 2013; Gary 2009; Gyampo 2010), the network analysis reveals who really acts and interacts. Moreover, through the relational focus, the research design avoids the artificial trap of differing between ‘formal’ and ‘informal’ institutions.

Besides contributions to current research about oil and gas in Ghana, the thesis adds to the study of social networks and the application of SNA. On the one hand, it shows the benefits of first getting an idea of the overall network embedding before limiting the network’s boundary in a second step. This enables researchers to get unique insights into the chances and challenges of multi-actors approaches. In this regard, the thesis differs from studies by, for example, Wonodi (2012) who concentrates on networks within

a pre-defined sector (the federal level of three Nigerian cities).

On the other hand, in minimizing the fallacies of respondents' answering behavior, the thesis sensitizes for data validity in network studies. Instead of only asking unidirectional resource exchanges, the network interviews asked respondents to report both about their outgoing and incoming ties. With this research design, the thesis was able to calculate an average confirmed correspondence of answers of maximum 30%. This comparably low percentage should push network researchers to critically question their data if they extract network data in the field.

By mixing quantitative methods with qualitative approaches, the thesis also shows the benefits of mixed-method approaches in SNA. For example, the lack of cohesive subgroups across networks and the competition among civil society groups in Ghana's petroleum sector are barely understandable without having insights into the practices of 'othering' and 'eye services'. Therefore, the study contributes to recent research about network practices (Fuhse 2009; Mische 2011; Pachucki and Breiger 2010).

In a similar vein, the thesis intrigues to understanding contestation among actors in natural resource governance. While SNA is useful to narrow down collaborative structures, it has tremendous problems to investigate contentious patterns, i. e., negative ties (Everett and Borgatti 2005; Wasserman and Faust 1994). The thesis aimed to filling this research gap by including the question 'With which of your contacts / partners are you currently not intending to collaborate in the year 2015?'. Only three out of 29 participants gave an answer to this questions. All others indicate that they cannot answer this question prospective as they would "of course collaborate in the future if the opportunity arises". In consequence, this study gives reasons to focus on contestation empirically and, inherently, on extracting negative ties.

Finally, the thesis refreshes discussions about ethics in SNA (Borgatti and Molina 2003; Breiger 2005; Kadushin 2005; Klov Dahl 2005) by evaluating ethical dilemmas in regard to an empirical example and on the foundation of gathering primary network data. Not only does the thesis pose critical questions about who owns network data (the sender of a tie; the sender *and* addressees; or researchers themselves) but it also discusses how certain data and comments have to be withhold – on expense of clear arguments – in order to protect respondents' identities.

## 9.4 Implications for Future Action and Research

Overall, as much as the idea of natural resource governance compels as an alternative to hierarchical steering by government, this thesis suggests that it is not as simple as development actors, researchers and practitioners claim it to be. Key preconditions for collaborative steering in natural resource governance are that powerful actor abstain from steering unilaterally, that less powerful actors provide necessary resources for power-balancing

strategies, and that the latter credibly show the ability of being reliable partners in governing natural resources. Moreover, it is critical that multi-actor approaches define ‘smart’ goals, i. e., goals which are specific, measurable, assignable, realistic and time-related, and which move beyond ‘standard jargons’ of international development cooperation. Finally, collaboration in complex actor-settings necessitates at least one trusted, neutrally perceived, and central actor which coordinates interest, streamlines agendas, keeps strategies on track, and maintains the overview.

In Ghana, the Public Interest Accountability Committee (PIAC) could become such a facilitating coordinator and, thus, could serve as a role model for other extractive countries. The PIAC inherently unites the several interest groups and, as a public institution, brings in the Ghanaian state with its dominant role in governing petroleum resources. Its innovative set-up is unique in Africa and as the results show, it enjoys a good reputation among all petroleum actors.

Yet, various factors need to change before the PIAC can play this coordinative role in Ghana and become a role-model for other extractive countries: First, a revision of the Petroleum Revenue Management Act, Act 815 (PRMA) is necessary as the law has, so far, failed to regulate resource transfers to the PIAC institutionally. Second, the government needs to actually release these resources for PIAC’s everyday work as well as for calling in experts for advice. Otherwise, the practice of ‘eye service’ – superficial inclusion but actual exclusion of non-state actors from governance decisions – will persist. Third, the PIAC needs to invest these resources in training its members, in knowledge generation and in knowledge dissemination. This approach could be the key for credible ‘status giving’ to balance the power of the executive. It is, fourth, crucial that the PIAC activates the social capital it inherently possesses by reaching out more actively to other petroleum actors and, potentially, the citizens directly. On an extended scope and fifth, donors need to respect the assigned role of institutions like the PIAC and should not spoil its network interactions. Yet, this currently occurs in regard to the UK-funded ‘Western Region Coastal Foundation (WRCF)’ which seeks to take up the idea of collaboratively governing the petroleum resources.<sup>203</sup> If donor agencies are really keen to turn words into action and commit themselves to ‘bottom-up’ collaboration on ‘eye level’, they would do better if supporting ‘home-grown’ institutions like the PIAC in Ghana and other developing countries.

In the broader scope of development cooperation, another lesson to be drawn from this thesis is the potential of multi-donor pooled organizations. Preceding other initiatives

<sup>203</sup> The WRCF aims to build a dialogue platform in the logic of the PIAC but with the inclusion of the private sector. In the opinion of several interviewees, the initiative lacks the experience, cultural knowledge and social capital to implement such an ambitious project, and it is perceived as an alien phenomenon, which has been designed on a drawing-board in London instead of including Ghanaian actors from the on-set. But because of its bold financial backup, it could grow to a central yet alien actor.

from 2010 onwards, STAR-Ghana has proven its effectiveness in disseminating financial resources. But more importantly, STAR-Ghana is fully integrated across the different networks and fully recognized as a partner by all network actors. As the attributive network data show, it is highly valued for its coordinating skills and knowledge in oil and gas, and is trusted across all sectors. For development cooperation this means that donors should pool resources more often, not only to make their interventions more coherent to each other but also to lift the “giver-taker-burden” from development funds beneficiaries.

Due to these critical points, this thesis suggests several implications for future research about natural resource governance in Ghana and beyond: On the one hand, scholars should critically – and not normatively – scrutinize collaborative approaches in natural resource governance. This implicates the necessity to go beyond the questions *whether* or *not* actors collaborate or why they *should* collaborate, and to ask *how* they collaborate. Strictly speaking, simple ‘yes’ or ‘no’ questions about collaboration are insufficient to understand multi-actor governance structures. Such an approach, on the other hand, calls for more researchers who gain and extract primary network data and who make SNA a more useful approach for development research. From a methodological point of view, the recurrent inconsistencies in the original networks (a maximum of 30% of claimed relations are confirmed by both sender and addressee of a tie) suggest the urgent need to include some form of ‘monitoring and evaluation’ instrument, for example by gaining both outgoing and incoming ties as done in the present thesis.

Future research should also focus on extending the discussions about how to generate high quality SNA data and on effectively designing and administering SNA questionnaires. A follow-up study with the same questionnaire and interviewees could generate longitudinal data and contribute to the emergent discussions about long-term relations. All this will not only push SNA literature but can help to improve our current understanding of unilateral, collaborative or contentious natural resource governance.

Additionally, the task of gaining and investigating negative ties provides several avenues for future research. While their existence is at hand – considering the numerous conflicting relations among actors (in natural resource governance) worldwide –, research needs more efforts to extract such data. A promising approach could be to focus on small networks that would allow to build deep trust relations between researchers and network alters. This trust could increase the possibility to retrieve negative ties.

Finally, the mismatch between relational data on the one hand and attributive data on the other is worth more investigation in future network studies. As shown in this study, the combination of relational and attributional data helps to understand the diversity of actors’ relations in petroleum governance in more depth.

Empirically, the present research urges scientists to keep track of the tremendous changes taking place in Ghana after the first discovery of oil in commercial quantities as the government’s hunger for oil revenues has only just begun. Since 2007, 25 further

discoveries have been made and projects such as the Offshore Cape Three Point (OCTP) Project, close to the Ivorian border, bear potential for conflict: Because of unclear maritime borders and, therefore, an ill-defined ownership of the offshore petroleum fields, this discovery has tremendous conflict potential between Ghana and the Côte d'Ivoire – offshore *and* onshore.<sup>204</sup>

The various problems and legal violations discussed in regard to the Ghana Gas Pipeline encourage a critical observation of the upcoming explorations and developments. Up to date, government officials repeat the promises made after the Jubilee discovery: more development for neighboring communities, employment for all, secure energy provision, and, consequently, tremendous benefits for the whole country. The present work raises serious doubts on the validity of such promises as they are clearly not an automatic accompaniment of oil and gas production. In consequence, future research should cautiously retrace the changes taking place on the community level. Even for natural resources as a unique source of opportunity, the crux of the matter will be to include citizens in the new developments.

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<sup>204</sup> The dispute over ownership between Ghana and Côte d'Ivoire has reached the International Tribunal for the Law of the Sea and necessitated talks between both countries in Geneva. The fact that these talks were brokered by the former UN-Secretary General Kofi Annan underlines the significance of solving the dispute peacefully.



# Appendix

## 1 Definition of Important Graph-Level Measurements

<i>Concept</i>	<i>Definition</i>
Brokerage	Connecting at least two disconnected nodes.
Reciprocity	Reciprocity is the fraction of dyads that are reciprocated, out of those dyads with at least one non-zero tie.
Transitivity	Measures completed triads, i. e., the percentage of edge pairs $(i,j)$ and $(j,k)$ such that $(i,k)$ is also an edge ('A friend of a friend is my friend'). Correlates with social density.
Density	The ratio of the number of edges in a network to the maximum possible number of edges.
Centralization	The concentration of edges around one single node or a small group.
Reachability	Shortest path between two nodes. If the diameter is low, then all nodes are relatively 'close' to each other and, thus, the network can be viewed as cohesive.

*Source:* Own graph based on Janssen (2006), Merrill-Matzner (2006) and Prell et al. (2010).

## 2 Definition of Actors' Centrality Measures

	<i>Measurement</i>	<i>Link to Power</i>
Degree	No. of direct connections	Actors' involvement; 'in-the-know'
In-degree	No. of in-coming (received) ties	Actors' prestige / popularity
Out-degree	No. of out-going (sent) ties	Actors' expansiveness
Closeness	Distance (shortest path) between nodes	Actors' independence
Eigenvector	Sum of an actor's links to others, weighted by their degree centrality	Relating to well-connected actors
Betweenness	No. of times a node links two disconnected nodes via the shortest path	Brokering in-between disconnected actors; potential influence over network's flows

*Source:* Own graph based on Janssen (2006), Merrill-Matzner (2006) and Prell et al. (2010).



### 3 Semi-structured Interviews: Participant Information Sheet

#### Participation Information Sheet

First let me thank you for your time and kindness to participate in this interview to help me with my research.

My name is Johanna Rapp and I am a PhD student at the Center for Development Research at the University of Bonn, Germany. I have completed my master degree in Political Science in 2012 and then worked as a lecturer and researcher for one year. My current research is conducted as part of my study to gain a PhD degree. It is financially supported by the Friedrich Ebert Foundation, a German foundation which aims at strengthening democratic values.

#### **Aim of the Study**

In my current research, I am trying to find out which actors are involved in the oil resource management in Ghana. Furthermore I would like to explore how these actors interact and which social and political changes the developing oil sector enforces, especially for communities inhabiting the Western Region. Therefore, I conduct interviews with a wide range of actors involved in this field such as local and national politicians, traditional authorities and affected individuals.

#### **Right to Refuse or Withdraw and Benefits of Participation**

I want to emphasize that you do not have to participate in this interview. You are free to withdraw your consent and discontinue answering the questions at any time. I will give you an opportunity at the end of the interview to review your remarks, and you can ask me to modify or remove portions of those if I have not understood you correctly. The participation has no direct benefits for you besides my great appreciation and gratefulness. Also there are no right or wrong answers. I am interested in your personal and individual opinion on this topic.

#### **Recording and Confidentiality**

I would like to audio record our conversation to transcript and use it later, but it is your decision to agree or reject audio recording. If you agree to it, I will preserve confidentiality in terms of your identity and I will ensure that only I have access to your interview transcript. If you wish not to be recorded, I will take notes and again all your identifying information (name, address, phone number) will be kept strictly confidential.

#### **Use of Information**

I will use the findings of this study to write my PhD dissertation and to publish papers in relevant academic and non-academic journals inside and outside Ghana. Names of none of the informants will be mentioned in the publications and I ensure confidentiality and your anonymity at all stages of the research process.

Finally I would like point out your possibility to ask questions about myself, my background or my research at any time of our conversation.

#### **Contact Details**

Johanna Rapp  
H/No. PT. 168/1  
Sawmill, Takoradi

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Email: johanna\_rapp@gmx.de

## 4 Survey: Participant Information Sheet

### HOUSEHOLD QUESTIONNAIRE

*The Western Corridor Gas Infrastructure Development Project*

–

*Responsibilities, Power and Legitimacy of Policy Implementers  
as seen by Affected Farmers and Land Owners in Ghana's Western Region*

### Participation Information Sheet

First let me thank you for your time and kindness to participate in this survey to help me with my research. My name is Johanna Rapp and I am a PhD student at the Center for Development Research at the University of Bonn, Germany. I have completed my master degree in Political Science in 2012. My current research here in Ghana is part of my aim to gain a PhD degree. It is financially supported by the German Friedrich Ebert Foundation and supported by the University of Accra, Ghana.

#### **Aim of the Study**

I am trying to find out whether and how communities, government representatives, companies, NGOs/CSOs and traditional leaders are communicating and collaborating with each other within the Oil and Gas Sector. Today, I want to find out how the recently constructed Gas infrastructure is influencing your livelihood. I am also interested in your opinion about the Oil and Gas Sector in general, how much you trust different actors and your satisfaction with the way the Oil and Gas resources are managed. The survey will take about 50-60 minutes.

#### **Right to Refuse or Withdraw and Benefits of Participation**

I want to emphasize that you do not have to participate in this survey. You are free to withdraw your consent and discontinue answering the questions at any time. Further, the participation has no direct benefits for you besides my appreciation and gratefulness. Also there are no right or wrong answers. I am interested in your personal and individual opinion on this topic.

#### **Confidentiality**

I assure you that your identity and everything you will tell is confidential. No unauthorized person will have access to the questionnaires and your answers. All your identifying information (name, address, phone number) will be kept strictly confidential.

#### **Use of Information**

I will use the findings of this study to write my PhD dissertation and to publish papers in relevant academic and non-academic journals inside and outside Ghana. I will not mention any names in the publications and I will ensure your confidentiality and anonymity at all stages of the research process.

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## 5 Survey: Household Questionnaire

### HOUSEHOLD QUESTIONNAIRE

*The Western Corridor Gas Infrastructure Development Project*

-

*Responsibilities, Power and Legitimacy of Policy Implementers  
as seen by Affected Farmers and Land Owners in Ghana's Western Region*

Questionnaire Number	
Name of Interviewer	
Name of Respondent	
Sex of Respondent <i>[0 = Female, 1 = Male]</i>	
Name of Community	
District	
Traditional Area	
Settlement Location <i>[0 = Rural, 1 = Urban]</i>	
Contact Details	

DATEINTR	Day	Month	Year
<i>[Date of Interview]</i>			

STRTIME	Hour	Minute
<i>[Time Interview Started]</i>		

## 1. Socio-Demography & Economic Activity

<b>1. How old are you?</b>	
<i>[Enter up to three digital numbers. Don't know = 997, Refuse to answer = 998]</i>	

<b>2. What is your marital status?</b>			
<i>[Do not read out response options. Tick corresponding box.]</i>			
Married	1	Single	5
Contemporary union	2	Other, please specify: _____	9
Divorced / separated	3	Don't know	997
Widowed	4	Refuse to answer	998

<b>3. How many people are currently living in your household including yourself?</b>	
<i>[Enter up to three digital numbers. Don't know = 997, Refuse to answer = 998]</i>	

<b>4. Were you born in the community you are currently living in?</b> <i>[Do not read out response options. Tick corresponding box.]</i>			
No (Migrant)	0	Don't know	997
Yes (Birthplace)	1	Refuse to answer	998

*[If Question 4 = 0]*

<b>4.1 Since when do you live in this community?</b>		
<i>[Enter up to six digital numbers. Don't know = 997, Refuse to answer = 998, Not applicable = 999]</i>	Month	Year

*[If Question 4 = 0]*

<b>4.2 Can you state the main reason for migrating to this community?</b>			
<i>[Do not read out response options. Choose corresponding box. If not clearly assignable, choose 'other']</i>			
Economic reasons	1	Other, please specify: _____	9
Personal reasons	2	Don't know	997
Political reasons	3	Refuse to answer	998
Medical reasons	4	Not applicable	999

<b>5. What is your highest level of education?</b> <i>[Do not read out response options. Tick corresponding box.]</i>			
No formal schooling	1	Bachelor Degree	6
Informal schooling only (incl. Koranic)	2	Master Degree	7
Primary School	3	Other, please specify: _____	9
Junior High School	4	Don't know	997
Senior High School	5	Refuse to answer	998

<b>6. What is your major occupation?</b> <i>[Do not read out response options. Choose corresponding box.]</i>			
Farmer	1	Unemployed	7
Fisher / Fishmonger	2	Retired	8
Trader	3	Other <i>[please specify:]</i> _____	9
Artisan <i>[please specify:]</i> _____	4	Don't know	997
Professional <i>[please specify:]</i> _____	5	Refuse to answer	998
Student	6	Not applicable	999

<b>7. On a scale from 1 to 5, how would you describe ...</b> <i>[Read out response options but not 'DNK' &amp; 'RtA']</i>							
	1	2	3	4	5	997	998
	Very bad	Fairly bad	Neither/ Nor	Fairly good	Very good	DNK	RtA
... the economic condition of Ghana currently?							
... the economic condition of Ghana before the discovery of Oil and Gas?							
... your personal living condition currently?							
... your personal living condition before the discovery of Oil and Gas?							

## 2. General Questions on Political Issues in Ghana

<b>8. How interested are you in public affairs? I am talking about politics and governance in Ghana in general.</b> <i>[Read out response options but not 'DNK' &amp; 'RtA']</i>	
Not interested at all	1
Little interested	2
Neither / nor	3
Fairly interested	4
Very interested	5
Don't know	997
Refuse to answer	998

<b>9. Did you vote in the last General Elections in 2012?</b> <i>[If yes, tick corresponding box.]</i> <i>[If no, ask: 'Can you give me the reason why you did not vote?'] [Open Question]</i>	
No <i>[please specify reason]</i> _____	0
Yes	1
Don't know / Can't remember	997
Refuse to answer	998

<b>10. Did you vote in the last District Assembly Elections in 2010?</b> <i>[If yes, tick corresponding box.]</i> <i>[If no, ask: 'Can you give me the reason why you did not vote?'] [Open Question]</i>	
No <i>[please specify reason]</i> _____	0
Yes	1
Don't know / Can't remember	997
Refuse to answer	998

<b>11. On a scale from 1 to 5, how much do you trust each of the following?</b> <i>[Read out response options but not 'DNK', 'RtA' and 'NA'. Ask whether NGOs / CSOs are familiar, if not explain. If the respondent does not understand the term, tick 999 for every upcoming question.]</i>								
	1 Not at all	2 Little bit	3 Neither / Nor	4 Fairly	5 Very much	997 DNK	998 RtA	999 NA
The President								
Your Member of Parliament								
Your District's Chief Executive								
Your District Assembly (Wo-)Man								
The Paramount Chief of your area								
Your Community Chief								
NGOs / CSOs								
Media								

<b>12. How much do you disagree or agree with the following statements?</b> <i>[Probe for strength of opinion]</i>							
	1 Strongly disagree	2 Dis- agree	3 Neither / Nor	4 Agr ee	5 Strongly agree	997 DNK	998 RtA
Most Ghanaians can be trusted.							
These days you have to be alert or some Ghanaians are likely to take advantage of you.							
Most Ghanaians are willing to help if needed.							
Ghanaians are only looking out for themselves.							

<b>13. In your opinion, what are the major challenges your community is currently facing? [Open question. List the three first mentioned challenges or less]</b>	
1.	
2.	
3.	
Don't know	997
Refuse to answer	998

*[If Question 13 ≠ 997, 998]*

<b>13.1 Which persons are most helpful in addressing these challenges? [Open question. List the three first mentioned actors or less]</b>	
1.	
2.	
3.	
Don't know	997
Refuse to answer	998

<b>14. On a scale from 1 to 5, how much, in your opinion, can the following effectively push community interests? [Read out response options but not 'DNK', 'RtA' &amp; 'NA']</b>								
	1 Not at all	2 Little bit	3 Neither /Nor	4 Fairly	5 Very	997 DNK	998 RtA	999 NA
... your Member of Parliament?								
... your District's Chief Executive								
... your District Assembly (Wo-) Man?								
... the Paramount Chief of your area								
... your Community Chief								
... NGO / CSO?								
... the Media?								

### 3. Land Acquisition and Compensation Process

<b>15. Did you lose any crops due to the construction of the Gas infrastructure? [Do not read out response options. Tick corresponding box.]</b>	
No	0
Yes	1
Refuse to answer	998

*[If Question 15 = 1]*

<b>15.1 Which kind of crops &amp; how many trees / plants of each kind did you approximately lose? [Open Question. Multiple answers allowed]</b>	
Don't know	997
Refuse to answer	998
Not applicable	999

[If Question 15 = 1]

<b>15.2 Who owned the land you were farming on? [Open Question]</b>	
Don't know	997
Refuse to answer	998
Not applicable	999

<b>16. Did you lose any land due to the construction of the Gas infrastructure? [Please emphasize: "I am <u>only</u> asking about land which was owned by <u>yourself</u>." Do not read out response options. Tick corresponding box.]</b>	
No	0
Yes	1
Not Sure / Don't know	997
Refuse to answer	998

[If Question 16 = 1]

<b>16.1 How many poles of land did you lose?</b>	
[Enter up to three digital numbers. If respondent uses other form of measurement, indicate this. Don't know = 997, Refuse to answer = 998, Not applicable = 999.]	

<b>17. Were you informed that your crops or land would be acquired before the Land Valuation Department (LVD) came to assess its value? [Do not read out response options. Tick corresponding box.]</b>	
No	0
Yes, please specify name & organization / institution: _____	1
Not sure / Don't know	997
Refuse to answer	998

<b>18. Have you received any monetary compensation so far?</b>	
[If no, tick corresponding box ⇒ Go to Question 18.1 and 18.2]	
[If yes, ask which type of loss was compensated & tick corresponding box ⇒ Go to Question 18.3 – 18.8]	
[If 997, 998 ⇒ Go to Question 19]	
No	0
Yes, I received crop compensation	1
Yes, I received land compensation	2
Yes, I received crop & land compensation	3
Not sure / Don't know	997
Refuse to answer	998

[If Question 18 = 0]

<b>18.1 Can you give me more background information why you have not been monetary compensated so far? [Open Question]</b>	
Not sure / Don't know	997
Refuse to answer	998
Not applicable	999

[If Question 18 = 0]

<b>18.2 Did you ask somebody to assist you in receiving your compensation? [Open Question]</b>	
No	0
Yes [please specify who was asked for assistance]: _____	1
Not sure / Don't know	997
Refuse to answer	998
Not applicable	999

[Affected persons, who were NOT compensated]

[If Question 18 = 1, 2, 3]

<b>18.3 How many months – from the assessment to the payment – did the compensation process take approximately?</b>	
[Enter up to two digital numbers. Don't know = 997, Refuse to answer = 998, Not applicable = 999.]	

[If Question 18 = 1, 2, 3]

<b>18.4 How much compensation in GH¢ did you receive?</b>	
[Enter digital numbers. Don't know = 997, Refuse to answer = 998, Not applicable = 999.]	
[Distinguish between crop and land compensation if applicable]	

[If Question 18 = 1, 2, 3]

<b>18.5 Did somebody explain to you how the amount of compensation was calculated? [Do not read out answers. Tick corresponding box.]</b>	
No	0
Yes [please specify:] _____	1
Don't know / Not sure	997
Refuse to answer	998
Not applicable	999

[If Question 18 = 1, 2, 3]

<b>18.6 Did you get the possibility to negotiate the amount of compensation? [Do not read out answers. Tick corresponding box.]</b>	
No	0
Yes, with [please specify name of negotiator] _____	1
Don't know / Not sure	997
Refuse to answer	998
Not applicable	999

[If Question 18.5 = 1]

<b>18.6.1 Did your effort to negotiate increase the amount of compensation? [Do not read out answers. Tick corresponding box.]</b>	
No	0
Yes	1
Don't know / Not sure	997
Refuse to answer	998
Not applicable	999

[If Question 18.5 = 1]

<b>18.6.2 Did somebody assist you in the negotiation process?</b>	
No	0
Yes [please specify who assisted] _____	1
Don't know / Not sure	997
Refuse to answer	998
Not applicable	999

[If Question 18 = 1, 2, 3]

<b>18.7 On a scale from 1 to 5, how satisfied are you with the amount of compensation you received? [Read out response options but not 'DNK' &amp; 'RtA']</b>	
Not at all satisfied	1
Little satisfied	2
Neither / nor	3
Fairly satisfied	4
Very satisfied	5
Don't know	997
Refuse to answer	998
Not applicable	999



<b>19. Have you received any other compensation, e.g. new land?</b> <i>[Do not read out answers. Tick corresponding box.]</i>	
No	0
Yes <i>[please specify]:</i> _____	1
Don't know / Not sure	997
Refuse to answer	998

<b>20. On a scale from 1 to 5, how much did your loss worsen your livelihood?</b> <i>[Read out response options but not 'DNK' &amp; 'RtA']</i>	
Not at all	1
Little bit	2
Neither / Nor	3
Fairly	4
Very much	5
Don't know	997
Refuse to answer	998

#### **4. Knowledge about the Oil and Gas Sector**

<b>21. How did you hear about the Oil and Gas discovery for the first time?</b> <i>[Open Question]</i>	
Can't remember / Don't know	997
Refuse to answer	998

<b>22. To your knowledge, who owns the Gas resources?</b> <i>[Open question]</i> <i>[Please emphasis: "I am <u>only</u> talking about the <u>Gas</u> resources."]</i>	
Not sure / Don't know	997
Refuse to answer	998

<b>23. To your knowledge, who constructed the Gas pipeline from Atuabo to Aboadze?</b> <i>[Open question]</i>	
Not sure / Don't know	997
Refuse to answer	998

<b>24. Do you know the Ghana Gas Representative (Liaison Manager, 'Community Rep') for your community?</b> <i>[Do not read out response options. Tick corresponding box.]</i>	
No	0
Yes <i>[please write name of Liaison Manager]:</i> _____	1
Not sure / Don't know	997
Refuse to answer	998

<b>25. Were you in any way informed how to behave in light of the pipeline, e.g. regarding possible dangers?</b> <i>[Do not read out response options. Tick corresponding box.]</i>	
No	0
Yes, by <i>[please write name of person/organization]:</i> _____	1
Not sure / Don't know	997
Refuse to answer	998

## 5. Interests and Information in the Oil and Gas Sector

26. On a scale from 1 to 5, how interested are you in activities related to Oil and Gas? [Read out response options but not 'DNK' & 'RtA']	
Not interested at all	1
Little interested	2
Neither / nor	3
Fairly interested	4
Very interested	5
Don't know	997
Refuse to answer	998

27. Since the beginning of this year, how often have you inform yourself about the Oil & Gas activities by ... [Read out response options but not 'DNK', 'RtA' & 'NA']								
	1 Never	2 Once	3 Occa- sionally	4 A few times	5 Regu- larly	997 DNK	998 RtA	999 NA
... listening to the radio?								
... watching TV?								
... reading newspaper?								
... talking to a Politician?								
... talking to the Ghana Gas Liaison Manager / 'Community Rep'?								
... talking to the Paramount Chief?								
... talking to your Community Chief?								
... talking to a NGO / CSO Representative?								
... talking to Friends / Family / Neighbors?								

28. On a scale from 1 to 5, how well informed do you feel about the Oil & Gas related activities taking place in your community? [Read out response options but not 'DNK' & 'RtA']	
Not informed at all	1
Little informed	2
Neither / nor	3
Fairly informed	4
Very informed	5
Don't know	997
Refuse to answer	998

## 6. Participation in Oil and Gas Related Matters

29. Since the construction of the pipeline, how often were you invited to a meeting / workshop / hearing concerning Oil and Gas related matters? [Read out response options but not 'DNK' & 'RtA']	
Never	1
Once	2
Twice	3
Three Times	4
Four times or more often	5
Don't know	997
Refuse to answer	998

*[If respondent was never invited, ask: 'Have you attended any nevertheless'? If no, tick 'NA']*

<b>30. How often did you attend such a gathering?</b> <i>[Read out response options but not 'DNK', 'RtA' &amp; 'NA']</i>	
<i>[If 1, 997, 998 or 999 ⇒ Go to Question 31]</i>	
<i>[If 2, 3, 4 or 5 ⇒ Go to Question 29.1]</i>	
Never	1
Once	2
Twice	3
Three Times	4
Four times or more often	5
Don't know	997
Refuse to answer	998
Not applicable	999

*[If Question 30 = 2, 3, 4 or 5]*

<b>30.1 Can you remember the name of the organizer of the <u>last</u> gathering?</b>			
<i>[If 'No' or 'Don't know / Not sure' ⇒ Go to Question 30.1.1]</i>			
<i>[If 'Yes' ⇒ Write down answer in letters and then go to Question 30.2]</i>			
No	0	Refuse to answer	998
Yes, please specify: _____	1	Not applicable	999
Don't know / Not sure	997		

*[If Question 30.1 = 0]*

<b>30.1.1 If you do not remember the exact name, do you remember which sector the organizer was coming from?</b> <i>[Read out response option but not 'DNK', 'RtA' &amp; 'NA']</i>			
Public Sector	1	Others, please specify: _____	9
Private Sector	2	Don't know / Not sure	997
Traditional Sector	3	Refuse to answer	998
Civil Society Sector	4	Not applicable	999

*[If Question 30 = 2, 3, 4 or 5]*

<b>30.2 On a scale from 1 to 5, how useful was the information given at the gathering?</b>	
<i>[Read out response options but not 'DNK', 'RtA' or 'NA']</i>	
Not useful at all	1
Less useful	2
Fairly useful	3
Somewhat useful	4
Very useful	5
Don't know	997
Refuse to answer	998
Not applicable	999

<b>31. Did you ever discuss a problem related to Oil and Gas with somebody else?</b>	
<i>[If 0, 997 or 998 ⇒ Go to Question 31]</i>	
<i>[If 1 ⇒ Go to Question 30.1 and 30.2]</i>	
No	0
Yes	1
Don't know	997
Refuse to answer	998

[If Question 31 = 1]

<b>31.1 What was this problem about?</b> [Open Question. Multiple answers allowed.]	
Can't remember / Don't know	997
Refuse to answer	998
Not applicable	999

[If Question 31 = 1]

<b>31.2 With whom did you discuss the problem?</b> [Open Question. Multiple answers allowed.]	
Can't remember / Don't know	997
Refuse to answer	998
Not applicable	999

[If Question 31 = 1]

<b>31.3 Did he/she solve the problem?</b> [Read out response options but not 'DNK', 'RtA' & 'NA']	
Did not solve it at all	1
Little bit	2
Neither / nor	3
Fairly solved	4
Did solve it completely	5
Don't know / Not sure	997
Refuse to answer	998
Not applicable	999

<b>32. If you have a problem considering the Oil &amp; Gas activities in the future, who would be the first actor you would ask for help? And who would be the second and third actor?</b> [Open question. Multiple answers allowed]	
1.	
2.	
3.	
Don't know / Not sure	997
Refuse to answer	998

## 7. Personal Inclusiveness and Satisfaction

<b>33. On a scale from 1 to 5, how much, in your opinion, can you personally influence the Oil &amp; Gas related activities taking place in your community?</b> [Read out response options but not 'DNK' & 'RtA']	
Not at all	1
Little bit	2
Neither / Nor	3
Fairly	4
Very much	5
Don't know	997
Refuse to answer	998

<b>34. On a scale from 1 to 5, how satisfied are you overall with the way the Gas Project is implemented in your community?</b> [Read out response options but not 'DNK' & 'RtA']	
Not satisfied at all	1
Not satisfied	2
Neither / nor	3
Fairly satisfied	4
Very satisfied	5
Don't know / Can't tell	997
Refuse to answer	998

<b>35. On a scale from 1 to 5, do you feel any tension in your community due to the Gas Project?</b> [Read out response options but not 'DNK' & 'RtA']	
Not at all	1
Little bit	2
Neither / Nor	3
Fairly	4
Very much	5
Don't know	997
Refuse to answer	998

<b>36. On a scale from 1 to 5, how much, in your opinion, ...</b> [Read out response options but not 'DNK' & 'RtA']							
	1 Not at all	2 Little bit	3 Neither / Nor	4 Fairly	5 Very much	997 DNK	998 RtA
... has Ghana benefitted from the Oil & Gas resources so far?							
... have you personally benefitted from the Oil & Gas resources so far?							

## **8. Performance of National Policy-Implementers**

<b>37. Which of the following persons ever visited your community to talk with you about the Gas infrastructure?</b> [Read out response options. Multiple answers allowed. Probe for any other Representative]					
	0 No	1 Yes	997 DNK	998 RtA	999 NA
Your Member of Parliament					
Your District's Chief Executive					
Your District Assembly (Wo-) Men					
Ghana Gas Official Representative [not Liaison Manager / 'Community Rep']					
The Paramount Chief of your area					
NGO / CSO Representative, please specify: _____					
Media Representative					
Other, please specify: _____					

<b>38. On a scale from 1 to 5, how much do you think the following are promoting the interests of citizens affected from Oil &amp; Gas activities?</b> [Read out response options but not 'DNK', 'RtA' & 'NA']								
	1 Not at all	2 Little bit	3 Neither / Nor	4 Fairly	5 Very much	997 DNK	998 RtA	999 NA
Your Member of Parliament								
Your District's Chief Executive								
Your District Assembly (Wo-) Man								
Ghana Gas								
The Paramount Chief of your area								
Your Community Chief								
NGOs / CSOs								
Media Representatives								

39. On a scale from 1 to 5, how satisfied are you with the performance of the following in addressing local concerns regarding the Oil & Gas activities? [Read out response options but not 'DNK', 'RtA' & 'NA']								
	1 Not at all	2 Little	3 Neither / Nor	4 Fairly	5 Very	997 DNK	998 RtA	999 NA
The President								
Your Member of Parliament								
Your District's Chief Executive								
Your District Assembly (Wo-)Man								
Ghana Gas								
The Paramount Chief of your area								
Your Community Chief								
NGOs / CSOs								
Media								

### 9. Trust, Power and Legitimacy in/of Policy-Implementers

40. On a scale from 1 to 5, how much do you trust each of the following in matters related to Oil and Gas? [Read out response options but not 'DNK', 'RtA' & 'NA']								
	1 Not at all	2 Little bit	3 Neither / Nor	4 Fairly	5 Very much	997 DNK	998 RtA	999 NA
The President								
Your Member of Parliament								
Your District's Chief Executive								
Your District Assembly (Wo-)Man								
Ghana Gas								
The Paramount Chief of your area								
Your Community Chief								
NGOs / CSOs								
Media								

41. On a scale from 1 to 5, how much do you think the following influence the way Oil & Gas revenues are invested on the community level? [Read out response options but not 'DNK', 'RtA' & 'NA'. Probe for strength of opinion]								
	1 Not at all	2 Little bit	3 Neither / Nor	4 Fairly	5 Very much	997 DNK	998 RtA	999 NA
The Paramount Chief								
Your Community Chief								
NGO / CSO								
Media								

[If Question 41 = 2, 3, 4 or 5]

41.1 Do you disapprove or approve of the following having influence although citizens did not vote for them like they do for the Government? [Read out response options but not 'DNK', 'RtA' & 'NA'. Probe for strength of opinion]								
	1 Strongly disapprove	2 Disapprove	3 Neither / Nor	4 Approve	5 Strongly approve	997 DNK	998 RtA	999 NA
The Paramount Chief								
Your Community Chief								
NGO / CSO								
Media								

42. How much do you disagree or agree with the following statements? [Read out response options but not 'DNK', 'RtA' & 'NA'. Probe for strength of opinion]								
	1 Strongly disagree	2 Dis- agree	3 Neither / Nor	4 Agr ee	5 Strongly agree	997 DN K	998 RtA	999 NA
Traditional Leaders are necessary to control what the Government is doing.								
NGOs / CSOs are necessary to control what the Government is doing.								
Media are necessary to control what the Government is doing.								
Traditional Leaders are useful to mediate between the citizens and the Government.								
NGOs / CSOs are useful to mediate between the citizens and the Government.								
Media are useful to intermedate between the citizens and the Government.								

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**THE FOLLOWING QUESTIONS ARE ONLY TO BE DISCUSSES WITH THOSE REPSONDENTS WHO KNOW NGOs / CSOs; FOR ALL OTHERS, TICK 999**

### **10. Civil Society Assessment**

43. Have you ever taken part in an NGO / CSO project / program / workshop?	
<i>[If no ⇒ Go to Question 44]</i>	
<i>[If yes ⇒ Go to Question 43.1 and 43.2]</i>	
No	0
Yes	1
Refuse to answer	998
Not applicable	999

*[If Question 43 = 1]*

43.1 Can you please tell me more about this project / program / workshop? [Open question]
Name:
Date of project:
Timeframe of own involvement:
Role:

*[If Question 43 = 1]*

43.2 On a scale from 1 to 5, how useful was your participation in the project / program / workshop? [Read out response options but not 'DNK', 'RtA' & 'NA']	
Not useful at all	1
Little useful	2
Fairly useful	3
Somewhat useful	4
Very useful	5
Don't know	997
Refuse to answer	998
Not applicable	999

<b>44. Can you please recall all the names of NGOs / CSOs you know about?</b>	
Don't know any	997
Refuse to answer	998
Not applicable	999

<b>45. Now I will read out a list with names of NGOs / CSOs who are active in the Oil and Gas Sector. Of which of the following NGOs / CSOs have you heard of?</b>					
	0 No	1 Yes	997 DNK	998 RtA	999 NA
Ahanta Youth Association					
African Centre for Energy Policy (ACEP)					
Association of Small Scale Industry – Nzema East (ASSI)					
Centre for Public Interest Law (CEPIL)					
Centre for Society and Community Advancement (CESCA)					
Community, Land & Development Foundation (COLANDEF)					
Friends of the Nation (FoN)					
Ghana Civil Society Platform on Oil and Gas					
Ghana National Canoe Fishermen’s Council – WR (GNFC)					
Ghana Wildlife Society (GWS)					
Integrated Action of Development Initiatives (IADI)					
Kumasi Institute of Technology, Energy and Environment (KITE)					
Network for Women’s Rights in Ghana (NETRIGHT)					
Nzema Youth Association					
Platform for Coastal Communities (PCC)					
United Civil Society Organization Nzema East District (UCSOND)					
Western Region Network for NGOs (WERENGO)					
WiLDAF Ghana [ <i>NGO promoting Women’s rights</i> ]					

ENDTIME	Hour	Minute
[ <i>Time Interview Ended</i> ]		

<b>Interviewer Comments</b> [ <i>Please note here any interesting / unique stories the respondent told.</i> ]



## 6 Social Network Analysis: Participation Information Sheet

### SOCIAL NETWORK ANALYSIS (SNA) QUESTIONNAIRE

#### CONTROL, COOPERATION AND CONTESTATION AMONG POLICY-IMPLEMENTERS IN GHANA'S OIL AND GAS SECTOR

#### Participation Information Sheet

First let me thank you for your time and kindness to participate in this survey to help me with my research. My name is Johanna Rapp and I am a PhD student at the Center for Development Research at the University of Bonn, Germany. I have completed my master degree in Political Science in 2012. My current research here in Ghana is part of my aim to gain a PhD degree. It is financially supported by the German Friedrich Ebert Foundation (FES) and supported by the University of Ghana.

#### **Aim of the Study**

My research has two major parts: Firstly, I am trying to find out how farmers and landowners who lost crops or land due to the Ghana Gas pipeline construction perceive the current developments in the Oil and Gas Sector and whom of the various policy-implementers ("stakeholder") they trust. Therefore, I am conducting a household survey in the seven affected districts. Secondly, I am trying to find out whether and how the various stakeholders from the public, private, traditional and civil society sector are communicating and collaborating with each other. For this purpose, I am currently conducting the SNA Questionnaire with your help. The survey will take about 40-60 minutes.

#### **Right to Refuse or Withdraw and Benefits of Participation**

I want to emphasize that you do not have to participate in this survey. You are free to withdraw your consent and discontinue answering the questions at any time. Further, the participation has no direct benefits for you besides my appreciation and gratefulness. Also there are no right or wrong answers. I am interested in your personal and individual experience.

#### **Confidentiality**

I assure you that your identity and everything you will tell is confidential. No unauthorized person will have access to the questionnaires and your answers. All your identifying information (name, address, phone number) will be kept strictly confidential.

#### **Use of Information**

I will use the findings of this study to write my PhD dissertation and to publish papers in relevant academic and non-academic journals inside and outside Ghana. I will not mention any names in the publications and I will ensure your confidentiality and anonymity at all stages of the research process.

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## 7 Social Network Analysis: Questionnaire

### CONTROL, COOPERATION AND CONTESTATION AMONG POLICY-IMPLEMENTERS IN GHANA'S OIL AND GAS SECTOR<sup>1</sup>

#### PART I – PRELIMINARY QUESTIONS

- I. Since when does your organization exist?
- II. What is your position in the organization and since when do you occupy this position?
- III. Since when is your organization active in the Oil and Gas Sector?
- IV. How would you define the main focus area of your organization's work in the Oil and Gas Sector?
- V. Can you please state three goals/aims you are trying to achieve with your work within the Oil and Gas sector (three catchphrases/keywords)
- VI. [NGOs only] How much funding have you received in the year 2014 and to whom?

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#### PART II – SNA QUESTIONS

##### GENERAL COMMUNICATION

1. In the year 2014, with which of the following actors<sup>2</sup> have you interacted with, by face-to-face talks, telephone, emails or any other communication means concerning matters related to Oil and Gas in Ghana? [COMPILE LIST]
2. In the year 2014, with which of these contacts did you officially work together by implementing a project together (based on a MoU or contract)?

##### PERSONAL MEETINGS

3. How many times, in the year 2014, have you asked each of your contacts / partners for a personal meeting to discuss matters related to Oil and Gas?
4. How many times, in the year 2014, have each of your contacts / partners asked you for a personal meeting to discuss matters related to Oil and Gas?

##### ADVISING ACTIVITIES

5. How many times, in the year 2014, have you asked each of your contacts / partners to give you advise related to Oil and Gas?
6. How many times, in the year 2014, have you been asked from each of your contacts / partners to give him / her advise related to Oil and Gas?

##### ADVOCACY ACTIVITIES

7. How many times, in the year 2014, have you asked each of your contacts / partners to assist or collaborate in advocacy activities (campaigns, promoting strategies, collecting data) related to Oil and Gas?
8. How many times, in the year 2014, have you been asked from each of your contacts / partners for your assistance / collaboration in advocacy activities (campaigns, promoting strategies, collecting data) related to Oil and Gas?

##### HANDING OUT RESOURCE

9. How many times, in the year 2014, have you handed out your own resources (financial, staff, office space) to each of your contacts / partners for activities related to Oil and Gas?
10. How many times, in the year 2014, did each of your contacts / partners hand out his/her own resources (financial, staff, office space) to you for activities related to Oil and Gas?

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<sup>1</sup> Do not use or cite without permission of author.

<sup>2</sup> Individual or collective who aspires influence through organizational and/or institutional means.

## 8 Social Network Analysis: Roster of Network Actors

Name Respondent: \_\_\_\_\_

Organization: \_\_\_\_\_

Place & Date: \_\_\_\_\_

Selection of Policy-Implementers / Stakeholders in the Oil and Gas Sector	
<i>Sector</i>	<i>Organization</i>
<i>Public (National)</i>	Environmental Protection Agency (EPA)
	Petroleum Commission (PC)
	Ministry of Energy and Petroleum (MoE)
	Ministry of Finance (MoF)
	Ministry of Local Government and Rural Development (MLGRD)
	Parliamentary Sub-Committee on Energy (PSCoE)
	Public Interest and Accountability Committee (PIAC)
	Members of Parliament (MPs)
	Ghana Revenue Authority (GRA)
<i>Public (Districts)</i> <sup>1</sup>	Development Planner (DevPlan)
	District Chief Executives (DCEs)
	District Assembly Men (DAs)
	Fisheries Commission
<i>Traditional</i>	Western Regional House of Chiefs
	Paramount Chiefs
	Community Chiefs
	Queen Mothers
<i>Private</i>	Tullow
	GNPC (incl. now GG)
	VRA
	Kosmos
	ENI
<i>Donor</i>	DANIDA (Denmark)
	DFID (UK)
	GIZ (Germany)
	JICA (Japan)
	NORAD (Norway)
	SDC (Switzerland)
	USAID (USA)
	STAR-GHANA (DFID, DANIDA, EU, USAID)

<sup>1</sup> Ahanta West / Ellembelle / Jomorro / Mphor / Nzema East / Tarkwa Nsuaem / Shama / STMA

Name Respondent:

Organization:

Place &amp; Date:

<i>Civil Soc. (I-NAT)</i>	CARE Ghana
	IBIS
	International Union for Conservation of Nature and Natural Resources (IUCN)
	KASA Initiative Ghana
	Oxfam
<i>Civil Society (ACC)</i>	African Centre for Energy Policy (ACEP)
	African Centre for Economic Transformation (ACET)
	Centre for Public Interest Law (CEPIL)
	Ghana Center for Democratic Development (CDD)
	Ghana Civil Society Platform on Oil and Gas
	Integrated Social Development Centre (ISODEC)
	Kumasi Institute of Technology. Energy and Environment (KITE)
<i>Civil Society (WR)</i>	Community. Land & Development Foundation (COLANDEF)
	Ghana National Canoe Fishermen Council – WR (GNCF)
	Friends of the Nation (FoN)
	Platform for Coastal Communities (PCC)
	United Civil Society Organization Nzema East District (UCSOND)
	Western Region Network for NGOs (WERENGO)
<i>Media</i>	PenPlusBytes (PPB)
	Radio Stations
	Institute Finance and Economic Journalists (IFEJ)
	Ghana Journalist Association (GJA)
<i>Multilat. Agencies</i>	European Union (EU)
	World Bank (WB)
<i>Others</i>	Auditor General Department (AGD)
	Security Agencies (Maritime, Navy, etc.)
	Enterprise Development Centre (EDC)
	Kwame Nkrumah University of Science and Technology (KNUST)

## 9 Social Network Analysis: Matrix to Fill During Interviews

QU-No Name Organization Place Date	
Question I	
Question II	
Question III	
Question IV	
Question V	
Question VI	



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19
SDC																			
USAID																			
STAR-GH																			
CARE																			
IBIS																			
IUCN																			
KASA																			
NRGI																			
Oxfam																			
ACEP																			
ACET																			
CEPIL																			
CDD																			
Platform																			
ISODEC																			
KITE																			
SEND																			
COLANDEF																			
GNCFC																			
FoN																			
PCC																			
UCSOND																			
WERENGO																			
PPB																			
Radio																			
IFEJ																			
GJA																			





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