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Conceptualisation of Management Efficiency in the Third-World Countries Managing Oil and Gas Sectors of the Economy: Ghana Perspective

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Abstract *This research paper is a conceptual and theoretical presentation and analysis of existing sources of information relevant to the topic. It is an exploratory study to pave way for future quantitative studies. The discussion concluded that Ghana needs to be more robust when it comes to management efficiency in organisations. Transactions and government dealings must be well negotiated by officials as experts, and not as politicians. Experts look to the future and at the masses as a whole, whereas politicians take decisions that are more beneficial to them and their relations, and pretend that it is for the entire country. Therefore, political will power is a moderator between the oil and gas sector and management efficiency. Hence, a recommendation is made for future research to test the hypothesis and also establish how the relationships are correlated quantitatively. Ghana government has only a 4 year mandate to rule or govern, and therefore, they always rush discussions of negotiations and sign quick contracts in the oil and gas sector in a haste, just to score political points, without much consideration to the future. As a result, the international investors knows how to struck a deal with the Ghana governments in their favour and all these amounts to lack of management efficiency coupled with weaknesses in the constitution of Ghana.*

Keywords *Management Efficiency, Oil and Gas Sector, Revenue, Political Will, Investors, Partners*

INTRODUCTION

This research is considered an applied research. All over the world, it has emerged that countries that have achieved growth and advancement into an international status are linked to natural minerals like the oil and gas industry production and business. Therefore, since Ghana has discovered oil and gas, and now is exploring and producing more oil and gas as part of its economic achievements, the question still remains, to what extent are Ghanaians and the Ghana economy benefiting from this discovery and production of oil and gas, which has transformed other parts of the world economies? According to Abdulai (2013), strong leadership together with management efficiency is the bedrock to achieving and sustaining development through national production and trade of oil and gas. Realistically, the world consumption of crude oil amounts to 90% globally and the discovery of hydrocarbons has mixed reactions from different countries, since its exploitation has helped advance some countries, while others are yet to witness such blessings in their country; Ghana is not an exception (Abdulai, 2013). In view of this, it is important to investigate the management efficiency practices in the Ghana oil and gas sectors for a clear determination as to what needs to be done to improve the benefits, where there are lapses.

Pawlowski et al. (2009) stated that Drucker (1994) defined efficiency as a kind of habit which people turn to learn upon time to become professionals; it is the main element of organisational and human development, which leads to satisfaction, in order for society to flourish as a fulfilment of a national objective. In simple terms, efficiency refers to the realisation of goals and objectives, which the oil and gas sectors are expected to adopt, and this would be viewed in line with agreements of contracts, policies, international corporations, and private sector participation methods or mechanisms used.

BACKGROUND OF THE STUDY AND THE GAPS

It was in 2010 that Ghana joined the legion of oil producing countries in commercial quantities (Abdulai, 2013). Tullow Ghana Limited is a major partner in the jubilee field, together with others, namely EO Group and Kosmos Energy (Environmental Protection Agency, 2008; Abdulai,

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2013). It is noted that environmental accounting should be pursued and adopted in order for Ghana to achieve sustainable development within the oil and gas sector of the economy (Abdulai, 2013), and that environmental accounting is defined as a system of preparing natural resources by physical accounts in line with the calculation and estimation of depletion of the maintenance costs that is required to sustain the natural resources' continuous use. Therefore, there is a need to research how management efficiency is applied in practice by Ghana oil and gas sectors towards propagating development using these 2 natural resources.

Abdulai (2013) argued that the fundamental question of intergenerational equity is whether the country wants to achieve sustainability impact or sustainability income with oil and gas production. This can only be achieved through the application of management efficiency at all levels and sectors of the industry. Oil and gas experts have recommended that using the oil and gas funds to grow and improve the livelihood of the citizens by providing better social amenities and growing the human resource base are the best methods of achieving intergenerational equity and sustainable impact (Abdulai, 2013). This simply implies that there should be improvement in the local content participation and development by building infrastructures and human resources where citizens will be actively involved in the economic affairs for true development.

The Government of Ghana is responsible for providing environmental regulatory laws to guide and enforce oil companies' accountability to the environment through compliance with health and safety rules and regulations (Abdulai, 2013). With these, it requires a very serious political will to enforce the laws and acts that are promulgated. Such advice needs to be investigated as to how far this has been. That is to say, is there any serious management efficiencies complied with in the oil and gas sectors? Abdulai (2013) further advised that there must be many indigenous organisations as revenue authorities placed on the Floating Production Storage and Offloading (FPSO) for equity as in management efficiency.

Moreover, companies in the oil and gas sectors have the duty and responsibility to guide and protect the land and the sea within which they work, in order to secure and sustain the environment (Abdulai, 2013); previous researches showed that there is a link between organisational profitability and the security of environmental protection. All these make one question whether there is management efficiency in their operations with the Government of Ghana and the stakeholders. The following are the variables that are associated with this research: oil and gas sector (independent variable), political will (moderator), and management efficiency (dependent variable).

Fig. 1 shows Ghana's offshore oil fields as the government sold to companies.

Source: GNPC, 2011; Kastning, 2011.

Fig. 1: Ghana's Oil Blocks

Fig. 1 depicts the various portions or blocks that have been sold to international foreign companies due to lack of Ghana's poor financial and resources capacity, and the knowhow. Ghana's share in oil and gas production is very small; Ghana cannot own its minerals without selling it out. The same circumstances apply to many Ghana-owned companies or organisations that have been sold, in other words, privatised to foreign owners. An example of this is the Vodafone Ghana, which used to be Ghana Telecommunication, and recently, Ghana Electricity Corporation, which has also just been threatened to be sold to foreign buyers. The question is, does Ghana practice management efficiency at all in all its dealings as a country, to achieve better development.

AIM/PURPOSE

The main aim of this research is to investigate the management efficiency in the oil and gas sectors, whereas the ultimate purpose is to propose for future scientific measurement evidences a model to show the gaps (affects) and/or effects of the lack of proper management efficiency practices within the oil and gas sector policies in Ghana and beyond.

RESEARCH OBJECTIVES

- The specific objective of this study is to examine whether there is management efficiency practices in the third-world countries within the oil and gas sectors.
- To establish a conceptual model/framework.

HYPOTHESIS

The following are the associated hypothesis designed:

H1: Within the Ghana oil and gas sector, there is significant growth achievements and human capital development through the positive influence of best practices of management efficiency.

H1a: Political will power positively influences the oil and gas sector.

H1b: Political will power moderates the oil and gas sector and management efficiency.

H2: The oil and gas sector has a positive correlation and influence on management efficiency.

PROBLEM STATEMENT

Theoretical

The Petroleum Annual Report, Ghana (2018), clearly stated that price fluctuations is one of its challenges; the International Monetary Fund (IMF) may reduce its economic growth forecasts. According to Yijie and Jing (2005), one of the limitations of management is low management efficiency, which has already become a serious restrictive phenomenon of the society and development of the economy, where developing nations or third-world countries like Ghana, are not exceptions to the problem.

The following are the main concern areas of management efficiency (Pawlowski et al., 2009): lack of efficient ways of approach, presentation, and measurement of policies under consideration; divisional problem of efficiency into organisational, managerial, and economic areas of consideration; lack of increase in organisational efficiency to negotiate contracts and deals properly; lack of proper determination of efficient processes of planning, organising, making decisions, motivating, controlling, and coordinating in management efficiency; lack of efficiency with regard to the process of human resources management in areas such as selection, recruitment, training, and development, and use of efficient management systems; and lack of time management and poor management style. All these factors affect the levels of management efficiency towards achieving organisational or national goals and objectives. These are the concerns surrounding the oil and gas sector negotiations of contracts and production for sales in the third-world countries that have joined the league of oil producing countries. Hence, the need to investigate, to what extent the poor countries with oil and gas production apply management efficiency to gain advantage for development.

Practitioner or Practical

Kastning (2011) wrote that there is an argument as to who owns the oil and gas; the economic facts argued that it is the Government of Ghana that owns the natural resources in, under, or upon any land with the control power vested in the president, as stipulated in article 257(6) of the 1992 Constitution of Ghana. The ironic situation about this ownership of natural resources, which has been a challenging factor, is that apparently the Government of Ghana or the president do not own or control the oil and gas sector projects, because they had been sold in 2004 to the following companies to have the exploration rights, production, and development of the offshore blocks: (1) Deepwater Tano Block: Tullow Oil & Gas own 49.95%; Kosmos Energy own 18%; Anadarko Petroleum Corporation own 18%; Ghana National Petroleum Corporation (GNPC) for the Ghana government as a partner own 10%; and Sabre Oil & Gas own 4.05%. (2) West Cape Three Point: Kosmos Energy operator own 30.875%; Anadarko Petroleum Corporation own 30.875%; Tullow Oil & Gas own 22.896%; Ghana National Petroleum Corporation (GNPC) for the Ghana government own 10%; EO Group own 3.5%; and Sabre Oil & Gas own 1.854%. (3) Jubilee Field (located in both blocks): Tullow Oil & Gas operator own 34.705%; Kosmos Energy (as technical operator for development) own 23.491%; Anadarko Petroleum Corporation own 23.491%; Ghana National Petroleum Corporation (GNPC) for the Ghana government own 13.75% (i.e. 10% carried interest, and a potential 3.75% working interest if it is decided to apply for back-in rights within 60 days after production has started); Sabre Oil & Gas own 2.813%; and EO Group own 1.75% (Offshore-Technology, 2011; Kastning, 2011).

The above blocks sold by the Ghana government points to the fact that third-world countries such as Ghana may not have the capacity and know-how to apply management efficiency in owning even up to 75% of its natural resources, such as oil and gas discovery. Hence, this research investigates whether due diligence was applied in selling an important natural resource and owning a very little percentage. The justification given was that traditionally, lands are owned by and entrusted to the Chiefs by stools, skins, and families or clans, or the head of the family. Ironically, the natural owners of these lands do not own the minerals under or upon any of the lands in Ghana, but rather they belong to the Government of the Republic of Ghana, as stated in the 1992 constitution, as the power and authority given to the president (Kastning, 2011). Kastning (2011) stated that Professor Kenneth Attafua, who was Executive Director of the Justice & Human Rights Institute Ghana, lamented that at least there should have been a sense of ownership, giving respect to the local communities for the oil and gas discovery as soon as these minerals were found. There should have been proper communication between the government and the local communities but there was not.

This points to the fact that due diligence by the application of management efficiency was not adopted by the government then, before going ahead and selling all the oil and gas blocks. This clearly shows that there may not have been any public participation or consultation, and only the government took the decisions because of the constitution (Osabutey, 2010). Hence, there is a gap in the Ghana 1992 constitution, which is lack of management efficiency between the Government of Ghana and the true land owners. How can people own land but cannot own minerals in it or upon it? If anything at all, there must be some management efficiency to do things right officially to avoid conflict of interest and neglect of a citizen's participation in decision making. Tullow Oil & Gas is an Irish independent exploration and production company; Kosmos Energy is an independent American oil and gas exploration and production company; Anadarko Petroleum Corporation is one of the largest in the world's independent oil and gas exploration and production companies in Texas, USA; Ghana National Petroleum Corporation (GNPC) was founded in 1985 in Ghana for the Government of Ghana; and EO (Edusei-Owusu) Group registered in Ghana by a Ghanaian called Dr Kwame Barwuah Edusei and George Owusu. This does not belong to the state. Sabre Oil and Gas, Inc. engages in the production of oil and natural gas, which was incorporated in 1989, based in Derrick City, Pennsylvania, USA. Literature reviewed showed that Sabre Oil & Gas Holdings Ltd. is based in Geneva, Switzerland, which operates a subsidiary of Petroleum in Oil and Gas Corporation of South Africa (SOC), Ltd. Hence, it is unclear which of these two companies is the one operating in Ghana. Further investigation is required to establish the actual company behind Sabre Oil and Gas Holdings.

Limitation

This study is limited in scope to only management efficiency, and by definition, it is knowing what is right and doing it right, and in relationship to policies and systems, and not by formula calculation of performance. Management efficiency is not management performance. They are 2 different functions. Hence, for this research, it is only necessary to investigate management efficiency theories and secondary sources.

LITERATURE REVIEW

Yijie and Jing (2005) argued that management efficiency simply refers to the quantity of information that is necessary for a manager to finish in units of time, with a corresponding system and method used in measuring the management efficiency. With this research the management efficiency is attributed to utilisation of oil and gas revenues, enactment of policies for agreements, and disbursement of funds for development. Economic development trends, together with the global economic crisis, indicated that low quality performance and interdependence of management efficiency are the real indicators (Joseph et al., 2014; Paruchuri & Misangyi, 2014; Ragozzino & Moschieri, 2013; Bagautdinova, 2014). Bagautdinova (2014) concluded that in this modern era there is a need for second dimensional measurement of management efficiency.

Pawlowski et al. (2009) argued that the management process in this modern era can be considered the main pillars in decision-making, in terms of conditions for the achievement of organisational goals and objectives. There are three main efficiency levels of approach, namely process level, organisational level, and workstation level; the efficiency of solving a problem will depend on the rationality of the process (Pawlowski et al., 2009). Pawlowski et al. (2009) identified 12 main principles as a guide towards attaining management efficiency in all dealings or negotiations. These are: clearly defined goals/objectives; using common sense during negotiations; obtaining professional backup or advice; being disciplined; being fair and possessing just behaviour; reporting immediate flaws; maintaining order in the process and cause of action; setting standards and norms to follow even in the operational level and being adjustable to unfavourable conditions; identifying standardised methods of work; providing written guides of everything discussed, as proper written instructions and regulations; and setting prices or reward systems for everything concluded on, for efficiency (Holstein-Beck, 2001).

Considering the bureaucratic aspects of management efficiency, a concept that was introduced by Weber in Holstein-Beck (2001), the following were identified as the attributes that reflect the highest efficiency and human rationality in decision-making during negotiations of national agreements: what is the purpose of the actions under consideration?; what is the precision of the actions?; how quick must they be?; do they need an ambiguous character?; will they be continuing the activity in the near future?; is there any use of discretion?; is there subordination?; are conflicts of interest addressed amicably?; and are both personal and economic materials properly accounted?. These are components that must be taken into consideration when entering into any negotiations for contracts of agreements for a country, especially in the oil and gas sectors. Moreover, the humanistic aspect of management efficiency model was suggested by D. J. Lawless, who said that there cannot be management efficiency without efficient teams of people, just as the below model depicts (Holstein-Beck, 2001).

- There must be a relaxed atmosphere that supports informal behaviour.
- There must be extensive discussions on the methods and means required for the task, before approaching it.
- Goals and objectives for the task must be formulated in a manner that will make it easy for everybody to understand, working towards achieving the goals.
- Other people's suggestions must be considered and complied with as a rule and each suggestion must be taken seriously, and people should be allowed to speak their minds.
- Disagreements must be analysed carefully for the causes, and with the wisdom of thoughts, try not to destroy good ideas.
- There can be votes in order to take proper decisions that represent the entire society or organisation.
- Criticisms must be allowed since it will not cause any threat to the objectives.
- A clear idea of how to perform and execute plans and agreements must be identified.

The question now is, is that how the oil and gas sector agreements of contracts followed the above with due diligence. In the organisational aspect of management efficiency, as B. K. Scanlan in Holstein-Beck (2001) identified, there are 6 rules to follow. These are: to maintain and define the high requirements in relationship to outcomes; to make the people aware of the current positions; to set up clear communication rules for every process; to provide an atmosphere of encouragement or support; appropriately delegate rights, obligations, and responsibilities; and set up evaluation and directive systems to be followed by all.

Oil and Gas Policy in Ghana

Odonkor (2015) stated that Ghana lost $70 million potentially in the petroleum upstream sector from Kosmos, Sabre Oil and Gas, EO Group, and PetroSA due to their untaxed acquisitions, which made them exploit such a loophole in Ghana tax laws. This boils down to the fact that there was no proper management efficiency at play on the side of Ghana negotiators since they did not know how. Ghana became a member of the Extractive Industries Transparency Initiative (EITI) in 2002 so that governments, companies, NGOs, and international agencies may be encouraged to develop a framework together, to enable transparent payments by the extraction industries (Kastning, 2011). The main criticism about the EITI is the lack of management efficiency, which is because there are no compulsory guidelines for the whole setup and it has become a deficit; and even in the oil and gas sector there has not been improvement on transparency because there are no legal measures to support EITI standards (Kastning, 2011).

Petroleum Revenue Management Bill was proposed by the Ghana government in early 2010, that is, after they had started lifting/drilling oil to be used as a legislative instrument to regulate the use of rents for management efficiency throughout the oil and gas industry (Kastning, 2011). It was suggested in the bill to use 30% of the oil revenue to support long-term funding while using the other 70% for the main stream to support government annual budgets; this bill was pending in parliament for more than a year (Kastning, 2011). During the parliamentary debate about the bill, the stringent issue was the percentage distribution. Hence, the Public Interest and Accountability Committee (PIAC) was established to enhance public transparency and accountability towards the management of the petroleum revenue (Ghana News Link, 2011; Kastning, 2011).

In Oman, Petroleum Development Oman (PDO) is the main operator producing almost all the national crude oil, which is 60% owned by the government; the remaining 40% is owned by a consortium of international oil companies, that is, Shell owns 34%, Total owns 4%, and Partex owns 2% (Figgins et al., 2018). It is stated that the PDO is responsible for all of Oman's natural gas supply. Also, Libya's Petroleum Law No. 25 1955 was the time the concessions were awarded, whereby in 1968 there were 137 concession agreements with over 40 different operating companies (Kordvani, 2012). And by 1970, the Libyan government initiated a lot of renegotiations by imposing tougher fiscal terms on International Oil Companies (IOCs) through favourable market conditions as it was to their advantage. Therefore, in 1972, agreements by participation replaced the concessions, which then transferred 51% of all the available concessions to the Libyan National Oil Company (NOC). Moreover, the Libyan government established the Exploration and Production Sharing Contracts (EPSA), which are subject to the Petroleum Law that sets out the principles they should follow. Therefore, within the EPSA, the Libyan government retained ownership of the oil fields through NOC, whereas the oil companies are regarded as contractors (Kordvani, 2012). Meanwhile, a more complex and detailed ownership of oil and gas can be found in Aladeitan's (2013) study, titled 'Ownership and control of oil, gas, and mineral resources in Nigeria: Between legality and legitimacy'. Can Ghana have something similar to Oman and Libya?

Gyampo (2016) argued that many more developments can be carried out by the government if other critical bills are enacted as part of social interventions to implement, without further delay from government and other stakeholders. Despite the fact that a few successes have been achieved, a lot more is needed through management efficiency for the betterment of Ghana, if the government provides more information on how the revenues are used. Fig. 2 and 3 show the proposed conceptual model and theoretical framework, respectively, which is deduced from the above literature reviewed for scientific testing of their correlations for future research.

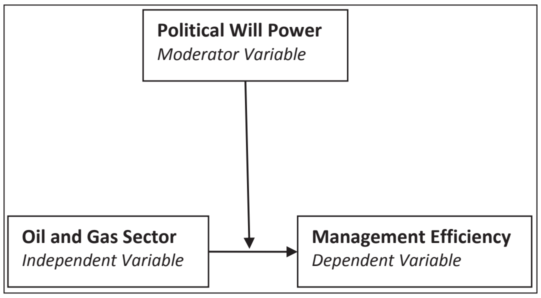


Fig. 2: Proposed Conceptual Model

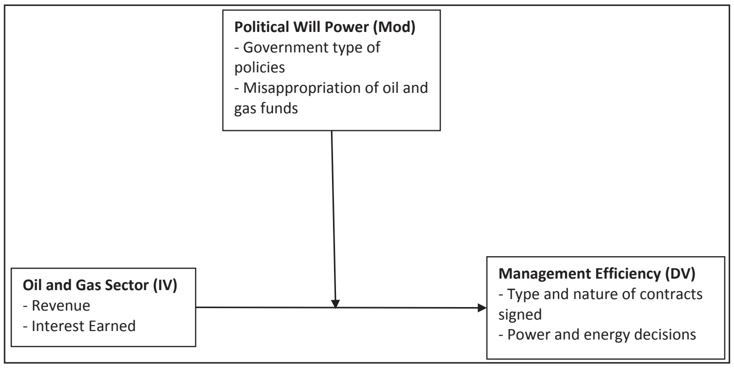
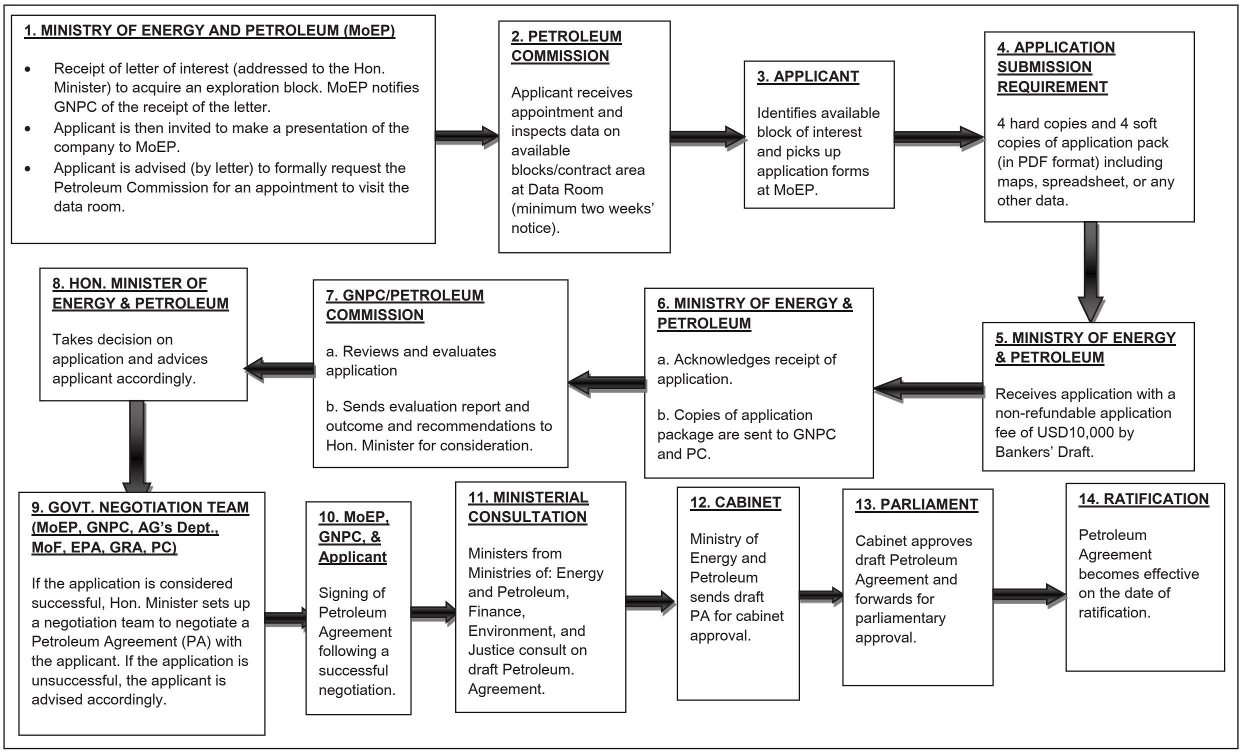


Fig. 3: Theoretical Framework



Source: Ministry of Energy & Petroleum (2014), Block Acquisition Process chart.

Fig. 4: Ministry of Energy and Petroleum Process for Acquiring a Block/Contract Area for Exploration

METHODOLOGY

This research is basic, based on theoretical findings and sources of existing information on the subject matter, on Ghana oil and gas sector businesses of engagements with investors and stakeholders. It is a conceptual study to design both the model and framework for future studies, with instrument design and hypothesis testing. In other words, it is an exploratory type of research, to explore the background of the oil and gas sector in Ghana, which is qualitative in nature; it is applied research.

DISCUSSION AND RECOMMENDATION

It is obvious that Ghana is lacking efficiency in managing its affairs and resources due to the poor fundamentals of its organisational structures and poor political practices, which undermine its democratic decisions on its natural resources. For instance, with reference to Fig. 4, it can be noted that there is no years of plan or scope by which a contract can be handled, but only a process, which is very short. Ghana engagements with investors in this sector proves to be a weaker development, since the percentages of interest to accrue is never up to 20% in any oil field agreements the country has entered into. Ghana's position in the oil and gas sector is volatile since it has not been able to translate better prices, in terms of fuel and gas, to consumers in the country. This means the government lacks the efficiency to take good decisions during negotiations, for far better deals and rewards. For instance, if Ghana owns oil fields and only receives less than 20% of the interest, is that considered true ownership? The Government of Oman owns about 60% of the crude oil, and likewise, Libyan's National Oil Company (NOC) owns 51% of the crude operations. It does appear that in Ghana every negotiation that the government enters into, the citizens do not see positive outcomes, but only political gimmicks and scores, which do not solve all the problems: hospitals, roads, schools and education, salaries and compensations, forex exchange, and so on. In this regard, there is the need to rethink and reposition Ghana's departments, ministries, and organisations, so that the positions are occupied by people who have integrity, knowledge, and are experts in their field, to deliver government businesses and work or contracts for the good of the economy, instead of relying on political appointments to all sectors in the economy, which polarises the objectives and existence of those structures, wasting Ghana's resources and making the country underdeveloped. Another issue is that the Ghana government has only a 4 year mandate to rule or govern, and therefore, they always rush and sign negotiations and contracts in the oil and gas sector in a haste, just to score political points, without much consideration to the future. As a result, the international investors know how vulnerable the Ghana government is, and knowing that time is on their side, they would put in measures to win over the Ghana government by giving them as little as possible, as there is no time to scrutinise contracts and deals. All this amounts to lack of management efficiency and constitutional problems.

Therefore, it is recommended that this research can be quantitatively studied in the future to test the hypothesis and find the model path values and construct validity and reliability. Moreover, future research should be able to find out whether the various correlations are positive or negative, and whether there is any relationship among them at all. With this, an appropriate population and sample size must be considered.

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