

National Oil Companies: Study of Malaysian, Norwegian and Saudi Arabian Models

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ABSTRACT

This independent study paper aimed to recommend the implementation of the national oil company (NOC) to Thailand. The paper describes the Norwegian, Malaysian, and Saudi Arabian models. The study base on the documentary analysis.

It was found that the Department of Mineral Fuels (DMF), the Ministry of Energy, has the power to control the concession and contracts in Thailand. The petroleum act allows the department to play as an operator and regulator. It causes conflicts of duties between operators and regulators. In Malaysia, Norway and Saudi Arabia establish the NOC and legislate laws and characteristics of the national oil company to prevent this problem.

Recommended Thailand to adopt the national oil company. Thai NOC will resolve the problems of the conflicts of duties of DMF and developing the well-know about the Thai petroleum industry. Eventually, there is a recommendation propose to solve the issues to improve these Petroleum Act.

Introduction

There are numerous petroleum resources around the world. The powerful nations have the potential process to utilize their petroleum; some countries establish the National Oil Companies (NOCs) for operating petroleum. NOCs are the companies with majority ownership by the government. In the OPEC countries and some non-OPEC countries, national oil companies have exclusive or near-exclusive control of oil production. The

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companies support government programs and provide fuels to domestic consumers at a discount compared to the international market. NOCs plays a significant role in the petroleum industry and often controversial both extractive industry and sale markets. It serves both commercial and non-commercial objectives of a government and has often been used as instruments of political control. In a historian's background, NOCs were developed in Austria-Hungary in 1908, for the supply of crude oil to private importers. Other countries followed suit, as oil developed to be an essential strategic commodity. The NOCs models in new age were developed in Norway, Malaysia, and Saudi Arabia.

The NOCs in the world are established for more decades. There are three primary models of the NOCs; they are Norway, Saudi Arabia, and Malaysia. First, Norway establishes the NOCs (Statoil) for operating petroleum resources because their territory has much petroleum in the North Sea for the developing economic system. The operation of Statoil called the "Norwegian Model." The Storting (the Norwegian parliament) has a consensual act to set up the Norwegian State Oil Company in 1972. They legislate the duties of operation in the Petroleum Act 1996. They have the excellence check and balance system in their NOCs. They separate the duties between the energy ministry (the Ministry of Petroleum and Energy (MPE), Statoil, and independent regulators that oversee all petroleum sector participants (Norwegian Petroleum Directorate, or NPD). Second, Malaysia was the colony of England, and the government aware of Malaysia's dependence on a foreign oil company. They want to protect their resources from foreigners and found the NOCs (Petronas). Petronas was given exclusive rights and powers over Malaysia's petroleum resources since its establishment by the Petroleum Act 1974 of Malaysia. The Prime Minister appoints the CEO of the BOD, who is also chairman. Third, the national oil company of Saudi Arabia is Saudi Aramco, 100% government-owned. Saudi Aramco undertakes almost all the exploration and production of oil and gas in Saudi Arabia, making it the world's largest oil company in terms of production. Because of the level of reserves held in Saudi Arabia and Saudi Aramco's production capacity, Saudi Arabia is the one the world which is considered to be a swing producer. This meaning that it is the only country that can individually influence the worldwide oil and gas market, either to stabilize prices or supply. The King has considerable power.

Thailand has petroleum resources, both onshore and offshore. Thailand implements three systems of exploration and production petroleum: concession system, profit-sharing contract (PSC) system, and service contract (SC) system. The Department of Mineral Fuels (DMF), Ministry of Energy, has the power to control the concession and contracts in Thailand. The Petroleum Act B.E.2514 (PA) authorizes the Department of Mineral

Fuels to promote and accelerate domestic petroleum exploration and production, manage and monitor petroleum concession awards, exploration, production, storage, transportation, and selling, and collecting petroleum royalty payments and any other benefits. Section 16 of PA This section is the primary duties of the director-general of DMF and regulates all of the petroleum royalty and has the right to observe and inspect the contractor and the concessionaire with the government. This role is legislative in Division 7 "Royalty" of PA, and the vital section is section 100 Octiens allows the department to play as an operator and regulator. It causes conflicts of interest and conflict of power between the operator and regulator because they are lousy check and balance system. The major countries' models reduce twice types of problems by introducing National Oil Company. Thailand should establish the NOCs for operation the collecting petroleum royalty payments and any other benefits and separate the role of regulation with The Department of Mineral Fuels.

In conclusion, this paper aims to study whether Thailand should adopt the NOCs and what is, the model should be learned and focus on the establishment, capital, owner structure, objective, and supervision from several countries for adopting the appropriate model in Thailand. Thai NOCs will resolve the problems of the conflicts of interest, increasing the facility for operating the petroleum resources, and developing the well-know about the petroleum industry.

Research results

1. The national oil company of Malaysia

The Malaysian government had become aware of the growing importance of the petroleum industry in Malaysia. The national oil company would ensure that Malaysian petroleum is appropriately managed to give the maximum short and long terms benefit to the nation. On 17 August 1974, Petronas or Petroleum Nasional Berhad establishment by the Petroleum Development Act 1974 of Malaysia.

Petronas was given exclusive rights and powers over Malaysia's petroleum resources by the Petroleum Development Act 1974. The oil, gas and energy industry is central to Malaysia's economic growth, Petronas has grown to international oil and gas company with business interests in 35 countries. These companies make the Petronas Group, which is involved in various oil and gas-based activities. Petronas is the most influential and mainly state-owned national oil and gas companies from countries.

The Petronas group is engaged in a full spectrum of petroleum activities, including upstream to downstream oil refining; marketing and distribution of petroleum products; trading; gas processing and liquefaction; gas transmission pipeline network operations; marketing of liquefied natural gas; petrochemical manufacturing and marketing; shipping; automotive engineering; and property investment.

Petronas is the Public Company Limited established by the Petroleum Development Act, the act set the name of this company and stipulate the object and duties of this NOC. The main objection of Petronas operation the petroleum resources from upstream to downstream for example, they operate the exploration and production of petroleum and the downstream they are the retailer of petroleum in Malaysia.

The management of Petronas is managed and controlled the overall operation of the organization's Chief operating officer (COO) was responsible for the three regional operations. Three regional General Managers who managed and controlled the daily operation gave regular reports to COO. The principal objective of these regional offices was to deliver oil and gas production at a specific rate to meet the national target set by Petronas.

Petroleum Development Acts of Malaysia coming into force, oil companies were granted the right to explore, develop, and produce petroleum through concession agreements between the oil companies and the individual state governments in Malaysia. After 1974, private investors were able to obtain the right to explore for, develop, and produce petroleum in Malaysia through production-sharing contracts (PSCs) and risk service contracts (RSCs) with Petronas. Petronas awards the PSCs and RSCs to oil companies. The production-sharing contracts give the contractor the right to exploration, development, and production of onshore and offshore fields. In contrast, the risk service contracts are for the development and production of small marginal fields. Petronas introduced the RSC framework. In the early days of the risk service contracts, IOCs were awarded risk service contracts. However, in recent years the trend appears to be that risk service contracts were awarded to Vestigo Petroleum, which is a wholly-owned subsidiary of Petronas Carigali Sdn. Bhd. (PCSB). PCSB enters into the alliance agreements or services contracts with oil services companies for the development and production of the oil fields. Under the terms of the production-sharing contracts, the oil companies are solely responsible for all the exploration, development, and production costs of the contract area under the production-sharing contract.

Petronas owns all the production-sharing contract data and assets and uses the approval mechanism under the production-sharing contract and the Work Program and Budget (WPB) to monitor and control the expenditure incurred by the Contractors for the

petroleum operations. The direct payments the government takes from the oil and gas produced in Malaysia are royalty payments, petroleum tax, and export duty. The Contractors pay royalties from the available production volume to the state and federal governments.

The Special Rights to National Companies, Petronas awards upstream licenses to IOCs through production-sharing contracts entered with Petronas. Under the production-sharing contract, the contractor is required to provide on-the-job training to Petronas' personnel. The IOC must also pay training and education commitments, the amount of which is negotiated between the parties, and contractually agreed between them in the production-sharing contract

The Prime Minister appoints the chairman of the BOD, who is also CEO. The BOD has no independent members. The BOD has considerable powers, and the NOC has considerable financial and budgetary autonomy.

Petronas Holding is not listed, but 4 of its subsidiaries are listed on the Malaysia Bursa (Malaysia Stock Exchange), the state ownership function is Ministry of Finance. However, some right is reserved to the Prime Minister. The exclusive privileges of Petronas, The Petroleum Act of 1974 gives Petronas ownership of, and exclusive rights to explore and produce, petroleum onshore or offshore in Malaysia territory. The BOD of Petronas takes the exclusive power to control the petroleum resource.

Malaysia has the Petroleum Development Act (PDA) the Malaysian Parliament passed 1974. These provisions implied an end to the concession scheme for the oil companies. The immediate functions of Petronas were to negotiate with the oil companies and the Federal and State governments.

The Petroleum Development Act 1974 legislates the main regulatory body for upstream oil and gas activities. That act provides the right of exploitation of oil and gas resources by Petronas. Petronas is vested with the entire ownership in and the exclusive rights, powers, liberties, and privileges in respect of the said resources, and to control the carrying on of downstream activities and development relating to oil and gas and their products sections 2(1), 3A(1),6(1), and 6(3)

In Division 3, "The Corporation" as section 3(1) of the Petroleum Development Act 1974 legislate the name of Malaysian National Oil Corporation, the company shall be styled as the Petroleum Nasional Berhad or in short form Petronas.

Petronas set under section 22 of Companies Act 1965. The structure is the same as the usual company in Malaysia. The owner of the oil and gas resources in Malaysia, Petronas enters into Production Sharing Contracts with other petroleum companies, which

explore, develop, and produce the resources. Petronas is also the regulator of all upstream activities. Section 3 of the Petroleum Regulations 1974 requires that companies intending to participate in such activities to obtain approval from Petronas.

Under the petroleum development act, Petronas was vested with the entire ownership and the exclusive rights, powers, liberties, and privileges of exploring, winning, and obtaining petroleum onshore and offshore in Malaysia. As the owner of the petroleum assets, Petronas awards the license to IOCs to explore, develop, and produce oil and gas in Malaysia through production sharing contracts between it, the IOC, and PCSB. The Prime Minister has the power to set the regulation for solving the problem by section 7, Prime Minister, to regulate the petroleum matter of Petronas.

2. The national oil company of Norway

Statoil was established with the requirement that its own 50% of all developed fields, mainly because IOCs were also operating in Norway. Statoil also invested heavily in pipelines and refineries in its early life. That meant it could dictate the use of these resources to private companies that produced crude oil.

Statoil's structure and project mismanagement led to a discussion regarding Statoil's status as a national oil company; some thought that because the company was investing overseas, this meant it was not doing work expected by the Norwegian national oil company. In 1999 Statoil proposed partial privatization to the government.

Statoil's status as a national oil company, that because the company was investing overseas, this meant it was not doing work expected by the Norwegian national oil company. From this point on, Statoil's strategy focused on profitability in multiple markets, not just the development of domestic resources. Statoil worked and continues to work domestically and internationally, upstream and downstream, and in the natural gas industry. Statoil and Hydro Oil & Gas, a division of Norsk Hydro, were merged in 2007.

The state's objectives for direct state participation (DSP) were to increase revenue, know-how, and control. In the following sections, the contribution that Statoil made to these goals will be described. DSP gave Norway a 'window to the oil industry.' Through Statoil, Norway developed a hands-on technical and managerial experience of oil operations. In doing so, it generated expertise that could be used to strengthen its position against international oil companies. Norway was able to overcome the information asymmetries between oil companies and government authorities. As a result, the balance of power turned in favor of the Norwegian state. The knock-on effect was an ability to negotiate more favorable conditions for the state because it knew the real value of its resource base. It could,

for example, demand more stringent and favorable terms and higher tax rates over time, to a large extent as a result of the learning process of a fully operational NOC.

Statoil is the public limited company, and they listed in the stock exchange market of Norway and America that the major shareholder of Statoil is the Norwegian government. The Petroleum Act 1996 (PA) is the main act to set the duties of own state corporation, State oil company, has the right under the PA 1996 and the structure follows the Act of 13 June 1997 No. 45 Norwegian Public Limited Liability Companies Act in the provision of the state limited companies. Statoil's non-commercial objectives are minimal. The structure of the company, when set up, ensured that the government would have little opportunity for interference. Today the company is 67% owned by the Norwegian government, and shareholders own the rest, and both of these interested parties want the company to maximize profits. Statoil's non-commercial goals mainly focus on wealth creation and wealth management for the Norwegian people.

Government revenue from Norwegian oil comes from three areas; taxes paid by oil companies to the government (58%), cash flows from the State's Direct Financial Interest (SDFI). This surplus oil wealth is held in a sovereign wealth fund, The Global Pension Fund of Norway, which is, in fact, two funds, one that invests in global companies and one that invests in domestic companies.

The MPE (Ministry of Petroleum and Energy) is central to the legal and administrative system for resource management on the NCS (Norwegian continental shelf). It took over responsibility for the sector from the Ministry of Industry in 1978. It ensured that the necessary considerations in petroleum activities were safeguarded by a separate sector ministry dedicated to these activities. The MPE was explicitly made responsible for the formulation of oil policy and the licensing system. It works with the political leadership to plan the development of the sector and does the preparatory work before the Cabinet granting production licenses. All other significant licenses and approvals are issued directly by the MPE, according to the Petroleum Act 1996. Thus, while the ultimate legislative and executive power rests with the state, the central governing functions rest with the MPE.

The NPD (Norwegian Petroleum Directorate) was established simultaneously with Statoil in 1972 as a separate government entity. It was made responsible for technical and regulatory supervision and guidance in the sector. It compiles data, collects fees, sets regulations within its areas of responsibility, and advises the Ministry on technical matters. It is subordinate to the MPE and, while the MPE has overall

responsibility for resource management, the NPD has more day-to-day, technical, and regulatory control. It also handles the more detailed approvals and consents.

This division of commercial, regulatory, and policy functions into three independent legal entities enables the state to have greater control over petroleum activities. This tripartite system is an essential part of the legal framework for Norwegian direct state participation. Certain aspects of Norway's legislative framework for its petroleum sector made an essential contribution to the success of direct state participation. Norwegian petroleum law laid down the model system of separating functions between government entities, the rules for ensuring transparency and accountability in the petroleum sector, and a licensing system that created competition between Statoil and foreign oil companies. A vital principle of the Norwegian system of governance is to separate functions between government entities. In the Norwegian petroleum sector, this has meant separating three state-controlled institutions, each with its distinct role: the regulatory (NPD), policymaking (MPE), and commercial (Statoil). Each of these bodies is independent and has an arm's length relationship with the other entities. This tripartite separation between commercial, policy, and regulatory functions has become known as the "Norwegian Model" of oil sector governance.

This administrative structure has many advantages. Firstly, it avoids any conflict of interest arising between the regulatory/policy-making bodies and the commercial entity. Separating responsibilities into three distinct entities also enables each role to be performed more effectively. The government and the MPE can maintain a much higher degree of control over Statoil. Where the NOC performs both the regulatory and commercial functions, it can quickly grow to become a compelling entity, undermining government influence over its actions. In the Norwegian system, the government always maintained the full right of instruction through Cabinet, the MPE, and NPD. It also improves the commercial role of the NOC. Where the NOC carries out both commercial and regulatory functions, this can lead to business distrust between the international oil NOC. companies (IOCs), and This can undermine the relationship of the NOC and IOCs and thereby the state's commercial interests. The NPD emphasizes its objectivity in regulating petroleum activities to reassure the IOCs that this is done objectively. In contrast to Statoil, the NPD can perform this task without bias to Norwegian commercial interests and acts as a 'faithful guardian of the public interest.'

Statoil was governed by legal norms that ensured its decisions were transparent, and public sector agencies were accountable for their actions. It prevented corruption and fostered good practice within the petroleum sector. The legal system in

Norway was able to enforce transparency and accountability and thereby upheld these principles. A criticism often made of public enterprises is under-performance because of the lack of incentives generated by commercial competition. Due to the joint venture system, Statoil, to a certain extent, conducted its petroleum activities in a competitive environment. It is regarded as having improved Statoil's performance, participating as a licensee in joint venture companies. It meant that the NOC's performance would be benchmarked against other oil.

The “Norwegian model” separates responsibilities between the energy ministry (the Ministry of Petroleum and Energy, or MPE), Statoil, and independent regulators that oversee all sector participants (Norwegian Petroleum Directorate, or NPD, and a safety and environmental authority). State Direct Financial Interest (SDFI) was established in 1985 to allow the Norwegian State to participate in the Norwegian petroleum sector directly as an investor. The state wholly owned Statoil until its merger with Norsk Hydro in October 2007 ("Statoil-Hydro," referred to as "Statoil"). Statoil is 67 percent owned by the Norwegian government and is quoted on the Oslo and New York stock exchanges. By international standards, Statoil has a robust corporate governance structure. The roles and responsibilities of the shareholders, the BOD, and Statoil's management are clearly defined. The BOD is composed of 11 members, of which 3 represent the NOC's employees. The others are independent. The NOC owes much of its success to the ability of the Norwegian government to adapt its policies to changes in geological, economic, and market conditions. These factors, coupled with good governance transparency, an already developed industrial sector, and closeness to consuming markets in Europe, were critical conditions for value creation by the NOC.

The Petroleum Act 1996 (PA) is the central act to set the duties of own state corporation, State oil company, has the right under the PA 1996 and the structure follows the Act of 13 June 1997 No. 45 Norwegian Public Limited Liability Companies Act in the provision of the state limited companies. The significant stages of petroleum activities and establishes a framework for state management of petroleum resources, section 1-1 reflects of PA.

The Norwegian state implemented a concessionary system whereby foreign oil companies must apply for a license to exploit petroleum on the NCS. The companies own the petroleum they produce, but the state controls how this is done. This license system ensured that the government-maintained oversight and control at each critical stage of petroleum activities. That was emphasized in Parliamentary Report No. 25 by the Ministry of Industry, stating that the organization of petroleum activities must 'provide

Norwegian authorities with full control of all stages in operation: exploration, production, processing, export, and marketing'¹. No major petroleum activities could be conducted without prior government approval. That is explicit under the Petroleum Act Section 1- 3

The Norwegian Parliament. They can extend a suitable provision for state activities. The section 11-2 Management Company of the Petroleum Act 1996 gives the right to set the state's own company to participate in the license of petroleum activities and set the duty of the state-owned company, the company shall separate the revenue accounts, and expense accounts about the relating to the participating interests.

Several state entities controlled Statoil; the NPD, MPE, the government, and parliament. Each entity had a separate function to prevent a conflict of interest arising that could undermine state control over Statoil. The legal framework for political control aimed to ensure that the new state-owned oil company functioned for the benefit of Norwegian society as opposed to its private interests. The methods for controlling Statoil consisted of oversight, reporting, and accountability requirements.

3. The national oil company of Saudi Arabia

The Saudi Arabian government began a process of nationalizing Aramco. The early stages began with the Saudi government taking a minority stake in Aramco, and with introducing Saudi nationals into more upper-level management roles in the company. Throughout the 70s, Saudi Arabia incrementally acquired more of Aramco until it held all assets in 1980. Eventually, Aramco was reorganized into the Saudi Arabian national oil company, Saudi Aramco. Saudi Arabia has many non-commercial goals that they implement through Saudi Aramco; to begin with, Saudi Aramco pays royalties to the state, which amount to approximately 93% of its profits each year². This money is used to fuel the Saudi Arabian economy and some of which is spent on economic development goals.

Fuel subsidies are used in Saudi Arabia, implemented by the royal family; they are designed to ensure continued support for the royal family and government. On a broader scheme, they act as a wealth distribution tool, in a country that is heavily reliant on its fuel wealth, at great expense to the government. Fuel subsidies in Saudi Arabia are

¹ Parliamentary Report No. 25 (1973-1974) Petroleum Industry in Norwegian Society

² Lin McGroary, The Non-Commercial Objectives of National Oil Companies, Thesis, p.16

amongst the highest in the world. Saudi Arabia also has a strategic foreign policy goal of maintaining close ties with critical diplomatic partners, first and foremost, the US. During the 1990s, Saudi Arabia accomplished the goal of being the top crude oil supplier to the US. In the early 2000s, this goal was relaxed due to the high expense it took to maintain, and this expense has now been enlarged because US crude oil production is near the highest it has ever been due to fracking of unconventional resources.

The best way for Saudi Arabia to pursue its non-commercial goals is to have a successful national oil company, meaning the company is sustainable in the long run, and it maximizes profit. This method will supply the government with maximum revenue in the long term, allowing them to fund their social and foreign policy objectives.

In Saudi Arabia, Saudi Aramco is the public limited company, and they listed in the stock exchange market of Saudi Arabia that the major shareholder of Saudi Aramco is the Saudi Arabia government. Articles of Incorporation of the Saudi Arabian Oil Company, Approved by Royal Decree, is the main act to set the duties of own state corporation. The Saudi Arabian Oil Company was established by Royal Decree in November 1988 as the last step in the take-over by the Saudi government of the assets of the Aramco concessionaire companies. In 1944, the company's name had changed to Arabian American Oil Company (Aramco). In June 1968, OPEC resolution XVI. Ninety stated that OPEC members could acquire conscious participation in the ownership of the concession-holding companies on the Participation Agreement in 1972 and government take-over of Aramco in 1976. Establishment of Saudi Aramco in 1988.

The Directorate of Oil and Mining Affairs was established in 1953, The role of Ministry of Petroleum and Mineral Resources (MINPET) is to give advice and recommendations on the petroleum policy of the Kingdom to the King and the Council of Ministers. Even with the establishment of the Supreme Petroleum Council in 1973, the final word on the decisions on petroleum still needs the King's approval. The Ministry does not act as a policymaker, but formulates most of the policy decisions, with Aramco acting in an advisory capacity on technical issues such as exploration, development, gas utilization, production, etc. After the policy has been formulated in the Ministry and approved by the King or the Consultative Council (COM), the Ministry either implements it or directs Aramco to execute it. The Ministry monitors all the changes in the world, prepares for each OPEC meeting, reads and discusses all oil matters. It then advises the Council of Ministers or directly to the King.

Most oil policy- decisions took place in that administrative structure, although at times the personal relationship between the King and the Minister of Petroleum and

Resources. The King is the chairman of the Supreme Council of Saudi Aramco. Members of the council are four ministers, including the Minister of Petroleum and Mineral Resources and the Minister of Finance and National Economy. The economic advisors in the Ministry prepare and evaluate different policy options for the Minister who presents the matter to the King directly or to the Council of Ministers. After the King's approval, the policy would be taken to OPEC, and the Minister would contact the King concerning any developments or changes resulting from the negotiations. Ministers Some matters might be taken to the Council of Ministers, the Ministry of Petroleum and Mineral Resources formulates petroleum policies, such as the agreed production levels (quota) in OPEC. They approve budgets for oil operation and capacity expansion, estimate the oil revenue component of the government budget, sends Saudi Aramco foreign downstream ventures suggestions to the government, and formulates the domestic energy policy about supply and pricing. The Minister reports to the King and the Council of Ministers. The structure of the Ministry changes with changes of Ministers.³

The Supreme Petroleum Council (SPC) had the function of the Council when it was formed was to draw up Saudi Arabia's overall international oil policy and to submit its final recommendations to the King. The Council was formed to take into account political and international relations issues as well as economic concerns. OPEC was established in 1960, and its first test of strength was in 1965 to get the companies to agree to include the royalty payment as part of expenses rather than including it in the government share. Aramco held the assets on behalf of the government. Aramco continued to operate and manage the oil and gas fields in the Kingdom on behalf of the government until 1988 when Saudi Aramco took over those responsibilities. The Saudi government-owned the assets. The Council of Ministers approved the Articles of Aramco incorporation, and a Royal Decree establishing Saudi Aramco was issued on 13 November 1988. All outstanding assets transfer issues between Aramco and subsidiaries and the Saudi government were resolved by January 1990.

The structure and conduct of Saudi oil policy and the sophistication of its tools of administration evolved with the political development of the Kingdom. The decision-making process starts from the highest authority "the King," followed by the

³ Nourah Abdul Rahman Al-Yousef "THE ROLE OF SAUDI ARABIA IN THE WORLD OIL MARKET" (Ph.D. dissertation, Graduate school, Surrey University, 1998), p. 16.

Council of Ministers, the Ministry of Petroleum and Mineral Resources, Aramco and other oil companies, and international organizations involved in oil decision-making.

He approves the major petroleum policy decisions based on the discussions and recommendations of the Ministry of Petroleum and Mineral Resources, which is responsible for the management of the country's resources and the co-ordination of the overall strategy.

The Royal Decree establishing the Saudi Arabian Oil Company (Saudi Aramco) laid out the Articles of incorporation of the company. The Articles contain the legal status, spheres of activities, financial and administrative status, and the fiscal arrangements with the government. The articles of incorporation of Saudi Aramco give it the right to engage in all oil-related activities in the Kingdom and abroad (Article IV). Although owned by the government (Article I), the articles specify its commercial nature (Article VI) It sets the capital of the company at 60 billion Saudi Riyal subscribed by the government represented by its rights and assets which were managed by the Arabian American Oil Company (Article VII).

The articles of incorporation give the company the privileges and rights provided in the old concession agreement of 1933 and all its supplementary documents and agreements (Article XXIV). Besides, the same fiscal and tax arrangements that applied to the concession agreement apply to the company, as well as the subsequent agreement in terms of royalty payments and income tax (Article XI).

The Articles establish a Supreme Council for the corporation and outline its responsibilities in articles XII to XV to determine the company's general policy. It consists of ten Members appointed by Royal Decree, who endorse the five-year business plan and capital investment, appoints the President, appoints the editor, and approves the company's balance sheet and the annual report of the Board of Directors.

The exclusive concession agreement with Saudi Aramco was extended in 2018 for another 40 years with an option to extend for a further 20 years. However, since the Saudi Government owns the company 100%, it holds a perpetual concession to explore and exploit the oil reserves of the country in return for revenue and royalties.

Table of Comparing the three NOC of Malaysia, Norway, and Saudi Arabia

Country	Definition	Characteristic	Regulation
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Malaysia	Petronas become an oil and gas multinational and expand these businesses internationally. Focus on profitability and growth. Develop an increasingly international culture and world-class organizational management.	Petronas is the Public Company Limited, that is holding the shares of its subsidiary company in Petronas Group.	Establish under the Petroleum Development Act 1974.
Norway	Statoil creates value and potential on the Norwegian continental shelf (NCS) and increasing international production, creating a platform for new energy sources.	Statoil is the public limited company, listed in the stock exchange market of Norway and America. The major shareholder of Statoil is the Norwegian government.	Establish under the Petroleum Act 1996(PA) is the central act to set the duties of own state corporation, State oil company, the structure follows the Act Norwegian Public Limited Liability Companies 1997.
Saudi Arabia	Saudi Aramco takes over the US Oil company and formulate policy towards the international oil market and downstream operations and counterbalance with the Oil Market and a significant member of OPEC.	Saudi Aramco is a public limited company listed in the stock exchange market of Saudi Arabia. The major shareholder of Saudi Aramco is the Saudi Arabia government	Establish under the Articles of Incorporation of the Saudi Arabian Oil Company, Approved by Royal Decree no. M/8 13 November 1988.

Conclusion

In conclusion, Thailand has petroleum resources both onshore and offshore that have no NOCs for operation the collecting petroleum royalty payments and any other benefits. Thailand has the Department of Mineral Fuels (DMF) for operation the petroleum resource in our country, the significant duties of them extend the term of a concession. Approve the determination of a production area, permit an extension of the period for commencing the production, and collecting the petroleum royalty to our state

that their duties are complicated the power. The Department of Mineral Fuels plays two roles in operation and regulator; we will separate his power of DMF because if he plays in the operator, but he has been the regulator. The check and balance are weak and easily to corruption the benefit in the petroleum sector.

The Petroleum Act B.E.2514(1971) authorizes the Department of Mineral(DMF), Ministry of Energy has the power to control the concession and contracts in Thailand. The petroleum act is promoted and accelerate domestic petroleum exploration and production, manage and monitor petroleum concession awards, exploration, production, and collecting petroleum royalty payments. The law allows the department to play as an operator and regulator. It causes conflicts of duties between the operator and regulator. The major countries' models reduce twice types of problems by introducing NOC.

In the Petroleum Act, the roles of operator and regulator of The Department of Mineral Fuels (DMF) legislate in Section 22/1 of petroleum act⁴ This section is about the primary duties of DMF as follow:

- extend the term of a concession
- approve the determination of a production area
- permit an extension of the period for commencing the production
- assign other persons to undertake the remedy and protection of the dirt arising from the operation of petroleum
- approve the working plan

The Department of Mineral Fuels (DMF) regulates all of the petroleum royalty. It has the right to observe and inspect the contractor and the concessionaire with the government, legislated in Division 7, "Royalty" of PA. The critical section is section 100 Octiens.⁵ The Petroleum Act gives the duties to the DMF as two role play that the operator and regulator, this is the problem of conflict of duties.

The three models of Malaysia, Norway, and Saudi Arabia in this research paper, are analysed. Each model has the ownership structure of its national oil companies for avoiding the conflict of regulator and operator. Furthermore, this research has the information and the explanation and the origin of each NOC. The main difference between the NOC models.

The National Oil company model for Thailand, the model is appropriate for establishing the NOC in Thailand. Two models, Norwegian model, and Saudi Arabian

⁴ Sections 22/1 Thai Petroleum Act, B.E.2514(1971), Law code

⁵ Section 100 Octiens Thai Petroleum Act, B.E.2514(1971), Law code

model, Malaysia is not appropriate because of Malaysia Petroleum Development Act legislates the right over petroleum resource is own by the Petronas, which is the exclusive privilege from the beginning under the Petroleum Development Act. Moreover, this act set the name of the National Oil Company and set other duties for this company. Petronas was setting up from the particular law. The Petroleum Development Act of Malaysia is the same as the National Oil Company Act, this way to set the NOC is not appropriate for Thailand because the act is hard to the regime the law for this model and hard to adapt to the model to Thailand.

Malaysia that contributes to the increase in the National Income to provide a better life. The output of this sector also eases people doing a job daily. This sector also can increase income per capita of the Malaysian by hiring more local labor to work in these industries and create expertise among Malaysian by providing more practical industries training. Hence it can increase individual disposable income and provide a comfortable and comprehensive standard of living of Malaysian. It hence can also achieve one of the macroeconomic objectives, which are full employment. Nevertheless, the model of Malaysia is hard to say about the excellent check and balance because his structure of the Petronas Company and his petroleum act give a lot of the privilege to this company because Petronas has power in Malaysia and the most regulation system is handle by Petronas. The Prime Minister has the power to set the regulation for solving the problem.

Saudi Arabia and Norway models are appropriate for Thailand because the Norwegian model is right. This model has a good structure and more appropriate for Thailand. In Norway, the government and Norwegian people have a low corruption rate and structure of Statoil, the Norwegian National oil company. They have proper checks and balances and separate the power of the operator and regulator. Statoil has a significant duty to operate the exploration and production the petroleum.

Moreover, they have high technology and research to create the well-know for operation. In the regulation side, the government of Norway set the department office for regulating the Statoil. Statoil is ownership by the Norwegian government and the significant profits from the petroleum sector are used for developing the country and manage profit in the government fund and return to make the facility, health care, and education for Norwegian people.

The Petroleum Act 1996 of Norway is allowed to establish the state's own company and the duties of the commercial, the importance. This act gives the right to set the state's own company to take the petroleum concession in Norway and set the duty for responsibility and duty of report to the other state department or the supervision of the

National Oil Company. Furthermore, the final reason, the beginning of the Statoil, is not set from the act, this act only set the duties of NOC and right to set the state company to take the concession. In the past, Statoil comes from the buying share and take over the other oil company in Norway and merge to Statoil.

Norway has the Norwegian model of Direct State Participation (DSP) should be used in resource-rich developing countries as part of the solution to the resource curse, but only where there is a genuine attempt to abide by the critical legal features of this model. The main features include a limited commercial function, transparency requirements, separating functions between government entities, and operating in partnership with foreign oil companies. Furthermore, for the company to remain productive and efficient, legal reforms must be implemented as circumstances in the oil sector change.

Although this model would be a challenge to replicate in a developing country, its particular design would help to limit the problems often associated with state-owned companies and capture some of the benefits of a liberalized model. It must, though, be tailored to the specific needs and political, economic, and cultural realities of the country in question. Few countries will possess the same initial advantages as Norway and must make the system work in the context of limited funds, expertise, and weak institutions. Moreover, to succeed, DSP must also be complemented by proper resource management at each critical stage in the decision-making chain, from extraction to the use of revenue. After all, DSP is only part of the solution to the resource curse.

Saudi Arabia's model is to set Saudi Aramco, the Saudi Arabian national oil company, for operation and regulation the petroleum resource in their territory. The model is appropriate for Thailand because the establishment of Saudi Aramco is looking like the Statoil of Norway. The Saudi Arabia government is legislating the Royal decree by the king to set the Saudi Aramco. This decree ordered the government to buy a share of the international oil company, US. Company in Saudi Arabia, and finally, the government takes over this company 100% shares, and Saudi Aramco controls the concession system because they are the licensor and concessionaire, the perpetual concession. And the Petroleum act is set the duty for responsibility and duty of operation.

Furthermore, the Petroleum act is set the duty for responsibility and duty of operation. Saudi Arabia is a big monopoly petroleum country. Petroleum decision-making in the Kingdom of Saudi Arabia emanates primarily from the King, the Council of Ministers (COM), and the Ministry of Petroleum and Mineral Resources. Between 1974-1986, the Ministry of Petroleum and Mineral Resources made recommendations to the King or the COM or the Supreme Petroleum Council concerning oil policy, including

oil production levels, investments in the petroleum industry, and oil pricing. However, by the late 1980s, a more significant role had been given to Saudi Aramco, i.e., to suggest policies pertaining & to the oil industry, including foreign downstream investments, expanding production capacity, and other matters. This country has a significant resource of petroleum, and the King has the right of petroleum owners. However, Saudi Aramco company, the National Oil Company of Saudi Arabia, will be the highest value company in the world in the future because the company will be listed in the Stock exchange market. If their plan is a success, the check and balance will be increase because many companies want to buy their share, and the shareholder will be helping to manage this enterprise.

On the other hand, Saudi Arabia is a big monopoly petroleum country. The major economy of Saudi Arabia is Petroleum exporting, they have the petroleum resource in the top tier of the world, and their state is the influence member and founder of The Organization of the Petroleum Exporting Countries (OPEC). The transparency in the company is good, but the Structure of Norway is the best. More countries in the world want to operate the National Oil Companies same Norway.

Thailand should establish the NOCs for operation the collecting petroleum royalty payments and any other benefits and separate the role of regulation with The Department of Mineral Fuels. Moreover, Thailand has the company appropriate to adapt for setting and reset this corporation to prepare for the National Oil Company. The PTT Exploration and Production Public Company Limited (PTTEP) is a subsidiary of PTT Public Company Limited, is a national petroleum exploration and production company based in Thailand. PTTEP's core business is exploration and production of petroleum in Thailand and foreign countries, PTTEP is listed in the Stock Exchange of Thailand (SET) and holding by PTT Public Company Limited. Thailand can set the law to adapt this company to the National Oil Company. The PTT Exploration and Production Public Company Limited (PTTEP) appropriate to play in the role of operator of the concession of petroleum exploration and production in Thailand and separate the duties from the Department of Mineral Fuels.

Finally, Thailand should adopt the NOCs and set the NOC to separate the power. The model that should appropriate for adaption in Thailand is the most suitable in Norway models. Thai NOCs will resolve the problems of the conflicts of interest, increasing the facility for operating the petroleum resources, and developing the well-know about the petroleum industry.

Recommendations

Even the national oil company should be set and used in Thailand for managing the petroleum resource of our country and resolve the problems about the conflicts of duties of the facility for operating the petroleum resources and developing the well-know about the petroleum industry. So from those as mentioned earlier, have recommendations to solve problems to support the establishment the Thai National Oil Company to perform and separate the two roles play of the Department of Mineral Fuels (DMF) as follows;

1. To legislate the new act "Thai National Oil Company Act" and write the definition of the national oil company in the new act.

According to Thailand, no has a national oil company, so it should enact the new act for the first to establish the NOC in Thailand. It will support the set the national oil company in Thailand. The name is "Thai National Oil Company Act." to establish the NOC. The definition of the national oil company is legislated in the precise meaning as an example: "National Oil Company means the state oil company is operating the petroleum resource and petroleum field in Thailand. The objective for operating the nation benefit from the petroleum sector, such as petroleum concession, profit-sharing contract (PSC) system, and service contract (SC) and grow the Thai economy." All of the models establish the NOC to operate their petroleum resources and participate in the petroleum concession.

However, the definition of the national oil company in the study models are focused on the activity of their company. All model no legislates the definition of the national oil company in their petroleum act.

2. To legislate the section about the characteristic of the national oil company in the Thai National Oil Company Act for setting the characteristic, exclusive duties, and power of the national oil company. To define the duty and privileges for the Thai NOC about the term of the concession. Approve the determination of a production area, permit an extension of the period for commencing the production, and collecting the petroleum royalty to our state.

According to the act, it should legislate the characteristic of the national oil company. In the study, the petroleum act of Malaysia, Norway, and Saudi Arabia permit their Company act can be adapted to use in the structure of the NOC because all model set the characteristic of national oil companies to be the public limited company. Moreover, the "Thai National Oil Company Act" is should reset the of PTT Exploration and Production Public Company Limited (PTTEP) to the National Oil Company. The act gives

the duties to operate the concession of petroleum resources in Thailand. Furthermore, it set the structure of the National Oil Company about the Thai government control of this company. However, the Thai government is the major shareholder of PTT and PTTEP is the subsidiary of PTT. The government will buy the stock of PTTEP from the Stock Exchange of Thailand for increases government control in this company.

3. To legislate and rewrite the duties of the national oil company to prevent the conflict of interest. Set the duties of the national oil company has been the operator in the Thai National Oil Company Act and decrease the duties of the Department of Mineral Fuels (DMF) to the one role as a regulator in the section of the Petroleum Act. Legislate the limited power of the national oil company to prevent the national oil company monopolize the petroleum sector of Thailand. If not clear legislate about this limitation, The National Oil Company will out of control and have not good governance. And then, legislate the full power for observation and regulation duty, give the Department of Mineral Fuels. This department will be a barrier to regulate the national oil company. Furthermore, increase the excellent check and balance for this structure and not have a conflict of interest. So, it should be added to the law.

According to the Thai National Oil Company Act will separate the duties of the Department of Mineral Fuels (DMF). It should enact the law for the first to establish the NOC in Thailand. It will support the separation of the power and duty of the old twice roles play of DMF. However, the characteristic of each National Oil Companies has the same goal. They have the objection to set their NOC to manage the petroleum resource for the highly beneficial and give this revenue from the petroleum sector to develop the value and quality of their people. Nevertheless, the NOCs do not necessarily follow the shareholder value maximization model alone. Since these companies are majority-owned by their national governments, maximizing the value of the company might have to compete with other governmentally mandated objectives. Although all national oil companies respond to their national governments to one degree or another, the amount of influence varies widely. The national oil companies of more developed nations, Statoil in Norway, and Petronas in Malaysia, and the companies are under pressure to maximize the flow of funds to the national treasuries.

Thailand should establish the NOCs for operation the collecting petroleum royalty payments and any other benefits and separate the role of regulation with The Department of Mineral Fuels. Thai NOCs will resolve the problems of the conflicts of interest, increasing the facility for operating the petroleum resources, and developing the well-know about the petroleum industry. Furthermore, Thai NOCs must set the limits of

power for adoption in Thailand. If not set the limitation, NOCs will is having an influence and out of control for the excellent achievement from the set goal. On the other hand, If the government more controls the NOCs, these NOCs will be the rack of developing and be affected by the economy.