



Analysis of economic management problems and challenges in increasing investment in the upstream oil and gas industry

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ABSTRACT

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Oil and gas is a very important industry in economic circulation which can contain the course of economic stability. In the oil and gas industry sector, it will really need the role of investors to provide funds in order to carry out oil and gas exploration and exploitation in accordance with the target. In this study using phenomenological qualitative research methods based on explanations related to facts that exist during the research process. The facts obtained from the analysis of problems and challenges of investment in the oil and gas industry will be presented qualitatively in accordance with the existing facts. In qualitative methods that describe related research objects that will provide meaning related to findings in the phenomenological category. This research was supported by the acquisition of data derived from focus group discussions (FGDs) conducted by the Expertise Agency with SKK Migas and the Ministry of Energy from Mineral Resources. The result of this study is that many factors that can affect upstream oil and gas investment are influenced by internal and external factors which must be overcome as a whole.

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1. INTRODUCTION

Oil and gas is an industry that is used to encourage economic turnover and individual activities by utilizing oil and gas resources as a means of living (Muarofah & Falianty, 2020) . The large role of the upstream oil and gas industry is very important for the country's economy. Disparate conditions in the economy have been occurring for a long time, even in the past few years where the condition and situation of the country has been quite chaotic due to the problem of the spread of the Covid 19 virus. This has also had an impact on the economy related to oil and gas. *Supply* and *demand* conditions that experience unstable levels of price fluctuations have a negative impact on the effectiveness of economic stability (Aprizal et al., 2022) . It is not uncommon for the process of instability in the upstream oil and gas industry to be influenced by several factors, including investment in the upstream oil and gas mining sector. Oil and gas is one of the industries that influences economic patterns in Indonesia because it has

managed to contribute large revenues and is able to influence the level of price stability in other industries. In an investment, an investor will not want to make an investment whose flow and implementation are not clear. This is based on the fact that one of the objectives of investment is to gain profits, not losses (Davidson, 2015). Oil and gas is a very promising investment target for its benefits. However, it also has huge losses if there is an obstacle or miscalculation in risk management. Every risk that arises in an industry cannot be ignored, but existing risks must be addressed immediately. Likewise in investments in the oil and gas industry, if there is a possibility of risk, management must immediately address it as a whole so as not to cause a greater impact (Paramita, 2022).

Indonesia's abundance of natural oil and gas resources opens up large income opportunities for the country (Arifin & Hidayat, 2021). In this way, it can indirectly stabilize the economy and improve the welfare of its citizens. Indonesia is indeed one of the countries with large natural resources, but it still lacks experts. With extraordinary technological developments and the pattern of society starting to become aware of expertise, new ways and solutions have emerged to overcome past failures related to the lack of expert resources in their fields. Apart from that, the large number of citizens who are facilitated to become experts have a big impact on the country's independence so that it does not continue to rely on experts from outside.

Oil and gas are the main factors in industrial turnover for other industries. Obstacles that occur in the oil and gas industry will affect other industries that use oil and gas. The stability of the entire industry is greatly influenced by the stability of oil and gas (Najicha, 2021). With the large population in Indonesia, of course every individual will need oil and gas in their lives. The level of community needs that is not accompanied by proper management of the circulation of oil and gas processes will have a significant impact (Anshar et al., 2023). Crucial problems exist in the oil and gas industry. As one of the drivers of industrial growth, oil and gas play a role that is also influenced by other industries. In general, every developing industry will need each other even though there is one industry as the main industry. Just as oil and gas will be maximized to have a significant influence on economic turnover patterns (Hanafie et al., 2023). It is not uncommon for oil and gas to be processed to produce additional resources to minimize the risks that occur with these substitute goods. Current technological developments are able to create and develop various facilities that make it possible to produce oil and gas so as not to focus only on agricultural products. This is due to fear of the limited amount of natural oil and gas resources if exploitation is carried out on a large scale.

There has been stability based on the pattern of oil and gas development in 2010 – 2020 which is quite crucial and needs to be maintained so as not to cause obstacles to other industries (Purwanto et al., 2021). Indonesia's natural oil and gas resources are quite large. However, The lack of expert personnel and availability of equipment is a big problem due to the lack of optimal management of this industry. Therefore, investment is starting to emerge which is expected to help the smooth and sustainable development of the oil and gas industry (Bhastary et al., 2023). Opening up investment land in the oil and gas industry cannot just be opened up. Increasing investor confidence is the biggest challenge, where investors will not be interested in unpromising industry conditions. The Indonesian state is trying to overcome this so that investors do not hesitate to invest and develop the oil and gas industrial sector (Arifin et al., 2021).

The many important things in the oil and gas industry provide opportunities for problems and challenges to arise and must be faced. As this research was conducted to identify problems and challenges that may arise in the oil and gas industry. Especially in the investment sector which encourages development and stability in the oil and gas industry sector in Indonesia. As one of the solutions that can be found, existing problems and challenges can potentially be turned into opportunities and profits. As in research carried out by Setyadi and Yuniza regarding suitability evaluation an electronically

integrated licensing system for the upstream oil and gas sector, both before and after the Job Creation Law (Braithwaite et al., 2010) . With research results in the form of specific and different characteristics between the upstream oil and gas sector and other sectors.

There have been identified gaps in previous research and contribute to the current research that previous research might have focused more on technical aspects of the oil and gas industry, neglecting a comprehensive analysis of economic factors. The current study could fill this gap by placing a stronger emphasis on economic management issues, such as fiscal policies, investment incentives, and financial mechanisms.

With this presentation, the researcher formulated a research hypothesis that the upstream oil and gas investment sector will provide opportunities as well as very crucial problems and challenges for which appropriate solutions must be found. Upstream oil and gas investment policies will greatly influence *supply* and *demand* in a country's economy.

This is what makes the researcher formulate the research problem as what problems arise in the upstream oil and gas investment industry sector? what are the challenges that arise in the upstream oil and gas investment industry sector? and how will the increase in the upstream oil and gas industry impact investment?

This research was carried out with the aim of analyzing the problems and challenges that occur in increasing the investment sector in the upstream oil and gas industry in Indonesia. The hope in this research is that every existing problem and challenge will become material for re-evaluation for related industrial sectors and also be used as a reference for further research. Not only that, it is hoped that existing policies will be able to be re-evaluated to see whether they are in accordance with the needs of the industrial sector or whether they are actually having a significant impact.

The research expected to provide insights into the specific economic challenges and management issues affecting investment in the upstream oil and gas industry. By identifying and understanding the economic management problems, decision-makers in the oil and gas sector can make more informed and strategic decisions.

2. RESEARCH METHOD

This research uses a qualitative phenomenological research method which is based on explanations related to the facts that existed during the research process. Facts obtained from the analysis of investment problems and challenges in the oil and gas industry will be presented qualitatively in accordance with existing facts (Firmansyah et al., 2021) . The qualitative method describes the research object which will provide meaning related to the findings in the phenomenology category (Kuswarno, 2007) . This research data was obtained from the results of a *focus group discussion* (FGD) conducted by the Expertise Agency with SKK Migas and the Ministry of Energy and Mineral Resources (ESDM). With this data, the researcher processes it in such a way that the conclusions drawn are described qualitatively. The phenomenological qualitative research method also considers the results of previous research to compare situations and conditions (Muktaf, 2016) .

3. RESULTS AND DISCUSSIONS

Oil and gas have become an important need for humans in carrying out their daily lives. These needs must be balanced with the presence of appropriate and appropriate raw materials. Law Number 22 of 2001 concerning Oil and Gas states that business activities that rely on exploration and exploitation industrial activities will have greater industrial circulation (Irawan & Riawan, 2023) . Investment in upstream oil and gas needs to be increased to make more significant developments related to upstream oil and gas itself.

Fiscal policy greatly influences investment in upstream oil and gas. Indonesia is indeed a country with a fairly high average economic growth in the oil and gas industry compared to other countries. However, unstable fiscal policy has resulted in little investment entering the oil and gas industry which is quite different from other countries (Manohara & Juwana, 2023) . Exploration and exploitation efforts carried out on oil and gas are carried out in a balanced manner so that the management of natural gas resources is maintained and does not experience fluctuations or shortages. One indicator that will attract investors is related to the stability of the condition of the oil and gas industry itself. Maximum utilization of potential will provide change as real evidence that can be produced to minimize the obstacles and risks that occur (Boyd et al., 2010). In this way, the oil and gas industry has the opportunity to experience an increase and obtain price stability for existing raw materials.

The role of investment in upstream oil and gas will increase oil and gas results obtained from existing funding sources. With so much natural wealth, the needs of citizens and the state, the availability of large funds is a crucial problem in oil and gas processing itself (Kamal, 2019) . Oil and gas that can be processed well and optimally will also provide benefits for investors. Increasing the level of investment which is still minimal needs more attention. So that investors have confidence and see profit opportunities in the upstream oil and gas industry. As upstream oil and gas plays a major role in oil and gas management, there are many problems and challenges that will be faced which will have an impact on the economy. The challenges that exist can be in the form of increasing trust, managing natural and human resources, risk management that must be implemented, and so on (Fadillah & Soesanto, 2023). Meanwhile, the problem that may be encountered in implementing upstream oil and gas investments is the lack of experts who have great potential to manage and provide solutions to existing oil and gas conditions. Then there will also be problems with fluctuations and inflation that will occur in a country. Especially in abnormal conditions in the country, where existing problems and challenges must be overcome optimally so as not to affect other conditions. It is not uncommon for investment management personnel to make a breakthrough to manage risk into profit (Tambunan & Togatorop, 2021).

In order to invite investor interest to be willing to invest in upstream oil and gas, there are several problems that arise in the upstream oil and gas industrial sector which are implemented by SKK Migas, including (Khairunnisa, 2016): (a) Oil and gas is still a resource whose revenues go to the state treasury, (b) The oil and gas business is still volatile, (c) Lack and difficulty of funding in the upstream oil and gas industry sector, (d) The lack of national strength in managing and developing oil and gas is generally still weak, (e) *subsurface* factors, (f) There is a lot of competition with other countries operating in the oil and gas industry with the resources they have, (g) The lack of regulations, spatial planning and licensing related to the upstream oil and gas industry is not conducive, (h) Lack of relationships between the central government and regional governments.



Figure 1. Illustration of the Indonesian Upstream Oil and Gas Industry

Based on the picture above, it is explained that the influence of oil and gas in life is very large to support the implementation of activities and industry. Oil and gas is processed to provide benefits and convenience (Paramita, 2022) . The cycle of oil and gas use will not stop in one industry, but will continue and circle back to other industries. Some of the oil and gas processed domestically will be used and distributed to the public and some will also be exported to other countries to increase state income through export foreign exchange (Effendy, 2019) . Oil and gas is one of the consumable products that will continue to be needed and repurchased. This is used in such a way as to not waste and result in losses that should be utilized. Upstream oil and gas will influence the results experienced from downstream oil and gas, where upstream oil and gas will undergo a process of exploration and exploitation of oil and gas processing until it can be used according to oil and gas management flows and needs. In upstream oil and gas there must be no negligence in processing, where failure or negligence resulting from upstream oil and gas will cause instability in oil and gas needs in other sectors. Upstream oil and gas plays a role in producing oil and gas management in a structured manner and in accordance with needs (Rosdiana & Siddik, 2015).

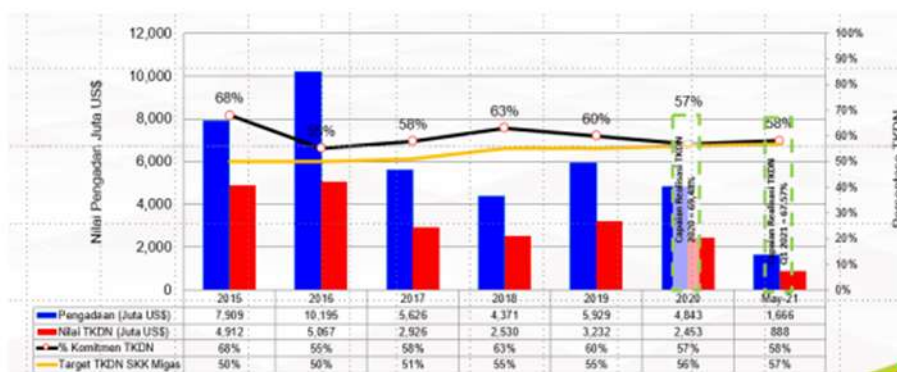


Figure 2. Development of Procurement Optimization and TKDN in the Upstream Oil and Gas Industry

In upstream oil and gas investment, there are 2 cooperation schemes implemented, namely a *cost recovery* scheme and a profit sharing contract scheme (*gross split*). (Ludwina Lilasari & Siallagan, 2023) . The existence of both schemes is aimed at overcoming unpredictable obstacles and requires making a decision in a short time. This

scheme is based on Law Number 22 of 2001 Article 1 Number 19, which states that a cooperation contract is a joint agreement that can be carried out by sharing the results of exploration activities which create greater profits for the country and the results can be felt and used as much as possible for increase the prosperity and well-being of society. Several principles in production sharing contracts include: (Sujatmoko et al., 2020) (a) The distribution of profit sharing is adjusted to the production results obtained. (b) The authority to make decisions rests with the highest authority of the oil and gas manager or in Indonesia it is called Pertamina, (c) All forms of facilities belong to the oil and gas company, (d) The distribution of reserve products is different from the distribution of main products, (e) The contractor will bear losses on operational costs if any, (f) Full ownership of minerals belongs to the state until they are handed over to certain parties.

4. CONCLUSION

This research produces findings that in the oil and gas industry, the role of investment has a very big influence on smooth running oil and gas management. Especially in creating opportunities and confidence for investors that upstream oil and gas investment is a very profitable part and can last for a long period of time. The existence of upstream oil and gas investment faces several problems and challenges in the form of; lack of experts and financial resources, fluctuating business, the existence of *subsurface*, tight business competition with other countries, lack of existing regulations, and lack of relationship between the central government and regional governments in terms of the oil and gas management industry. The large number of opportunities provided for investment opportunities will influence the circulation of upstream oil and gas being managed.

The research offers valuable insights for stakeholders but has limitations, including potential data constraints and a narrow temporal scope. To improve future studies, researchers should explore alternative data sources, conduct longitudinal analyses, adopt a more global perspective, engage diverse stakeholders, and employ an interdisciplinary approach. Additionally, there is a need for research on the long-term implications of economic management strategies and comparative analyses with alternative energy sectors to inform more nuanced decision-making in the evolving energy landscape.

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