IJAFIBS, 10 (3) (2022) pp. 151-158

Published by: TRIGIN Publisher

International Journal of Applied Finance and Business Studies

Journal homepage: www.ijafibs.pelnus.ac.id

Comparative analysis and the impact of the implementation of the profit-sharing scheme of gross split oil and gas on the investment value of upstream oil and gas

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ARTICLE INFO

Article history:

Received Nov 26, 2022
Revised Des 12, 2022
Accepted Des 26, 2022

Keywords:

Comparative Analysis
Investment Value
Oil and Gas
Profit-Sharing Scheme

ABSTRACT

This research wants to prove whether when Indonesia implemented the rules for implementing the gross split profit sharing scheme in 2017 it had an impact on decreasing upstream oil and gas investment in the following years. Is there a significant difference regarding this upstream oil and gas investment before and after the determination of the implementation of the gross split profit sharing scheme. What are the trends in matters related to upstream oil and gas activities starting from upstream oil and gas investment values, oil, and gas production, signing of new contracts both conventional and non-conventional oil and gas, oil and gas reserves, and oil and gas drilling charts. Using quantitative descriptive research, proves that there is no significant difference in the value of stock investment both before and after the implementation of the gross split profit sharing scheme in 2017 with some interesting trend descriptive analysis. For future researchers, they can conduct research on a longer period in the coming years to get a better trend pattern.

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1. INTRODUCTION

Even though Indonesia has made use of new, renewable energy to reduce carbon emissions, the government still has the ambition to boost oil and gas production, especially for oil by 1 million barrels of oil per day in 2030 (Setiawan, 2021). Indonesia's oil consumption is increasing but inversely proportional to oil production (Alan & Mustika, 2021; Fajri, 2020). The Minister of Energy and Mineral Resources (ESDM) further said that many countries' oil and gas potential has not been exploited (Persia, 2018). If you don't act, it will cause production to fall, increase imports and result in a decrease in foreign exchange (Nasution & Faisal, 2016). To maximize oil and gas production, considerable capital is needed both in terms of funds and the need for reliable human resources. The strategy that has been carried out by Indonesia to attract investors/contractors to invest is by offering cooperation contracts or production sharing schemes that provide benefits to both contractors and the government.

In 1966, Ibnu Sutowo introduced a production sharing scheme for oil and gas cooperation contracts which attracted enough attention from contractors to invest. The Cooperation Contract contained in Law no. 8 of 1971 also aims so that Indonesia can learn from foreign parties so that Indonesia can independently become a producer in managing natural wealth in its own country (Chandranegara, 2017; Damayanti, 2019; Lubis, 2019; Suparyanto dan Rosad (2015, 2020).

Furthermore, the Cooperation contract is called the Production Sharing Contract (PSC) which is strengthened in Law no. 22 of 2001. The PSC production sharing system between governments and oil and gas Cooperation Contract Contractors (KKKS) occurs after previously deducting cost recovery (Rulandari et al., 2018). Cost recovery is the return of oil and gas exploration and exploitation costs from the government to KKKS (Jumiati & Sismartono, 2018; Setyadi & Yuniza, 2021; Strajhar et al., 2016; Tambunan & Togatorop, 2021).

Cost recovery that is too high causes a reduction in state revenues, for example in 2015 of US$13.9 billion which exceeds non-oil and gas state revenues of US$12.86 billion. In addition, the BPK found fraud in cost recovery inflation which had begun to increase since 2014. This was supported by the Indonesia Corruption Watch (ICW) which revealed indications of irregularities in domestic oil revenues in 2000-2007 reaching IDR 40 trillion from cost recovery. Duta (2016) on CNN Indonesia said that the BPK revealed that the practice of inflating the amount of cost recovery was carried out intentionally and repeatedly by the 7 working areas.

To overcome the problem of cost recovery, the government issued ESDM Regulation No. 8 of 2017 concerning gross split profit sharing contracts. It is hoped that this gross split profit-sharing mechanism will overcome the problem of cost recovery and further maximize government revenue (Alan & Mustika, 2021; Wicaksono, 2018). However, this gross split profit sharing scheme has raised polemics, including fears that it will not attract the attention of investors to invest. Besides that, in terms of being very detrimental to workers, especially workers in the upstream oil and gas sector, it is no longer possible for the State to intervene in policies from PSC Contractors. Responding to the existing polemic and various inputs from stakeholders, the government has issued Ministerial Regulation No. 12 of 2020 concerning the third amendment to the Minister of Energy and Mineral Resources Regulation No. 08 of 2017 concerning gross split yield contracts. This change is about affirming the application of forms of cooperation and flexibility in the forms of profit-sharing contracts for gross split or cost recovery. The point is that the gross split profit sharing scheme is not abolished but can be an option for contractors.

This research wants to prove whether when Indonesia implemented the rules for implementing the gross split profit sharing scheme in 2017 it had an impact on decreasing upstream oil and gas investment in the following years. Is there a significant difference regarding this upstream oil and gas investment before and after the determination of the implementation of the gross split profit sharing scheme. What are the trends in matters related to upstream oil and gas activities starting from upstream oil and gas investment values, oil, and gas production, signing of new contracts both conventional and non-conventional oil and gas, oil and gas reserves, and oil and gas drilling charts?

This research is based on the following theories: Contract theory is a theory introduced by Kenneth Arrow in the 1960s where this theory studies how economic behavior can construct contractual arrangements in the presence of information asymmetry (Smith, 1993). The implication of this research is that the government builds cooperation contracts with contractors and how their behavior builds production sharing contracts in the oil and gas industry.

Theory of Scarcity by Lionel Robbin is a science that studies human behavior to achieve goals and manage existing scarcity for that purpose. Fraud Triangle Theory developed by Donald Cressey in observing the causes of fraud. The implication in this study is that each party, both the government and contractors, can mutually maximize profits or shift risks as much as possible to one party to another. This is evidenced by several BPK findings related to inflation and cost recovery cases where there are already regulations regarding operational financing that can be covered.

The theory of justice by Adam Smith which contains the main principle of justice is the principle of not harming others. In a work contract between the government and a contractor, if you comply with all applicable provisions, no party will be harmed.

As the result of Previous Research Related to Production Sharing Contracts Brandon (2021) found in his research that the gross profit scheme is more profitable than cost recovery for companies with research objects that use conventional field data with oil and gas production commodities. The same results were found by (Anjani & Baihaqi, 2018) where the gross split scheme will benefit contractors if implemented with good work program planning & budgeting, accurate calculation of oil and gas reserves, timely construction of oil and gas facilities, and efficient use of production costs.

For the government, even though the revenue is smaller, on the other hand it is not burdened with production cost recovery which has so far disrupted state finances in the development of domestic oil and gas exploration and production.

(Rulandari et al., 2018) in his research evaluates how the implementation of PSC Cost Recovery is compared to the gross split PSC in oil and gas cooperation contracts in Indonesia. The research method used is a comparative descriptive method combined with qualitative. Methods of data collection is done by interviews, observation, and documentation. The author concludes that the government's decision to use a Gross Split PSC is more profitable for the government than a cost recovery PSC. It is recommended that the government make a big breakthrough as a big step to encourage investment by improving the process of improving bureaucracy, improving regulations, transparency and eliminating uncertainty in the implementation of the Gross Split PSC, as well as providing various fiscal and non-fiscal incentives, and improving public services.

This gross split profit sharing scheme offers a reduction in the bureaucracy in investing which is expected to attract investors to carry out exploration and exploitation in Indonesia. It was further stated that the Oil and Gas Special Task Force (SKK Migas) is an institution appointed by the state to carry out control and supervision of KKKS activities in production sharing contracts (Fajri, 2020).

Research conducted by Soewandari (2016) through literature and field studies found that the Government, represented by SKK Migas, in determining cost recovery begins by negotiating with the Cooperation Contract Contractor at the initial stage of preparing the Plan of Development, and there is no determination of the amount or limit. of the nominal cost recovery that can be returned by the Government and the obstacle encountered lies when there was a cost overrun during the initial negotiations without any clear justification.

Based on the results of this study, the hypothesis H0 was developed: "there is no significant difference in the investment value of upstream oil and gas before and after the enactment of the 2017 gross profit-sharing sharing rules".

This is different from the research conducted by (Alan & Mustika, 2021) which uses a statutory approach, a case approach, and a conceptual approach. The results of the study show that in the practice of the oil and gas industry, Indonesia implements a system of production sharing contracts, both cost recovery and gross split, which have not succeeded in creating a production sharing contract that is fair and proportional to the state. It was further said that the lack of oversight from the government and clauses that tend to be burdensome to one party which leads to injustice both for the state and for contractors is a problem and has not been successfully resolved with several schemes implemented by the government. Therefore, a new scheme is needed that prioritizes aspects of justice, namely the Pain and Gain Sharing scheme. This scheme offers many advantages compared to the previous two schemes.

2. RESEARCH METHOD

This type of research is quantitative descriptive research with data processing using SPSS. Data were obtained from the official website of the Ministry of Energy and Mineral Resources and from several other official websites that are relevant to this research. This study uses data related to the upstream oil and gas investment value with the 2017 cutoff as the year the gross split profit sharing scheme was implemented which will then be analyzed before data (2015-2016) and after the 2017 cutoff, namely 2018 and 2019. Descriptive data will be analyzed several important data related to oil and gas including upstream oil and gas investment value, oil prices, new conventional and non-conventional contracts, total investment and oil and gas reserves from 2011 to 2019.

Descriptive statistics will be displayed in the form of trend charts and bar charts to gain insight into oil and gas facts. While the different test will be carried out using the independent sample t test method to find out whether there is a difference in the value of the investment before and after the implementation of the profit-sharing scheme for the gross split cooperation contract. If the alpha value shows a result ≤ 0.05, it means we accept H0, which means that there is no significant difference in the value of the investment before and after the implementation of the 2017 gross split profit sharing scheme. Conversely, if the alpha value shows a result > 0.05, it means that H0 is rejected, which means there is a significant difference in the value of the investment before and after the implementation of the 2017 gross split profit sharing scheme.

3. RESULTS AND DISCUSSIONS

To answer the hypothesis and the purpose of this study, namely whether there is a significant difference in the upstream oil and gas investment value before and after the implementation of the gross split profit sharing system, you can see the results below:

Table 1. Mean Difference Test Results using the independent sample t test.

Group	N	Mean	Std. Deviation	Sig
Before	2	13463.0000	2654.47886	
After	2	11932.3500	89.30759	
Equal Variances not assumed				0.564

The average investment value in the 2 years prior to the enactment of the 2017 gross split profit sharing scheme was slightly higher than the year after. However, the significance value shows the number 0.564 which is greater than 0.05 which means H0 is accepted or in other words there is no significant difference to the average investment value before and after the implementation of the 2017 gross split yield scheme.

For a clearer analysis, we can pay attention to the trend in upstream oil and gas investment value after 2017 the following gross split profit sharing scheme was implemented.

After 2017 the value of upstream oil and gas investment increased by 17% in 2018 and only decreased by 1% or 16% in 2019. This increase in 2 consecutive years was the highest increase in the last 9 years. This means that the polemic about the concern that the investment value will decrease is refuted by evidence that in the year after the gross split profit sharing scheme was implemented it increased by 17% and 16% respectively in the years after 2017, namely 2018 and 2019.

However, there are several trends in upstream oil and gas activities that need to be considered as follows:

Figure 1. Oil and Gas Contract Signing 2011-2019

From 2011 to 2019, a downward trend was found for the number of new work contracts for both conventional oil and gas and non-conventional oil and gas. Even though since 2017 there has been a high increase in conventional work contracts, this is not comparable to the highest point achieved in 2011. This is a signal that Indonesia needs to pay close attention to the production sharing scheme with contractors and its implementation mechanism to attract investors to come create new cooperation in the oil and gas industry. If you only hope for existing contractors, oil and gas production will gradually decrease.

The total oil and gas production in the last 9 years has shown the following trends:

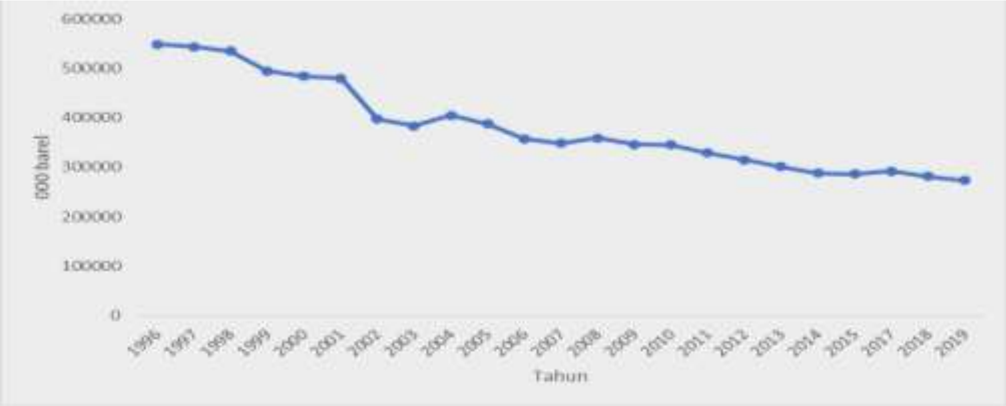

Figure 2. Oil Production 1996-2019

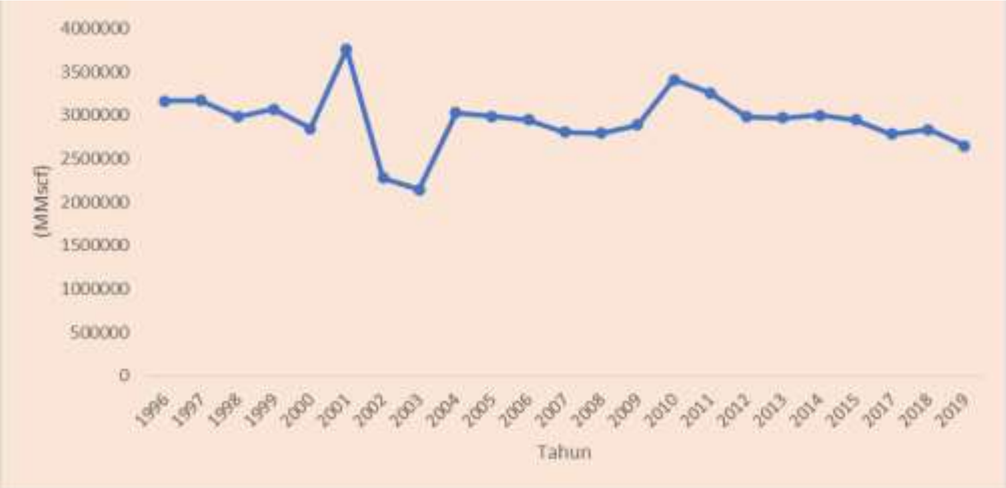

Figure 3. Gas Production 1996-2019

Gas production in the last 23 years is clearly shown in the graph showing a decreasing pattern which of course must be a concern for the state because if production continues to decrease while oil and gas consumption continues to increase then in the future Indonesia will be forced to import oil and gas from abroad which will result in a decrease in the country's foreign exchange.

This fact is also supported by oil and gas reserves which are increasingly showing a decreasing pattern, especially in the last year of 2019 as shown in the bar chart below:

Figure 4. Petroleum reserves (proven and potential)

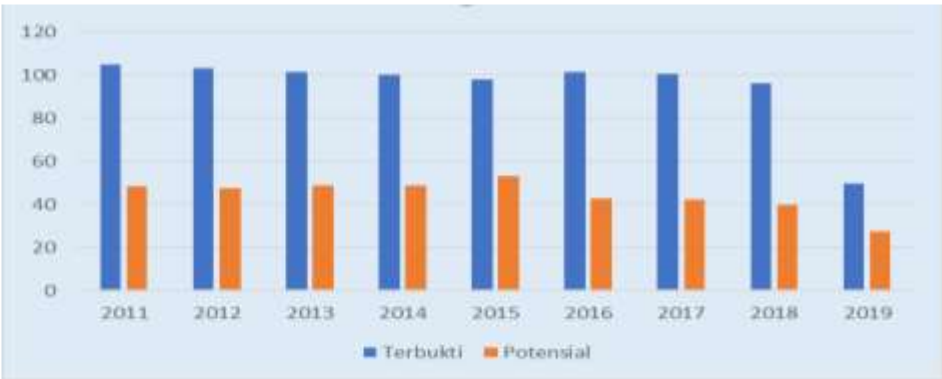

Figure 5. Gas Reserves

Exploration well drilling chart for 2011-2019 shows realized value, discovery, and success ratio in a decreasing trend as well. For more details, see the following graph:

Figure 6. Exploration well drilling chart

Some of the things mentioned above coupled with the sluggish oil prices in recent years require extra attention from the government to immediately implement an appropriate strategy so that it can balance every core need that requires oil and natural gas. The following is the price of oil displayed on the following chart:

Figure 7. Oil Price

Even though the investment value has not shown a decline since the implementation of the gross split profit sharing scheme in 2017, the facts from the data presented through analysis of trend charts and bar charts show the results of a downward pattern from a number of important aspects related to upstream oil and gas, namely oil and gas production, signatures new contracts for both conventional and non-conventional oil and gas levels, oil and gas reserves, and exploration well drilling charts. This declining pattern was not immediately anticipated through one of them in terms of attracting more investors to want to cooperate, our country will increase imports of oil and natural gas and of course it will cause various negative impacts that will be detrimental to the country.

4. CONCLUSION

This research wants to prove whether when Indonesia implemented the rules for implementing the gross split profit sharing scheme in 2017 it had an impact on decreasing upstream oil and gas investment in the following years. Is there a significant difference regarding this upstream oil and gas investment before and after the determination of the implementation of the gross split profit sharing scheme. What are the trends in matters related to upstream oil and gas activities starting from upstream oil and gas investment values, oil, and gas production, signing of new contracts both conventional and non-conventional oil and gas, oil and gas reserves, and oil and gas drilling charts? From research results and analysis of available data, the following conclusions can be drawn: research proves that there is no significant difference in the value of stock investment both before and after the implementation of the gross split profit sharing scheme in 2017, after observing the year after the implementation of the gross split profit sharing scheme in 2017, it was found that the following year, the investment value increased by 17 percent and 16 percent in 2018 and 2019. There have been several declining patterns for almost a decade in terms of production volume, signing of new contracts, oil, and gas reserves, and drilling of oil and gas exploration wells. This matter needs to get extra attention from the government because this will lead to reduced state revenues from natural resource products, reduced supply of oil and natural gas for the needs of the Indonesian people and other negative impacts that are affected by it. The issue of production sharing contracts which in 2020 will eventually be enforced to freely determine the cost recovery or gross split profit sharing scheme needs to be evaluated objectively in its implementation to maximize the fair interests of both parties, both the government and contractors.

This research is expected to contribute to the government and contractors, especially the government in terms of regulating the oil and gas cooperation profit-sharing mechanism so that it can provide justice for both parties. For academics it is hoped that this research can be an additional reference when it is still very rare to find.

This study uses very minimal differential test data due to the limited number of years considering the cut off special rules for gross splits is 2017 and the data available after that is only 2 years. For future researchers, they can conduct research on a longer period in the coming years to get a better trend pattern.

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