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Implementing Cost Optimization Program As A Business Sustainability Effort, A Case Study of PT Borneo Energi Indonesia

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ABSTRACT: The high rate of consumption of fossil fuels in Indonesia encourages PT Borneo Energi Indonesia to continue to increase oil and gas production. This is a challenge for PT Borneo Energi Indonesia which has mature well assets that require huge maintenance costs, and this is a contributor to the company's increasing costs during the 2020-2022. This has a significant impact on profits and the business continuity business in the future. Therefore, a cost optimization program needs to be carried out to assist companies in maintaining profit.

This study uses qualitative methods, data obtained through in-depth interviews and Focus Group Discussion (FGD). The questions posed in the one-on-one interviews and FGDs were aimed at observing how far the respondents knew the condition of existing costs in the company, their impact on company profits, and the impact on economic, social, and environmental aspects as an indicator of corporate sustainability. The results show that the role of Synergy & Borderless Operation and Digitalization are pillars that need to be prioritized in responding to future challenges, especially in the industry 4.0 era, as well as the dynamics of organizational change that occurred after the implementation of sub holding and regionalization to build business continuity.

KEYWORDS - Maintenance cost, Cost Optimization, Digitalization, Business Sustainability.

I. INTRODUCTION

In achieving business sustainability in the future company must maintain its business to remains effective and efficient in managing costs. However, the data shows that the realization of the cost in 2018 to 2022 is increasing as shown in the Figure 1 and Figure 2.

There was a significant increase of production cost and operating cost, and the cost optimization is urgently needed to sustain the business, to leverage the ability in investment, and to keep the company profitable in the future.

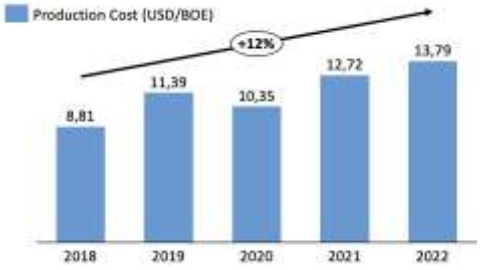

Figure 1. Production Cost 2018-2022

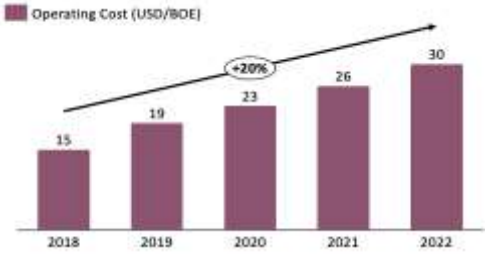

Figure 2. Operating Cost 2018-2022

According to the condition mentioned above, this research is studying the aspects of costs that can be controlled and optimized effectively without reducing the quality of work or aspects of Health, Safety, Security,

and Environment (HSSE). So that it can contribute to reducing costs and increasing company profits for the company's sustainability in the future.

II. LITERATURE REVIEW

II.1 Cost Optimization

The terminology related to the cost as the variable in financial aspects, there are three types of cost: cost optimization, cost effectiveness, and cost reduction. The difference between those three are: cost optimization refers to the process of reducing costs while maintaining or improving the quality of products or services. It involves identifying areas where costs can be reduced without negatively impacting the value of the product or service. Cost optimization can involve strategies such as streamlining processes, improving efficiency, or reducing waste. The goal of cost optimization is to maximize value while minimizing costs.

Cost reduction, on the other hand, focuses solely on reducing costs. It involves identifying and eliminating unnecessary expenses, reducing overhead costs, and cutting back on expenses wherever possible. The goal of cost reduction is to lower costs to increase profits or to free up resources for other purposes.

Cost effectiveness refers to the ability of an organization to achieve its goals and objectives in the most efficient and cost-efficient way possible. It involves comparing the costs of different strategies or solutions to achieve a particular outcome and selecting the one that offers the best value for money. Cost effectiveness considers both the costs and the benefits of different options and aims to identify the most efficient way of achieving a particular outcome. However, this final project is similarizing the perception into one terminology which is cost optimization as the variable used in the research especially for the case that happens in the oil and gas industry.

The oil and gas industry is undergoing significant changes due to factors such as the shale revolution, increasing use of non-renewables, lower oil prices, and improving energy efficiency. These changes pose challenges to the industry's goals of efficient and environmentally responsible operations, production optimization, and capital cost reduction (Furman et al., 2017). In addressing these challenges, the industry is relying on optimization and analytics technologies to achieve its objectives. Cost optimization is particularly important for the industry to sustain profitability. Thus, optimization is related to cost-effectiveness and cost reduction.

In addition, cost optimization is a continuous process that involves managing project costs effectively to gain a competitive advantage. An example in Mega Oil & Gas projects, located offshore in the Arabian Sea, face multiple challenges in project management, including severe weather, geographical conditions, and a shortage of labor. The authors of this paper have real-life experience in implementing complex and mega upstream Oil & Gas projects with ADNOC Offshore and provide a list of workable methods for cost optimization. The authors show that cost reductions can be achieved through strong project management, effective management of uncertainties, high-quality engineering, value engineering during the EPCC phases, and effective management of changes and stakeholder expectations throughout the project life cycle (Mohamed Ali Awwad et al., 2021).

Some research has been conducted cost optimization in the who applied unique methodologies to achieve significant savings in CAPEX and OPEX in the company, resulting in increased total asset value and production optimization. These methodologies included running facilities at maximum capacity to avoid bottlenecks, reducing hook-up time to allow for smooth equipment relocation, optimizing project time and costs, and focusing on waste elimination. The company was recognized as a best-in-class operator and received multiple operational excellence awards due to its innovative approach to project planning and execution. The company utilized invented tools and local resources to achieve challenging objectives, including saving 5% of total project costs. The company also utilized readily available solutions, such as a gas plant from a sister company, to save over $30 million (Kamel Abdelhamid Al-Sawi et al., 2023).

Another research in cost optimization that related to the business sustainability also explained that the energy industry is undergoing a major transition, which places significant demands on logistics industries. Futureproofing and sustainability are top priorities for businesses to address revenue and cost. An ambitious journey towards total business transformation was taken, covering operating models, operations, commercial, organizational structure, people, performance, data, and technology. People are critical to the success of any transformation, and a change in mindset and agility is essential. To ensure successful transformation, high-impact areas were identified to deliver maximum results while maintaining business continuity and keeping costs under control. The transformation journey had three focus areas, namely people and mindset, future-proofing the business to impact the top and bottom line, and driving sustainability through cost optimization, talent management, and asset optimization (Seth et and Deepak Goyal, 2022). Moreover, research in The North Kuwait, where the wells face significant challenges with massive formation damage and fluid losses during workover operations in the Upper Burgan Formation, leading to incremental operational costs and delayed production. To address this, a unique solution called the "salt pill" has been developed as a filtration control

agent that can be used in Gas & Oil wells with over 2% water cut. This technology was successfully tested in candidate Sabriyah wells, leading to satisfactory results and increased oil production. The success of this pilot will serve as a best practice solution for KOC assets, leading to cost optimization and improved well integrity and productivity (Rashidi et al., 2019). Cost optimization has been using the Integrated Production Model (IPM) during a period of oil low prices. The studied resulted 24% reduction in annual compressor costs. Overall, the paper highlights the effectiveness of the IPM as a tool for optimizing production systems and generating future production strategies and cost reduction opportunities (Hidayat et al., 2017).

Since the optimization effort is to answer the challenges caused by the external factor that uncontrollable by a company, cost optimization initiatives in the oil and gas industry in Nigeria examines the impact of oil price fluctuations on the personnel, projects, and finances of Nigerian oil and gas companies. The cyclical nature of oil prices leads to high operating costs during booms and makes production unprofitable during recessions. Consequences of falling oil prices include lost jobs, decreased sales, and project delays or cancellations. To adapt to these changes, Nigerian businesses adopt cost best practices, compare prices and manage balance sheets. The authors support their claims with online research and quantitative research based on historical data (Ugolo et al., 2019). Another study also conducted in the oil and gas production sector, explored how oil and gas producers are using digital transformation to meet long-term business needs such as improved health, safety, and the environment. Extend the life of production equipment; improve reliability to reduce maintenance costs; reduce losses; improve usability to reduce labor costs; Increase productivity; increase production; improve governance and regulatory compliance (Jonas Berge, 2018).

In the Indonesia Petroleum Association journal stated that there are 7 pillars in cost effectiveness: Budget accuracy, technical standardization, and innovation, change of working philosophy, operations optimization, supply chain optimization and renegotiation, cooperation with other companies, and organizational rightsizing (Purwanto et al., 2020).

To be implemented to a wider scope, some adaptation is also needed in adjusting those pillars to the current condition, and this led to the new 8 methodology of cost optimization that PT Borneo Energi Indonesia brings to its strategy shown below.

Figure 3. Eight Pillar Methodology of Cost Optimization
(Cost Optimization Internal Workshop, 2023)

Cost optimization is a broader concept that has been used in different scope besides the oil and gas industry. For instance, there are several studies regarding the cost optimization in the mining industry. Eugine et al (2016) presents the Mixed Integer Linear Programming (MILP) formulation and methodology for valuing orebodies using various mining options with complex production requirements. The MILP Optimization Framework provides a global optimization solution to help determine the transition points between open pit and underground mining operations. Various mining options were evaluated based on the assumption of low operating costs and high pre-production capital investment, with the COPOS mining option generating the highest NPV.

In summary, cost optimization focuses on maximizing value while minimizing costs. According to the definitions and explanations, PT Borneo Energi Indonesia elaborates the concept of cost optimization into three streams; cost saving, cost avoidance, and revenue growth in achieving the cost minimization goals in the company.

II.2 Cost Saving

Cost saving refers to the process of reducing expenses or spending less money than previously anticipated while maintaining the same level of productivity or quality of goods or services. It involves identifying areas where unnecessary expenses can be cut and finding ways to streamline. The goal of cost saving is to improve profitability and financial performance by minimizing expenses while maintaining or improving the quality of goods or services offered. A cost savings analysis conducted by calculating and comparing budgeting and realisation costs with the following budgetary considerations reviewed (Hanna et al., 2019).

Moreover, achieving management performance can be conducted by comparing actual figures of monitored economic parameters (expenses) with the planned budget. It also explained that saving and efficiency start when we begin to count spending. The use of cost saving as a variable has been carried out by several researchers (Klychova et al., 2014). Cost saving implementation also can be described as a team's efforts to improve the efficiency and standardization of oil well design in the BN area of Oman. The team is aiming for a minimum 10% cost reduction through optimization and standardization and is also exploring innovative contracting strategies to further reduce costs. The team includes members from various departments, and their approach aligns with the company's focus on commercial thinking and long-term improvement (Akarametahkom et al., 2021). In addition, at the 29th International Ocean and Polar Engineering Conference by Jang et al (2019), a paper presented regarding the cost saving, this study focuses on the rearrangement of topside equipment on a single deck to reduce construction schedule delay risks and fabrication costs for EPCI contractors. The design involves elongating the vessel length and making the process deck wider than the hull deck and relocating equipment from two module decks onto the enlarged single deck. The single level topside design is expected to reduce topside weight, simplify construction, and allow for a faster fabrication schedule. The single level design may also help mitigate delays caused by long-lead equipment by allowing for separate integration on a FPSO moored to the quayside.

II.3 Cost Avoidance

Cost avoidance refers to the process of identifying and taking measures to prevent potential costs from occurring in the future. It involves proactively identifying and addressing issues that could lead to increased expenses or financial losses. Cost avoidance can be achieved through various methods, such as implementing preventative maintenance measures, identifying, and addressing potential risks, improving the quality of goods or services, and developing more efficient and effective business processes.

Function analysis is used to identify opportunities to minimize operating and maintenance costs, with a focus on minimum operating expenses and capital expenditure. The article highlights the success of value methodology in reducing capital project costs and its potential for application in operating facilities. The success of the value methodology in reducing capital project costs has prompted the authors to consider its application to plant operations, particularly in minimizing operating and maintenance costs. Value methodology is used when value is an issue and optimization is required (Carpenter, 2020).

The key difference between cost avoidance and cost savings is that while cost savings focus on reducing existing expenses, cost avoidance focuses on preventing future expenses from occurring. By identifying potential cost drivers and taking proactive measures to address them, businesses can improve their financial performance and reduce the impact of unforeseen expenses.

II.4 Revenue Growth

Revenue growth refers to the percentage increase in a company's total sales or revenue over a given period, typically year over year. Revenue growth is a key metric that investors, analysts, and executives use to evaluate a company's financial health and potential for future profitability.

A company's revenue growth rate can be influenced by a variety of factors, such as changes in consumer demand, market competition, pricing strategies, and marketing initiatives. High revenue growth rates are generally seen as positive indicators of a company's financial health and ability to generate profits, but sustained growth can also be a challenge and may require investment in new products, services, or markets.

A large literature on firm growth originates with Penrose (1994). Baumol et al. (1970) were among the first to empirically examine a firm's willingness to retain earnings to drive growth. Several economic models explore allocation of capital and labor strategies under growth (Aghion and Howitt, 1992), and economic growth through creative destruction (Schumpeter, 1950).

II.5 Sustainability

The modern understanding of sustainability as a framework for environmental, social, and economic development emerged in the mid-20th century, in response to increasing concerns about the impacts of globalization on the natural world and society. In the decades that followed, the concept of sustainability has been increasing from time to time, as well as the social movements. The United Nations played an important role in addressing the sustainability issue, with the 1987 publication of the Brundtland Report, which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The emergence of sustainability as a key imperative of this century, with technological advances and the impact of our footprint on the environment. The oil industry sees sustainability as a business imperative, not just a moral sacrifice, as it presents both risks and opportunities for the industry. The industry faces challenges as energy demand continues to increase while mature sectors decline. Our mission is to extend the life of the

industry by making new discoveries, increasing recovery from existing areas, and unlocking unconventional resources while increasing the focus on sustainability (Fattahi, 2017).

Moreover, sustainability business is defined as the rationale of how an organization creates, delivers, and captures value, in economic, social, cultural, or other contexts, in a sustainable way (Nostrabadi et al., 2019). In the business concept, *business sustainability* can be defined as the ability of firms to respond to their short-term financial needs without compromising their (or others') ability to meet their future needs. Thus, time is central to the notion of sustainability (Bansal et al, 2014). Another definition about sustainable business models is defined by Lüdeke-freund (2010) as "*a business model that creates competitive advantage through superior customer value and contributes to the sustainable development of the company and society*" (Yang et al, 2017).

Business sustainability in the oil and gas industry also has been studied by Abdul Jaleel Al Khalifa (2016) who explained that the oil and gas industry leaders have debated whether the current down cycle would be short or long, and whether it is beneficial or tragic. Some believe that down cycles are necessary to increase competition and efficiency, and that casualties are a normal part of a free market economy. Others argue that the current down cycle has had devastating consequences, including job losses, bankruptcies, and trillions of dollars in losses for shareholders. The debate touches on economic theories and assumptions, including the first law of thermodynamics, which assumes rational behaviour and a level playing field among market players. However, it is also explained that suppliers may have other motives and not all players may operate under the same circumstances.

Oil and gas company could achieve sustainability by adopting a circular economy mindset, which aims to keep resources in use for as long as possible, extract maximum value from them while in use, and recover and regenerate products and materials at the end of their service life. This approach reduces the need for raw materials, decreases carbon intensity, and reduces the carbon footprint. Recycling and reusing materials and plastics, as well as deploying new models of energy conservation throughout the value chain, can create new business opportunities and contribute to a more sustainable industry. The industry can set a target percentage for incorporating circular economy concepts, and there are numerous opportunities for which a positive business case exists (Sami Alnuaim, 2019).

More specific terms of sustainability in the corporate level discussed the enablers and challenges of building a corporate sustainability culture as infrastructure for environmental and sustainability programs, based on a survey conducted in the oil and gas industry. The study identified three success factors: strong corporate commitment, economic value translation, and communication of targets. Prevailing challenges include lack of resources, leadership, and scepticism around the industry's role in climate action. The theoretical model of organizational sustainability culture is found to be less developed in the industry's internal drivers, and sustainability vision and corporate values are seen as the most culture-enabling elements. The study concludes that the industry is still developing its approach and solutions for sustainability, and organizations can utilize the study's conclusions to maximize identified success factors and mitigate challenges to build organizational resilience (Alicja and Marshall, 2023).

Getting deeper in the financial aspect, the context of sustainability has been also studied in financial area, found that companies with high value and continuity sub-indicators exhibited high levels of financial sustainability, while undervalued and bankrupt companies with low sub-indicators exhibited low levels of sustainability. The study also highlights the relationship between corporate value and solvency, and the trade-off between benefits and costs associated with managing financial resources. This study proposes a conceptual and theoretical approach to corporate financial sustainability and its measurement, with a detailed analysis of financial indicators within financial sustainability networks addressing key questions of their relationship to value (Zabolotnyy et al., 2019). In addition, an institution must be financially viable in order to achieve its goals and objectives in the long term (Marwa and Asia Pono, 2015:876). Sustainability is referred to as the ability of an institution to continue functioning indefinitely into the future without the risk of depletion of critical resources (Afriyie, 2015:18). Financial sustainability is not an end, but the goal is to meet the goals of the university and ensure that the university generates sufficient income to invest in future academic and research activities (Sazonov, Kharlamova, Chekhovskaya & Polyanskaya, 2015:34).

Another research has been conducted by analysing the sustainability reporting practices of top oil and gas companies in Russia. The study uses panel data analysis of sustainability performance indicators and financial data from 45 companies listed on the Russian Trading Stock Exchange from 2012-2016. The results show that companies improve their sustainability performance to manage risk and improve financial stability (Orazalin et al., 2019). Some literature has shown the studied about sustainability such as Dunphy, Griffith and Ben (2003) use qualitative analysis of organizations to discuss financial, environmental, and human sustainability indicators and advocate for the adoption of sustainability principles in all aspects of organizational life. Dunphy et al. (2003:12) establish that an organization is sustainable if its stakeholders continue to support it. Moreover, Denneen and Dretler (2012:4) argue that financially sustainable institutions are focusing on four

aspects, namely Developing a clear strategy, focused on the core business; Reducing support and administrative costs; Freeing up capital in non-core assets; and strategically investing in innovative models.

Ponomarenko at al (2021) explains the need to develop new oil and gas fields as production at existing facilities is projected to decline. Government policies regarding private sector involvement in new offshore exploration and production projects are likely to change to allow socially responsible companies access to their own areas. The authors propose a methodology for assessing corporate sustainability based on well-founded indicators in areas such as occupational safety, environmental protection, and profitability. This methodology includes his two performance indicators for assessing company ratings in relation to best companies and corporate social responsibility dynamics within companies. The results show significant differences in corporate sustainability between oil and gas companies. The proposed methodology has practical relevance for companies when analyzing and planning activities to achieve their corporate social responsibility goals. Moreover, the author uses 3 sphere in assessing the indicator of sustainability; social sphere, environmental sphere, and economic sphere. In summary, business sustainability is about finding a balance between generating revenue, managing expenses, and investing wisely for the long-term growth and success of the business.

III. RESEARCH METHOD

This final project is conducted to solve the problem in the author's company regarding the optimization program. Therefore, to understand deeper about the topic, this final project is using qualitative method.

According to Schindler (2021), qualitative research includes a set of interpretive techniques aimed at describing, deciphering, translating, and otherwise dealing with the meaning, rather than the frequency, of certain phenomena that occur naturally in the social world. These techniques include individual in-depth interviews (IDI) and group interviews, as well as multi-method approaches using interviews and observational techniques such as case studies, ethnography, grounded theory, and action research. In addition, Schindler describes qualitative research as interpretative research because it seeks to develop understanding through detailed explanations. It helps build a theory, but it is rarely tested.

Therefore, exploratory research is used in this final project rather than confirmatory research so that the author could find out the streams of cost optimization program made by the company are suitable or not. The research is begun with exploring the business issue and ended with the conclusion and recommendations for future project development.

IV. RESULT AND DISCUSSION

Respondents who joined the FGD gave similar answers that there was a significant increase in costs in the 2020-2022 period. However, 1 respondent (FGD1) stated specifically that the high costs were due to the increasing operational & maintenance costs for mature wells, meanwhile 2 other respondents (FGD2 and FGD3) stated that the increased costs were caused by an increase in drilling activity as an effort to achieve production and lifting targets. In detail, FGD1, explained that the high maintenance costs for mature wells were due to the fact that these wells are in the natural declining phase, therefore maintaining and re-operating them to support the achievement of production targets was higher because these wells required special treatment such as a workover program and intensive well service in order to produce oil and or gas according to the target.

FGD1 also conveyed that the reason for maintenance and operation of these wells was because the working areas of PT Borneo Energi Indonesia were consisting of various entities from holding companies subsidiaries which are oil and gas companies which had fields that have been operated for a long time as one of the results of the termination of these companies. Therefore, if it is not maintained and operated it will hinder the company in achieving production targets.

FGD2 argued that the cost increase was not dominated by maintenance aspects, rather the cost of drilling which is the job related to the well to achieve production targets. In addition, FGD3 also added that in the 2020-2022 period, there were some contributions from other costs besides maintenance which led to high cost realization in that period, namely investment costs which were recorded as operational costs regarding dry hole wells. This difference in perception is caused by the background and scope of work of the respondents that lead to a different point of view. FGD1 looked at operational costs, while FGD2 and FGD3 looked at investment costs. In addition, it could be also influenced by the working experience the respondent has that leads to a different perspective in seeing something happened in the company.

Seven other respondents through one on one interviews (R1-R7) also argued that the trend of costs during the period tended to increase. Only R3 is who argue that the cost trend has not increased significantly because the company is still able to make high profits. This respondent's answer can be influenced by differences in the scope of work performed. These respondents are financial staff in the field of revenue so there is not enough access or information related to company costs. Six other respondents gave the same answer that during the 2020-2022 period the company's costs experienced a significant increase, with the biggest contribution was from maintenance. The interesting thing is that there are 3 out of 7 respondents (R1, R6, R7),

even though they say that costs tend to increase and are caused by maintenance costs, but these 3 respondents argue that maintenance here is not only due to wells job, but also maintenance of production facilities which is the asset from the transfer of management or termination of the previous company which was acquired by the holding company of PT Borneo Energi Indonesia during the implementation of new reorganization. The assets from the transfer of assets handed over from the previous operator which has been operating the field for many years, so those assets are considered old assets that require repair and maintenance to maintain operational reliability.

However, all respondents, both those who went through FGDs and one on one interviews, all argued that the cost figure for the 2020-2022 period showed an increasing trend every year, and the maintenance aspect was mentioned several times by all respondents in answering the questions. Therefore, all respondents conveyed the same argument that the upward trend in costs will have an impact on the company's financial health and need to be anticipated to keep a good business in the future.

Even though there was a slight difference in the perception of the answers regarding cost trends, all respondents in interviews (R1-R7) and FGD (FGD1 – FGD3) argued that the cost that occurred in the 2020-2022 period at PT Borneo Energi Indonesia would have an impact on the company's profit. 9 out of 10 respondents even said that the current conditions would significantly erode the company's profits. While R3 argues that the realization of costs that occur every year, the effect of these costs will not be too significant on profits, because R3 looks at the company's short term plan. R3 argues that even though costs are higher, the revenue generated by the company will also be boosted by increasing work programs to achieve oil and gas production and lifting targets. In addition, it was also conveyed that the crude price would have a change to increase. Meanwhile, R5 also said that although there are those who argue that it will not significantly affect profits in the short-term, this needs to be anticipated and considered for the long term, especially currently the company is planning to conduct an Initial Public Offering (IPO) to become a public company that must be transparent and financially stable.

In the FGD, FGD3 provided another focus besides the profit aspect, which was looking at it from a cash flow perspective. FGD3 believes that high costs that are not supported by high revenue will affect the company's cash flow, so that the company will have difficulty in funding investment projects to develop its business. In the end, one option to overcome this is to use a bank loan facility, and when the company's cash flow is not good, it will affect the company's assessment by the bank in providing loans.

From the question regarding the effect of costs on company profits, it can be concluded that the impact is big or small, the conditions of increasing costs have an influence on the company profits. Respondents argued that the cost that occurred would have a big impact on profits because even though there were some respondents who were optimistic that crude price would increase, this factor was an external factor that could not be controlled. Moreover, the level of oil and gas production will also be greatly influenced by the condition of mature wells, which need more efforts to gain optimal production levels.

The respondents realized that the condition of increasing costs every year will impact the company, so that when they are asked about the efforts that needed to be made to anticipate these challenges, all of them gave similar answers, they argue the need for an innovation effort or program to achieve cost optimization. This is also reinforced by the information obtained through the interview process, that the company's management is concerned with the trend of rising costs. In addition, FGD1 and FGD2 said that SKK Migas requested team recommendations from each contractor and from internal SKK Migas to form a special team in implementing cost optimization in the oil and gas industry. This shows that the innovation program in responding to the trend of increasing costs needs to be carried out and made as a comprehensive effort by all employees. In line with the spirit of SKK Migas as a government representative, PT Borneo Energi Indonesia through its holding and sub holding company also continues to work on implementing a cost optimization program. R7 further explained that PT Borneo Energi Indonesia is accelerating the Standard Operational Procedure (SOP) as a guide in carrying out this program in the company.

In the one on one interview session, R6 argued that innovation and programs in response to the above conditions are needed because PT Borneo Energi Indonesia's business is an oil and gas industry which is a non-renewable energy. So that R6 believes that to achieve profit targets and maintain the company's business continuity in the future, programs or innovations related to cost optimization must be cultivated within the company. R3 also provides a response regarding the effect on company profits which has another domino effect, one of which is the level of profit attainment which indicates the company's financial condition which will be an assessment of external parties, for example from the bank in assessing the company's financial health.

R6 added that innovation in terms of technology and synergy needs to be carried out because it has the potential to have a significant impact on cost optimization for the company. Therefore, the use of technology in the current digital era needs to be utilized. In line with R6's argument, R1 also conveyed the same thing that technology has an important role in achieving efficiency and cost optimization so that it will maintain and increase company profits.

Respondents also said that there were directives and instructions from the company's management in managing costs, but these directives were felt to be not massive. All respondents agreed that there was still a lack of socialization of the cost optimization program being implemented, so that the involvement of all employees in the company was not maximized. Many of the employees know that cost optimization needs to be done, but do not know what and how they should contribute and become part of the company's agent of change in maintaining a sustainable profit level.

In conclusion, from the sample of respondents selected in this final project, all believe that innovation or intensive efforts are needed to overcome the high costs that will have an economic impact on the company and business continuity in the future.

Refer to the results of the interviews and FGDs, the respondents had the same argument that if a company carries out a program related to sustainable cost optimization, it will have an impact on the economic aspect, which is maintaining and increasing profits. Thus, the company will develop and maintain the sustainability of its business.

Regarding the impact on business sustainability, respondents were asked on how much effect the implementation of this program had on economic, social, and environmental aspects. All respondents, both from the results of interviews and FGDs, argued that the most obvious is the impact on the economic aspect, because this can be seen from the profits that companies can earn. The positive profit generated will show the company's ability to run its business in the future, the company's ability to invest in developing the business, fulfil its financial obligations, and meet investors' expectations. This was also conveyed by FGD1 that the spirit of cost optimization program is to sustain the business of the company in the long term. Another respondent from the interview and FGD did not convey in detail how this economic aspect had an impact on business sustainability, but the answers provided referred to the acquisition of profit which shows the company's ability to survive in the future.

There were several different answers when respondents were asked about the impact on social and environmental aspects. R5 said that this cost optimization program did not have a positive impact on social and environmental aspects, because according to R5, this optimization program could pose a risk of non-compliance with company standards. For example, when carrying out cost optimization for inspection work in the operating area, the HSSE aspect will be affected so that it can pose a potential hazard to the social community and the surrounding environment. This is because R5 looks at the direct effect of implementing the program, it only sees the direct economic impact. However, FGD3 in the FGD session argued that this cost optimization program has a major impact on environmental aspects.

FGD3 provides an example of a fuel cost optimization program that will have a direct impact on reducing carbon emissions. In this case, respondents have different perceptions of the impact of the program being implemented.

However, respondents in interviews and FGD sessions conveyed the same arguments regarding the risks of implementing cost optimization, one of which is the argument presented by R6, which is the potential in integrity aspects, especially regarding HSSE aspects which may not be fulfilled due to the reduced costs. However, the company has conveyed instructions that the cost optimization program is not simply cost cutting, so that reliability and fulfilment of HSSE aspects still a priority. Another obstacle in implementing this program in order to be able to maintain the company's business is the presence of bureaucracy and long administrative aspects. This was conveyed by R7 when he were asked about the obstacles in implementing the program, R7 said that the current organizational structure at PT Borneo Energi Indonesia is a challenge in carrying out a program or business decisions because it consists of various entities so that it could hinder the bureaucratic process which will affect the sustainability program company.

In the last session of each interview and FGD, respondents were asked questions about their expectations from implementing this cost optimization program for the company. R1 stated that consistency in implementing the program was needed in order to continue to contribute positively to profit achievement, R2-R6 emphasized massive outreach and internalization to all employees in order to create a cost-conscious culture. In addition, R7 added that supporting programs such as campaigns and upskilling for employees are needed so that it will encourage employees to generate innovative ideas related to cost optimization.

Moreover, respondents in the FGD session conveyed the same thing, it is expected that this program can become a culture that is continuously carried out by all elements of the company, as well as being one of the considerations in the decision-making process when providing work plans and budgets as well as revenue and profit targets. In conclusion, all the respondents with different background, gender, and working experiences have the same perspective towards business sustainability. They argue that a cost optimization program could help the company in maintaining a better future of the business.

V. CONCLUSION AND SUGGESTION

V.1 Conclusion:

After conducting data analysis, it can be concluded that:

1. The trend of the cost in the period 2020-2022 is increasing. The increase is mostly due to the maintenance cost related to the mature asset that consist of oil and gas wells and production facilities. In addition, dry hole cost from unsuccessful drilling projects is also contributing to the increase of the operating cost in that period.
2. The increase of the cost will affect the profitability of the company and hinder the company's investment programs. Moreover, it also affects the investor valuation since the company is planning to go public.
3. Innovation and cost optimization programs are urgently needed to face the challenges ahead such as the uncertainty in the oil and gas industry. The cost optimization program would help the company to maintain its business still profitable when the production is in a natural declining phase and the crude price is uncontrollable.
4. Cost optimization program will directly affect the economic aspect that can be seen from the profit generated by the company. The ability to generate profit will determine the business continuity in the future. Therefore, the cost optimization program is the effort of the company to create business sustainability.

V.2 Suggestion:

1. This final project scope is only in PT Borneo Energi Indonesia that only covered some operation area, therefore, it would be more beneficial if the next research could cover all the area of the sub holding upstream to have a wider perspective and different field operation characteristics.
2. Some of the data is restricted to disclose due to legal and commercial reasons, therefore, a collaboration with the sub holding or holding company who has the authority to release the data could ease the data collection for further research.
3. The period year in this final project only limited to the year of 2020-2022 which has been influenced by the Covid19 pandemic where some activities are limited. Consequently, the data in the first year of this research might not represent the real condition. Therefore, further research could use more period year to have a better understanding of the cost trend.
4. Further research could use more literature review as the basis of its concept to have a better fundamental understanding about the cost optimization.

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