

ANALYSIS OF SUPPORTING FACTORS FOR INCREASING COAL DELIVERY CAPACITY AT PT PELAYARAN BAHTERA ADHIGUNA

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Abstract: PT Pelayaran Bahtera Adhiguna or commonly abbreviated as BA_g is a subsidiary of PLN engaged in national shipping for coal transportation in Indonesia. The problem in this research is how external and internal factors can increase coal delivery capacity. The purpose of this study is to analyze external and internal factors supporting coal delivery capacity at PT Pelayaran Bahtera Adhiguna. The method used to analyze in this study were to reduce the data, present the data and draw conclusions. The results of this study show the increase in coal production. Indonesia's geographical conditions, capacity and special PLTU terminal facilities, good ship management, the number and composition of the fleet owned, and the age of the ship are external and internal factors that can increase coal delivery capacity at PT Pelayaran Bahtera Adhiguna.

Keywords: *Coal, Shipping Industry, Delivery Capacity, Ship.*

Introduction

In recent years, several industrial sectors have developed and progressed rapidly, especially in the industrial sector. The coal sector and other relevant sectors such as the land, sea, and air transportation industry sectors have been able to encourage overall national economic growth. Coal is a non-renewable natural resource. Coal has an important role in many ways. One of the contributions of coal is to the world's energy needs. Coal is generally used as a Pembangkit Listrik Tenaga Uap (PLTU). The increasing consumption of coal in the world is inseparable from the rapid increase in demand for coal as the main energy source for power generator. Coal is one of the second largest suppliers of energy sources after oil (Setiawan, 2015).

In detail, referring to the coal demand plan data from the Ministry of Energy and Mineral Resources, the coal demand in 2022 was 188.9 million

tons. Meanwhile, it is predicted that in 2023 it will be 195.9 million tons, 2024 will be 209.9 million tons, and for 2025 it will be 197.9 million tons. Until 2025, the electricity sector or PT Perusahaan Listrik Negara (PLN) is still the largest industry as a domestic coal user. With each demand in 2022 of 119 million tons, in 2023 of 126 million tons, in 2024 of 140 million tons. it will reach 128 million tons in 2025.(Sutrisno et al., 2019)

Seventy percent of the electricity generated in Indonesia is the result of the utilization of coal. The process of transporting and unloading coal as well as optimizing shipping activities affect the supply of coal at a special port belonging to the PLTU. For this reason, optimization is needed in coal delivery activities.(Septianto et al., 2020)

PT Pelayaran Bahtera Adhiguna or commonly abbreviated as BAg is a subsidiary of PLN engaged in national shipping for coal transportation in Indonesia. Since the ownership of the business was taken over by PT Perusahaan Listrik Negara (PLN) in 2011, BAg has been trusted by PLN to develop the coal sea transportation service business. This trust is inseparable from BAg's business experience in the field of sea transportation services in Indonesia. Although trusted to develop its business, BAg remains focused on carrying out its vision of becoming a sea transportation service company in order to secure the supply of coal for power plants owned by PLN and Independent Power Producers (IPP) located in the territory of Indonesia. In running its business, BAg is expected to become a company that can follow the development of the shipping industry in Indonesia. This expectation is in line with BAg's vision, which is to become a superior and reliable sea transportation service company with international standard services. Business development is BAg's effort to deal with changes in the company's external and internal environmental factors. On the external side, the projected coal demand for Pembangkit Listrik Tenaga Uaps (PLTU) until 2030 will continue to increase, accompanied by government programs, namely the 35,000 MW power plant program. This program requires an even distribution and increase in coal supply. This opens an opportunity for BAg to continue to develop its

business through sea transportation services. Meanwhile, internally, the number of fleets owned by PT Pelayaran Bahtera Adhiguna is not sufficient to support the delivery of coal supplies for domestic needs.

BAG's coal delivery performance is still not optimal. Therefore, it is deemed necessary to conduct research to identify and analyze factors that have a significant weight in influencing performance. To optimize the performance of BAG coal shipments, it is very necessary to improve the performance of ships, the accuracy of the delivery schedule and arrival of transportation, the availability of port facilities and infrastructure, port capacity, destination and direction of travel, availability of the number and type of fleet. The purpose of this study is to determine the external factors and internal factors that can increase coal delivery capacity.

The International Book of Coal Petrography (1963) states that coal is a combustible sedimentary rock, formed from plant remains in varying degrees of preservation, bound by compaction processes, and buried in basins at depth.

According to Jinca (2011), as an archipelagic country, Indonesia has potential areas that are spread out from Hinterland, connected by road transportation networks to ports, sea transportation systems (to ports, shipping/shipping, and the potential for movement of goods) have a very important role. Sea transportation is an option for transporting passengers or goods in large quantities, the speed and cost of transportation per ton mile is relatively low, and it is very profitable for the process of transporting goods and passengers over long distances, especially in the archipelago. Sea transportation is a system of moving people and goods operating at sea using tools as vehicles with the help of machine or human power.

According to Mikael (2016), indirect delivery activities are actually often encountered in everyday life, most of the producers themselves are unable to handle shipping problems without being assisted by several delivery service providers themselves. To overcome these problems, producers certainly need qualified business partners to handle good delivery distribution

so that the products and services provided can be quickly felt by consumers as the target market of the producers themselves.

In the concept of delivery, there are two things that play a role in the success of delivery, namely producers and consumers. The producer as part of the principal plays a role so that a product can be delivered evenly. Meanwhile, from the consumer's point of view, they want to get the products or services offered easily. These two points of view have a common thread in the form of closeness and convenience.

Method

The type of research used in this study was a type of qualitative research. This research began by collecting data, theory and data analysis. This qualitative method used data collection techniques by conducting interviews with two respondents. The data sources used were primary data, namely data obtained directly from the original source, and secondary data, namely data obtained by researchers indirectly using intermediary media. The data analysis technique used in this research consisted of 3 (three) steps, namely by reducing the data which means summarizing, choosing the main things, focusing on the important things, looking for themes and patterns; after the data were reduced then the next step was the data display or data presentation, which was done in the form of a brief description; the last step in the data analysis process was drawing conclusions or verification.

Discussion and Result

Based on the results of interviews with the company, several important factors related to the delivery of BAg coal were obtained from several aspects. Some of these important factors are obtained and grouped into external factors and internal factors that affect coal shipments, which are as follows:

Table 1 External and Internal Factors Affecting Coal Delivery Capacity

External Factors	Internal Factors
Opportunities: - Increasing Coal Production - Geographical Conditions of Indonesia - PLTU Special Terminal Capacity and Facilities	Strength: - Good Ship Management - Number and Composition of Owned Fleet - Ship Age
Threat: - Competition in the business of sea transportation services and its supports - Shipyard company docking rates - Freight cost is determined by PLN	Weakness: - Limited ICT system support - Dependence on KSO partners - The career and performance system is not yet running

Based on the table above, the factors that are included in external factors and internal factors can be classified. There are opportunities, threats, strengths and weaknesses that affect coal shipments. The factors that support the increase in delivery capacity are opportunities on external factors and strengths on internal factors.

Identification of External Factors

The external environment is a condition outside the company that can affect the life of the company. According to Viljoen in Moeljadi (1998: 28) the external environment is often referred to external opportunities and threats, including political, social, technological, economic, geographic, customers, suppliers, competitors, creditors, and labour. Meanwhile, according to Glueck in Moeljadi (1998: 28) this environment is called as "factors outside the company that can pose opportunities or threats".

External factor analysis in this study aims to examine various external factors that affect the increase in BAg coal delivery capacity. Some of these

important factors that support the increase in coal delivery capacity are as follows:

1. Increasing Coal Production

The demand for energy in the world, especially in Indonesia, will increase every year in line with the development of the industry to process raw materials into finished goods that are needed in the economy. The need for energy is also influenced by the development of people's needs in meeting their needs. The increasing demand for energy for people's daily needs as well as for industrial needs requires the state to obtain this energy supply.

Various energy sources can be used by humans, from very simple energy sources to energy that requires very sophisticated management. One of the alternative energy sources that is often chosen by the countries in the world to drive their industry is coal.

Currently, Indonesia's coal reserves have reached 38.84 billion tons. With an average coal production of 600 million tons per year, the age of coal reserves is still 65 years if it is assumed that no new reserves are found. In addition to coal reserves, there are also coal resources which are recorded at 143.7 billion tons.

Based on this note, BAg has the opportunity to become a coal distributor appointed directly by PLN to deliver coal cargo to PLTUs throughout Indonesia.

2. Geographical Conditions of Indonesia

Indonesia as an archipelagic country has a strategic geographical location and condition. Of course, this has an impact on the lives of Indonesian people, especially in the field of transportation. This condition also makes it easier for Indonesian shipping companies to determine shipping routes in carrying out loading and unloading activities.

3. PLTU Special Terminal Capacity and Facilities

To support coal loading and unloading activities at the Electric Steam Power Plant (Pembangkit Listrik Tenaga Uap (PLTU)), it is necessary to

develop a special terminal for the operational interests of the PLTU. The construction or development of transportation facilities can also have a positive impact on an area. The port is a very effective marine transportation support facility to connect an area with other areas in the archipelago such as Indonesia.

Identification of Internal Factors

According to Hunger in Moeljadi (1998: 33) every effort made by the company is always faced with an ever-changing situation. This condition cannot be implemented without an adjustment process to existing internal conditions. So, the internal environment is a reflection of the strengths or weaknesses of a company organization and can reflect the management skills of the Company. This can show the strength of resources, including all material or non-material aspects owned by the company in carrying out its business and functions for commercial production.

Internal factor analysis in this study aims to examine various internal factors that influence the increase in BAg coal delivery capacity. Some of these important factors that become strengths and weaknesses in influencing the increase in coal delivery capacity are as follows:

1. Good Ship Management

Good ship management is needed to improve the company's performance in daily operational activities. Operational activities involve ship management and human resource management. Human resource management does not only manage employees on land such as central employees and employees in branches. The management of human resources includes crew management. To focus on its operational activities, BAg crew management is assigned to a vendor or third party in operating the ship so that the supervision of the ship's crew can be easily monitored and managed properly.

2. Number and Composition of Owned Fleet

Ships are an important asset owned by shipping companies. The more varied the ships owned, both in type and size/capacity, the greater the company's strengths and opportunities in developing its business. This is because the company can meet customer demands. Moreover, the more varied the number and fleet of vessels can improve services in the form of the effectiveness of PLN's coal transportation as the parent company.

3. Ship Age

Assets such as vessels have disadvantages such as depreciation, especially the age of the vessels getting older. For consumers, the age of the ship is one of the requirements that must be met in terms of shipping services. Ships carrying coal cargo to be transported to a number of Electric Steam Power Plant (PLTU) must have roadworthy quality, so that the security of cargo supply can be maintained. In addition, the relatively old age of the ship can reduce performance in the length of time the cargo is carried to a number of places.

Conclusion

Based on the results of the study, it can be concluded that external factors that can support the increase in coal delivery capacity at PT Pelayaran Bahtera Adhiguna, are the increasing demand for coal energy for the daily needs of the community as well as for industrial needs requires the state to obtain the coal energy supply, Indonesia's geographical conditions also make it easier for shipping companies to determine shipping routes in carrying out loading and unloading activities, and to support coal loading and unloading activities at the PLTU it is necessary to develop a special terminal for the operational interests of the PLTU.

While the internal factors that support the increase in coal delivery capacity at PT Pelayaran Bahtera Adhiguna are good ship management to improve the company's performance in daily operational activities, the number and composition of the varied fleets that can improve services in the

form of the effectiveness of PLN coal transportation as the parent company, and the age of the ship that must still be optimal for transporting cargo so that the security of cargo supply can be maintained.

Suggestion

In our opinion, the suggestion for this research is that further studies of the company's business model planning in gas transportation (LNG) can be carried out in line with the need for PLN power plants that do not only rely on coal as raw materials.

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