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Ship Anchoring Management Process In Guide Services

Henni Sutryani[1], Indah Purnaningrarti[2], Yollanda Octavitri[3], Kusharyanto[4]
[1,2,3,4]Politeknik Pelayaran Banten

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ABSTRACT

The port is the first link and gateway in a logistics distribution between countries and islands. By using ports, logistics distribution becomes faster and more efficient than being done through flight paths which require relatively more expensive costs and require more land. The port will connect several modes of transportation and several parties involved in the logistics management of goods. Every form of entry and exit of goods through the port must follow the procedures and SOPs applicable within the area. One procedure that has an important influence is the regulation on the management of Ship Anchoring in a port. Ship Anchoring Management is an activity to regulate the traffic of ships that will unload and / or load in a port. The Ship Anchoring management process is also an important process that deserves attention because the process is a process that will connect directly the land, namely the port with the ocean, namely ships. All forms of bureaucracy will be carried out by supervisory officers, namely Syahbandar and port management. The bureaucracy involves official and legal complete information and information about goods or cargo to be transported or unloaded on ships or to ports. With the management of Ship Anchoring, of course, all guide service activities afterwards will be carried out systematically and regularly. The ship's docking management process on ships will also affect the loading and unloading time by stevedoring companies (PBM), warehousing rental time, and other costs in the form of operational loading and unloading activities. This study uses data analysis, namely the Analysis Hierarchi Process (AHP) with respondents in the form of informants from the Indonesian port of Tanjung Priok, related Syahbandar parties, field officers, and stevedoring company managers. With the AHP method, it will produce a priority scale of several problems found from collecting facts in the field. This study produces the most influential party of the problem of ship anchoring management in a ship that will dock at Tanjung Priok port, namely by the Tanjung Priok Port Syahbandar, while the factors that cause these problems are law enforcement factors and rules that apply when carrying out ship anchoring management at Tanjung Priok Port Jakarta.

Henni Sutryani
Politeknik Pelayaran Banten
henni@bp2ip-tng.sch.id

INTRODUCTION

In Law Number 17 of 2008 concerning shipping, it is stated that a port is a place consisting of land and / or waters with certain limits as a place for government activities and business activities used as a place for ships to dock, get on and off passengers, and / or loading and

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unloading goods, in the form of terminals and ship berths equipped with shipping safety and security facilities and port supporting activities and as a place Intra and Antasmodal Transportation Displacement [1]. The port has several management management including the management of the Ship Anchoring system. The Ship Anchoring System in question is a time limit for a ship that is docking, the ship's docking path at the dock, and the technical loading and unloading process of a ship. If a port has a good Ship Anchoring system, of course, a ship can dock or load and unload easily and according to schedule. But what often happens in Indonesia is that ships often have to wait before they can dock at the dock because the dock to be addressed is still used by other ships that are docked [2].

The Ship Anchoring management system at the port is a benchmark for service performance at a port [3]. One of the Ship Anchoring management system services provided by port services is guidance services or guide services. Guiding services are activities carried out by Pandu in assisting Nahkoda so that ship movement can be carried out safely, orderly and smoothly [2]. Scout officers are nautistic sailors who have met the requirements set by the government to carry out guiding duties. In supporting guiding activities, guide officers are also equipped with Guiding Aids and Guiding Infrastructure. Guidance Tools are tools that are directly used to assist guides in carrying out guiding tasks, such as Handy Talkies and Guide Ships. Guiding Infrastructure is a tool that is indirectly used to assist guides in carrying out guiding tasks, such as uniforms and buoys [4]. The flow of traffic and the movement of ships while in port is very dependent on guide officers. Guide officers are assisted by existing facilities and infrastructure to provide instructions and decisions on whether or not the ship can dock, load and unload, and move to leave the port.

In container loading and unloading activities, Tanjung Priok Port applies a queuing system [5]. The queuing system in question is a queue system for ships entering the dock to carry out loading and unloading. The queuing system used is first in first out or first come first serve. The input in the queue is the ship dating the process of loading and unloading activities and the output is the ship out and at the time of loading and unloading activities the ship uses 3 cranes at each dock if the cargo load is a container. According to one of the PBM management managers at Tanjung Priok port, it often occurs at the north pier of the Jakarta International Container Terminal (JICT) and TPK Koja, the schedule of guide service queues can have an impact on feeder ships that seem to have their own "arbitrary" docking time. Even though with the limited dock owned by Tanjung Priok port, docking time is very important. Shows the inconsistency of berthing times that interfere with fixed schedule ships. In addition, there are often violations in the queuing system such as unscrupulous shipping agents who try to dock first for the reason that they cannot wait for the guide queue and because they want to follow the schedule load container vessels at other ports such as Singapore ports or Port Klan.

Therefore, a study is needed to analyze the management process of Ship Anchoring in guiding services on the productivity of loading and unloading activities at the port of Tanjung Priok Jakarta from any problems encountered after observing related parties in the field.

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METHODS

This study used observations, semi-structured direct interviews, and AHP surveys as primary data in the study. While the secondary data in this study are collections of similar research results and journals on port management including statistical data related to ship traffic flows and logistics activities at Tanjung Priok Port Jakarta.

The method of data collection in this study is to make direct observations or direct observations to the field related to the management process of Ship Anchoring in ship guide services on the level of productivity of loading and unloading activities at Tanjung Priok port. Researchers observed the number of facilities owned by the port in conducting ship guidance from the arrival of ships, ship guidance, to ship mooring and the occurrence of loading and unloading processes at the port. Observations were also made by taking into account the implementation of SOPs applicable at ports related to the Ship Anchoring management system at ports including the guide service process. The observation process is also carried out by comparing processes that are in accordance with SOPs with those that do not comply with SOPs. Furthermore, data collection is carried out by conducting interviews with informants or research sources/data sources. The interviews were conducted semi-structured in person. Interviews are conducted by taking into account the ideas of informants and facts that actually occur in the field.

AHP (Analytical Hierarchy Process) is a technique developed by Thomas L. Saaty in the 1970s and helps decision makers to figure out the best alternative from many elements of choice. AHP uses pair wise comparison to create a matrix that describes the comparison between one element and all other elements [26]. AHP (Analytical Hierarchy Process) is an excellent mathematically based procedure suitable for the evaluation conditions of qualitative attributes. The attributes are mathematically quantified in a set of paired comparisons. The advantages of AHP compared to others are due to the hierarchical structure, as a consequence of the selected criteria, down to the most detailed sub-sub-criteria. Take into account validity up to the tolerance limit of inconsistencies of various criteria and alternatives chosen by decision makers.[26]

In essence, AHP is a comprehensive decision-making model by taking into account qualitative and quantitative matters. In the decision making model with AHP basically trying to cover all the shortcomings of the previous models. With AHP it is also possible to measure and regulate the impact of a component interacting with each other in a system on system errors.[26]

This study used the process hierarchy analysis (AHP) method. Main equipment *Analitycal Hierrarchy Process* (AHP) is a hierarchy of functionality with the main input being human perception. With hierarchy, a complex and unstructured problem is solved into its groups. Then the groups are organized into a hierarchy. AHP includes logical personal considerations and values. This process relies on imagination, experience and knowledge to construct a hierarchy of problems and on logic, intuition and experience to consider. AHP shows how to connect elements from one part of a problem with elements from another to obtain a combined result. The process is to identify, understand, and assess the interactions of a system as a whole. [27] [26]

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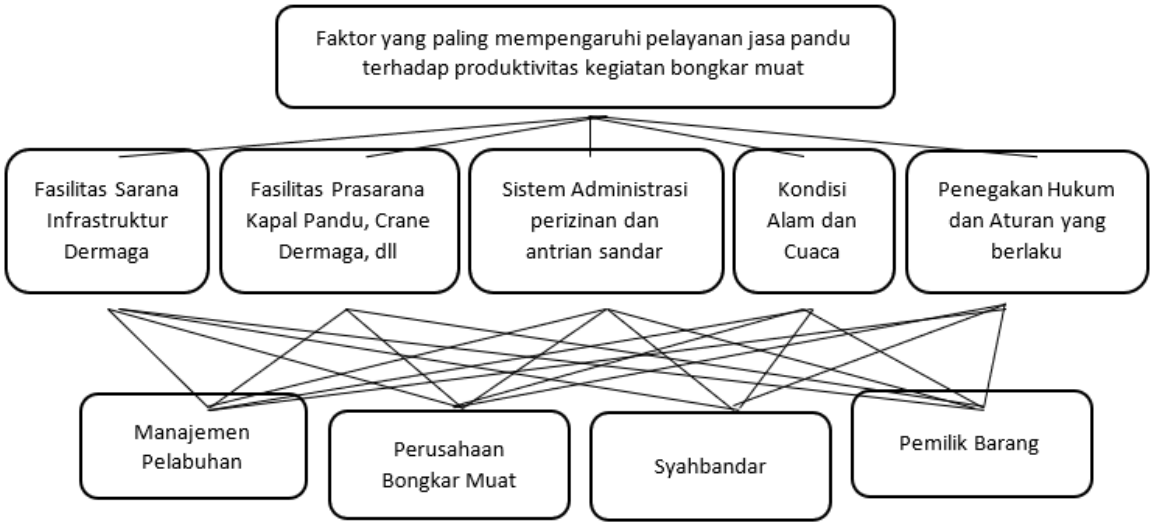
AHP is a method to help arrange a priority from various options using several criteria (*multi criteria*). Because of its multi-criteria nature, AHP is quite widely used in prioritization. For example, to set research priorities, the management of research institutions often uses several criteria such as research impact, cost, human resource capabilities, and also maybe the time of implementation. In addition to zero multi-criteria, AHP is also based on a structured and logical process. The selection or arrangement of priorities is carried out by a logical and structured procedure. The activity is carried out by representative experts related to alternatives that will be prioritized. [26]

The use of AHP begins by creating a hierarchical structure or network of problems to be studied. In the hierarchy there are main objectives, criteria, sub-criteria, and alternatives to be discussed. Pairwise comparisons are used to form relationships within structures. The result of this pairwise comparison will form a matrix where the ratio scale is derived in the form of the main eign vector or eign-function. The matrix is characterized positively and inversely.[28]

In this study, the hierarchy applied in the AHP hierarchy concept is which factors in Tanjung Priok Port hinder the process of ship guide services in ship anchoring management on the level of productivity of loading and unloading activities at Tanjung Priok Port, an analysis is made using AHP which can be described as follows:



The AHP hierarchy shows that level 1 is the purpose of the AHP analysis, namely any Ship Anchoring management processes in guide services to increase loading and unloading productivity at Tanjung Priok Port. Level 2 is a criterion determined from data collection in the field, consisting of infrastructure facilities at port docks, port infrastructure facilities such as guide ships and dock cranes, licensing administration systems and queues applied at ports, weather conditions and sea currents, and the last is legal rules and discipline on ship berthing times. Furthermore, at level 3, namely participants or parties involved in achieving goals, consisting of port management, stevedoring companies, Tanjung Priok main airports, and goods owners.

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RESULTS AND DISCUSSION

This study outlines the problems and findings that arise during research on the management process of Ship Anchoring in guide services on loading and unloading productivity at Tanjung Priok port. Research is carried out in stages, namely through the process of literature study, observation with surveys to the field, and interviews on roles related to research problems. After the data is collected from each data collection process, data analysis is carried out using the AHP method. In the AHP analysis, there are several criteria that are used as aspects of the description of the problem in this study. After that, the results of the collected criteria are calculated hierarchically with each alternative data (respondents) to get accurate results for the actual problems. [29][28]

The results of the discussion in this qualitative research resulted in a priority scale of problems that became an important factor in the influence of loading and unloading productivity at Tanjung Priok Port. Based on tables 4-16 and tables 4-17 The following are the results of the analysis obtained from the calculation and analysis of AHP in the management process of Ship Anchoring in guide services on loading and unloading productivity at Tanjung Priok port:

Table 0-1 Respondent Priority Ranking

RESPOND	MATRIX VALUES	RANKING
Port Management	0.1724	6
Loading and Unloading Company 1	0.1492	7
Loading and Unloading Company 2	0.1784	5
Petug Pandu 1	0.1925	2
Petug Pandu 2	0.1886	3
Main Urban Occupation	0.2121	1
Item Owner 1	0.1788	4
Item Owner 2	0.1784	5

Based on tables 4-18, it is obtained that Kesyahbandaran Utama is the most important and most influential party on loading and unloading productivity through guide services in the management process of Ship Anchoring at Tanjung Priok Port with a final score of 0.2121. The next party is the officer in the field, namely the guide officer who directly implements the Ship Anchoring management process in a ship that will dock or will leave the port, followed by the Port Management on the next priority and the Loading and Unloading Company on the last priority in this study.

Table 0-2 Critria Priority Ranking

CRITERION	MATRIX VALUES	RANKING
Facilities	0.7995	1
Infrastructure Facilities	0.0033	4
Administration System	0.0070	3
Natural and Weather Conditions	0.0001	5
Law Enforcement and Rules	0.1902	2

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Table 4-19 shows the priority scale of each criterion obtained from table 4-15 is the most influential criterion factor for guide services on the productivity of loading and unloading activities is facility facilities with a final score value of 0.7995. Next is the aspect of law enforcement and rules in the management process of Ship Anchoring, followed by aspects of the administrative system used, infrastructure facilities as support, and the last is the fact of natural and weather conditions at Tanjung Priok port.

CONCLUSION

Based on the findings and results of the research discussion, it can be concluded that the most influencing factor on the management process of Ship Anchoring in stevedoring guide services is the factor of Facility Facilities at Tanjung Priok Port. While the most important and most influential party is the Main Port of Tanjung Priok. The Ship Anchoring management process at Tanjung Priok port had previously run well and in terms of facilities facilities it was quite complete but could not meet the needs for each year in the process of supporting loading and unloading activities, namely the management process of parking a ship to the port dock to dock or leave the port. The author provides suggestions to improve the management process of Ship Anchoring more efficiently, the Tanjung Priok Main Port must be more disciplined in enforcing violations that occur. So that loading and unloading productivity at the port can run effectively.

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