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Analysis of Factors Causing Increased Ship Waiting Time in the Coal Unloading Process at Tanjung Emas Port, Semarang

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Abstract : *The development of the era affects the mode of transportation in Indonesia. Transportation can affect all aspects of people's lives and become an important and strategic means of development to smooth the wheels of the economy. The port is one of the factors that has the greatest influence on the economy. The port that provides various facilities and services aims to smooth activities at the port. This study aims to analyze the factors that cause the increase in ship waiting time in the coal loading and unloading process at Tanjung Emas Port, Semarang. The research method used is quantitative descriptive. The sampling technique used simple random sampling and a total of 100 respondents. Data analysis used multiple linear regression using the SPSS V.25 data processing application. The results of the study showed that service facilities have a positive and significant effect on customer satisfaction, obtained t count (5.205)> t table (1.98373), administration has a positive and significant effect on customer satisfaction, obtained t count (2.297)> t table (1.98373), natural conditions have a positive and significant effect on customer satisfaction. It was found that t count (4.100) > t table (1.98373), so H1, H2, H3 were accepted.*

Keywords:*Services, Facilities, Administration, Process, Port.*

1. BACKGROUND

Since the time of the Mataram kingdom, Semarang Harbor has been a place for merchant ships coming from various regions to dock. Semarang at that time was a small city built facing the Java Sea around the Dutch Fort. Semarang River was once the only artery of trade that transported goods by small boats from the city to large ships anchored far offshore and vice versa.

Judging from the lighthouse that has the number 1874 written on it, it can be seen that Semarang Port was built at the beginning of the 19th century. The city of Semarang continues to grow from time to time so that land for building warehouses along the Semarang River becomes a serious problem besides the Semarang River itself cannot maintain its depth.due to mud deposits. To meet the demands of city development, a Port plan was made in 1886 to build a coaster Port.

Seeing that Semarang Port was getting busier, the Dutch Government built a railway line connecting the Port with other areas. The main commodities transported by Central Java trains were oil, cement, and fertilizer. However, after 1925, there was no more significant expansion, only small-scale development. Although there has been no large-scale expansion, the potential for development remains large. After the Proclamation of Independence of the Republic of Indonesia in 1945, along with the increasing operational activities of Tanjung Emas Port, additional facilities were needed, so that in 1963 the Coaster Port or Nusantara Port

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was built which could accommodate larger ships, still having to anchor and carry out loading and unloading activities at Rede which was ± 3 miles from the Port using barges.

In the future, the role of Central Java, which is known to have a port, will play a very important role for potential areas around it in efforts to improve the economy, especially industry and trade, both nationally and internationally. From the data obtained, there is an increase in the flow of containers and loading and unloading activities at the Tanjung Emas Container Port in Semarang, this indicates that industrial activities in Central Java, both those with export and import values, are also increasing.

It is undeniable that the condition of increasing activity of flow and loading and unloading of Containers indicates that market demand for goods will also increase. The economic condition of the people in Semarang City, which is on average in the middle to upper middle position, is one of the forerunners of the emergence of diverse needs for food both industrially and basic needs.

Thus, in order to anticipate the surge in demand for shipping goods through the Port of Tanjung Emas Semarang, the facilities and infrastructure at the Port must be considered, because this will directly affect the performance of the Port. According to Kotler and Keller (in Donni, 2017) stated that consumer or customer satisfaction is a feeling of pleasure or disappointment of a person that arises after comparing the performance (results) of the estimated product with the expected performance.

The performance of Tanjung Emas Port Semarang is the spearhead of the basic point of assessment of customer satisfaction, especially in the city of Semarang in receiving ordered products from producers who have packaged a product according to customer demand. Customer satisfaction is the foundation of the development of market passion in an area. The longer the distribution of goods/products, the weaker the market in an area will be, but vice versa.

The agency depends on the service of Tanjung Emas Port Semarang is As a user of service services, which of course is oriented towards increasing profits, it is very dependent on the service of Tanjung Emas Port Semarang in carrying out the loading and unloading process of goods. It's just that there are several indications that are complaints from agents to Tanjung Emas Port Semarang, namely the licensing process, not all related agencies are integrated into one system from various permit issuing institutions, it is not optimal.

Meanwhile, the factual conditions that occur in the field require agents to process quickly. Added to the length of the processing of prohibition and restriction permits (lartas) from related agencies, implementing 24/7 Service and services that are not yet optimal so that there is an increase in the amount of costs, especially for overhead costs. Then the Cargo manifest data received by the Directorate General of Customs and Excise is not informed to other interested agencies.

Efforts that can be made in the post clearance process include encouraging temporary storage sites (TPS), shipping lines, trucking and container depots to utilize 24-hour services a day and 7 days a week (24/7), the need to implement online Delivery Orders (DO) on Shipping lines and the need for regulations governing the release of goods by TPS if the owner of the goods has not released the goods within 1 x 24 hours.

In fact, within the scope of the agency, managing the distribution of documents requires several stages, namely; notifying the consignee, ETA from the Ship and how long it will take to unload/load the goods. Then notifying Customs and making a Public Notification (PU) of the goods on the Ship and those to be unloaded. When the Ship has arrived and started loading/unloading activities, the consignee, or the appointed EMKL will take care of the B/L and the goods documents. With the existing B/L and other supporting documents, first complete the obligations to the shipping agent, such as freight, Container guarantee, documentation fee, Administration, terminal handling charges (THC) and other costs.

If the costs and Customs obligations have been completed, the consignee or designated EMKL will receive a delivery order (DO). With D/O and B/L withdrawal, the goods will be released by receiving a fiat – out. A delivery order is a written order listed as the recipient in the Order of Bank B/L listed as the Notify Address. Company guarantees can only be accepted if the company providing the guarantee is well known for its bona fides and credibility.

From the preliminary study conducted, there is an indication of Waiting Time at Tanjung Emas Port, Semarang. Internal port problems are generally problematic in Administration or defined as the time calculated from when a container is unloaded and lifted from the ship until the container leaves the port terminal through the main door. The time required for each container is uncertain, but complaints that often arise are related to ship service data where the Human Resources (HR) working at the Port are not yet qualified enough to meet the time targets that should be achieved in the process of container flow and loading and unloading activities.

Temporary Ship Service Data if the Port performance is not optimal, it will have a direct impact on services in the field so that it will cause new problems, namely the waiting time for Ships (Waiting Time) is getting higher, so that it will cause a high cost economy, which has a direct impact on the price of goods on the market. These problems arise from various factors, some of which are service facilities, Administration, and Port Environmental Conditions.

Although Tanjung Emas Port holds a very important control for potential areas related to the distribution of goods, it cannot be denied that the service facilities are not yet adequate, some equipment that should be used effectively and efficiently is poorly maintained so that this will hinder the time for Containers to enter the Administration stage. The following are factual conditions that describe the availability of facilities at Tanjung Emas Port, including:

Table 1.

Number of Facilities at Tanjung Emas Port, Semarang

Type of Tool	
Container Crane	5 Unit
Rubber Tire Gentry Crane	11 Unit
Top Loader	3 Unit
Side Loader	2 Units
The trailer	20 Units
Forklift	6 Units
Woven fabric	-
Length of Pier	495 Meter
Deep	10 Meter
Container Storage	5 Regions (CY01-CY05) -Area = 154,407 ha -Capacity = 10,584 TEUS - Reefer Plug = 58 U
Container Freight Station (CFS)	-CFS = 3,600m -SO-03 = 6,000m
Operating System	*Equipped with Client Server Utilising with the latest technology including the use of radio data link on all system movements. Equipped with TOP-X which is a Real Time Graphic planning, control and monitoring system. TOP-O is developed by the automatic door opening and closing system and Management Information System.*

Source: TPKS, 2020

It should be that service facilities that can be optimized by Human Resources (HR) are not included in one of the factors that become obstacles in the activity of loading and unloading Containers, because there are factors that cannot be optimized, namely the Condition of the Port Environment. Ships are one of the transportation that is very dependent on the Condition of the Port Environment, where the weather determines whether the ship can be declared worthy and safe to travel.

Many large ports in Indonesia have found cases like this, namely the increasing waiting time for ships caused by less than optimal port performance. Therefore, it is necessary to study more deeply what factors affect the waiting time for ships (Waiting Time) at Tanjung Emas Port, Semarang. Thus, it is expected to be able to anticipate problems that will arise in the future.

From the descriptions above, there are several problems that can be raised or used as a formula in this study, so this study is very important to study. There are at least four variables according to Hermaini W (2010) Among them are:

1. Tanjung Emas Port Semarang has a very large potential to be developed in the future, this is reinforced by existing data, which states that there is an increase in the flow of container ship arrivals at Tanjung Emas Port Semarang. This raises concerns that growth in volume, without adequate quality improvements in capacity, loading and unloading services of ships at the pier, will cause an increase in the waiting time of ships at the port.
2. The performance of loading and unloading equipment at Tanjung Emas Port, Semarang, until 2010, was known to have an unbalanced level of equipment utilization and was still very low.
3. TRT (vessel turn-around time) of General Cargo Ships and Container Ships at Tanjung Emas Port, Semarang, was recorded at 77.0 hours.
4. Weather factors, rain, storms, cause disruption to the loading and unloading activities of goods and passengers. Tanjung Emas Port Semarang During the high rainy season, it will cause high tidal water so that it greatly disrupts the smooth transportation of goods and passengers.

Based on the description above, the author is interested in conducting research to determine and analyze the factors that influence Waiting Time at the port. So with this background, the author determines the thesis research entitled "ANALYSIS OF FACTORS

CAUSING THE INCREASE IN SHIP WAITING TIME IN THE COAL UNLOADING PROCESS AT TANJUNG EMAS SEMARANG PORT".

2. THEORETICAL STUDY

Waiting Time(WT) is the waiting time spent by the Ship to undergo the process of activities in the Port waters area, aimed at obtaining berthing services at the Port or Pier, in order to carry out loading and unloading activities at a Port. For example, a Ship that is queuing in the waters of Lampu I submits a berthing application to PT Pelindo III, Tanjung Emas Branch, Semarang at 10.30 WIB. Then the pilot comes to pick up the Ship at 11.30 WIB, then the Waiting Time is 1 hour. So a delay of 1 hour can be said to be wasted time (non-productive) which must be borne by the Ship, the shipping entrepreneur or the shipper who has used the Port facility services, which is due to certain factors at the Port. The service performance indicators related to Port services consist of:

1. *Approach Time (AT)*or pilotage service time is the amount of time used for the ship to move from the anchor location to tying the rope at the mooring.
2. *Effective Time (ET)*or effective time is the amount of effective time used to carry out loading and unloading activities while the ship is moored.
3. Idle Time (IT) is ineffective or unproductive time or wasted time while the ship is at the mooring due to the influence of weather and damaged loading and unloading equipment.
4. *Not Operation Time (NOT)*is the break time, the planned stop time while the Ship is in Port. (preparation of b/m and work breaks)
5. *Berth Time (BT)*is the mooring time from the first line to the last line
6. Berth Occupancy Ratio (BO 10 he level of pier usage is the comparison between the time the pier is used and the time available (the pier is ready for operation) in a certain time period expressed as a percentage.
7. *Turn around Time (TRT)*is the arrival time of the ship anchored at the pier and the departure time of the ship after carrying out loading and unloading activities (TA to TD).
8. *Postponed Time*is the waiting time caused by administrative processing at the Port.
9. *Berth Working Time (BWT)*is the time for loading and unloading activities while the ship is at the mooring or at the dock.

Administration

Administrationhas several meanings based on various sources because the definition of Administration itself can come from any aspect, especially the transportation aspect. According to Merckx, 2005, in Sherly Luthfi Anita, et al (2017), the definition of Administration is the average time a container is at the port terminal and waiting for the next activity to take place. This is in accordance with the definition according to the transportation dictionary which defines Administration as the number of days required for a container to change status, for example under inbound load (UIL) status to empty available status then under outbound load (UOL).

World Bank(2011), states: Administration is the average time a container is in the terminal since the container is unloaded from the ship (discharge) until it leaves the terminal (Gate Out), which means that all obligations related to importation (Quarantine, Customs, etc.) have been completed so that the owner of the goods can fully control it. Another source states, Import container administration is the time calculated from when a container is unloaded and lifted (unloading) from the ship until the container leaves the terminal through the main door. Administration is actually one of the parameters of port performance, besides the problematic Waiting Time. The definition of Waiting Time is the waiting time for a ship to be able to dock at the pier and carry out the loading and unloading process. The smaller or zero "Waiting Time" is, the better the loading and unloading performance at the Terminal/Port. Factors that affect Waiting Time include: availability of dock facilities (adequacy), adequate loading and unloading equipment and other supporting facilities such as stacking yards and lifting and transport equipment used for haulage and lift on and off activities in the stacking yard and no less important is the performance or productivity of loading and unloading which is usually done by cranes on the dock. So it can be concluded that between Waiting Time and Administration are connected port performance parameters, namely if waiting calculates the length of time a ship waits at the port to be able to dock and carry out loading and unloading activities, while Administration is calculating how much time is needed by a container (which is a ship's cargo), from being unloaded/loaded until the goods come out of the container terminal gate. It can be seen that this Administration is actually part of the document and physical goods management activities, which start from:

1. Arrival of the ship in the harbor waters, to wait to dock at the pier.
2. The ship is docked at the pier, waiting for the process of unloading goods.

3. The process of unloading goods up to storing goods at CY (this is where the new administration calculation actually begins).
4. Custom clearance and customs approval (SPPB) processing process.
5. Management of goods/containers up to payment of storage costs.
6. Release of goods/containers from the Port Area (this is where the Administrative calculation ends).
7. Goods arrive at the importer/goods owner's location

Factors Affecting Administration

In general, the processes that determine the length of administration at the port are pre-clearance, customs clearance and post-clearance, as below:

1. Pre-clearance is the time required from when the container is placed in the Temporary Storage Place (TPS) to the preparation of the Goods Import Notification (PIB) document. In general, this activity includes two processes, namely:
   a. Container Process: Unloading containers from ships (stevadore unloading) then stacking containers in the Container Yard (CY). then stacking (stacking) in the Container Yard (CY)
   b. Document Process: includes preparing the Goods Import Notification (PIB) document, to paying Import Duty and taxes for imports.

   The determining factors for pre-clearance are (Directorate General of Customs and Excise, Ministry of Finance of the Republic of Indonesia - April 2018):
   a. Discharge-stacking speed
   b. Speed of quarantine action
   c. Speed of notification delivery
   d. Speed of original B/L retrieval
   e. Fulfillment of prohibition and restriction obligations (lartas)
   f. Speed of completion of Certificate of Origin (COO) or Certificate of Origin of Goods (SKA).
   g. Motivation to hold goods and not rush the goods out.
2. *Customs Clearance*is a physical inspection of containers (specifically for the red lane), verification of documents by Customs, and issuance of a Goods Release Approval Letter (SPPB). Broadly speaking, this activity includes two processes, namely:

a. Container Process, includes: bringing the container from CY to the Inspection Field (Specifically for Red Lane), then brought to a temporary storage area, if the container condition is Less than Container Load (LCL - one container contains more than one sender and more than one recipient)
b. Document Process, includes:
    1) Submit the Import Notification (PIB) document. Determination of the lane: Red, yellow, hi (specifically Red Lane), far or priority lane.
    2) Physical and document checks (if you are on the red lane), or document checks only (if you are on the green lane or priority lane).
    3) Once it is 'clear', Customs and Excise will issue a Goods Release Approval Letter (SPPB).

The determining factors are (Directorate General of Customs and Excise, Ministry of Finance of the Republic of Indonesia - April 2018):

a. Speed of hardcopy submission for Red and Yellow Lines.
b. Speed of preparation of goods for physical inspection
c. Speed of physical examination
d. Speed of delivery of physical examination results.
e. Document checking speed.

3. *Clearance in and out of the ship*

Before the ship arrives, the things that need to be prepared are as follows:

The first thing that shipping agents do is that agents always update ship news during the trip (Branch Report) and make contact with the ship, especially to (Ship Captain) to send (Master Cable) to find out the schedule when the ship will arrive, For the Clearance In process, agents submit ship arrival services within a maximum of 1x24 hours, first the agent must register the ship by submitting an agency appointment to the system (Inapornet) to be verified by the Port Organizer (KSOP) so that the status of the agency service changes status to ship news, continued to complete the data on the ship news as completely as possible for the news to be sent to the Port Organizer in the form of PKK and to the Harbor Master in the form of SPM. In the verification process by each agency, the time limit for providing a response to Inaportnet is 5 (five) hours from the time the service is received. After the PKK and SPM are approved by the PKK that has been verified by the Port Organizer, the BUP then sends RPK-RO data to the Port Organizer from the PPKB which is submitted, some of the data from

the PKK that has been verified. Data entered into the port organizer in the form of PPK services for ship berthing. And the issuance of SPK Pandu from BUP if the PPK has been determined by the Port Organizer (KSOP). and SPOG can be issued no later than 1 (one) hour since the SPK Pandu is issued, after the SPK Pandu is issued the ship can immediately contact the scouting party to be guided for the ship's berthing. Agent activities after the inapornet data is verified are as follows:

a. Holding a pre-meeting at PPSA (One-Stop Service Center) to determine piloting hours and mooring time.
b. Holding a meeting to determine the berth at KSOP (Port Authority and Harbor Master's Office) and the Agent itself to report the ship's movement.
c. Coordinate with the JMI Docking party appointed to carry out ship repairs to prepare everything needed by the ship to determine which shipyard the ship will be repaired at.
d. Agents provide information to quarantine for ship arrivals to be checked and for the PHQC (Port Health Quarantine Clearance) issuance process. By attaching the Crew List.

   For the purpose of clearance in for ships, the documents are intended for the archives of shipping agents, Pelindo, Adpel archives and the LALA (Sea Traffic) section of KSOP Class 1 Tg.Emas Semarang by attaching:

   1) *RPT (Route Operation Plan)*
   2) Agency Appointment
   3) Crew List
   4) Ship Particular.
   5) Sea Mail
   6) Measurement Letter
   7) SPB (Sailing Approval Letter) arrival
   8) LKK (Ship Arrival Report)
   9) SPOG (Movement Exercise Approval Letter)

   After all the clearance checks have been completed, the agent will provide information to the ship to prepare to move.

When the ship arrives, what you do as an agent is as follows:

1) After the Agent has made a deposit

   The agent takes the ship's documents, along with other documents for the memorandum and the clearance in and clearance out process. Before the documents are brought to the harbor master, the agent checks the documents first for expired / invalid documents (Memorandum), after checking the documents and there are expired documents, the agent will report and make a letter of renewal of expired documents to the KSOP, While the ship is in port, the ship's documents remain stored at the harbor master until the ship leaves the port.

   The documents taken on board the ship are:

2) Registry Certificate

   A certificate stating the nationality of a ship given by the government of the country. The ship is entitled to legal protection from the said country and has the right to fly the flag of the country in which the ship is registered.

3) International Tonnage

   A letter stating the important dimensions of the ship such as: ship length (LOA), ship width (breadth), ship depth (depth), ship gross weight/Gross Tonnage (GT).

4) Ship Safety Construction Certificate

   A certificate stating that the ship's space and its buildings can carry cargo according to the type of ship that meets ship standards and safety requirements.

5) Ship Safety Radio Certificate

   A certificate stating that a ship is equipped with a radio receiver and transmitter in accordance with certain requirements. Ship Safety Equipment Certificate A certificate that explains and states the ship's equipment and tools.

6) Safe Manning Certificate

   Certificate stating the details of the officers and crew of the ship.

7) Safety Management Certificate

   A certificate stating that the ship management system is in accordance with the system used based on the ISM Code standard.

8) International Ship Security Certificate

   A certificate stating the level and security of the ship.

9) International Oil Pollution Presentative Certificate

   A certificate stating that the ship does not cause air pollution or pollution at sea.

10) Certificate of Insurance or Other Financial

    A certificate stating that the ship has been insured to anticipate events that occur at sea.

11) Safety Equipment Certificate

    It is a certificate that shows the equipment that must be on board, namely fire safety systems and facilities, self-rescue facilities and equipment and rope throwing facilities and radio installations.

12) Rat Letter

    A certificate stating that the ship is free from disease-causing rats.

13) Classification of Hull Certificates

    Certificate stating the type of hull classification of the ship as well as the type of hull.

14) International Load Line Certificate,

    A certificate that explains and states the maximum and minimum load limits of a ship.

15) International Life Raft Certificate

    Certificate stating the lifebuoy used in an emergency.

16) Port State Control

    A certificate stating all conditions of the ship along with a certificate stating that the ship is seaworthy and its deficiencies.

17) Oil Record Book

    A book that lists the minutes of the condition of the oil used by the ship.

18) Health Book

    A book stating that the ship is clean and free from infectious diseases.

Agents conduct Health Book, SSCEC, P3K clearance to quarantine for ship inspection and submission of PHQC (port health quarantine clearance) issuance. For Quarantine clearance to the Port Health Service regarding ship sanitation by attaching:

1) *Health Book.*
2) *SSCEC (Ships Sanitation Control Exemption certificate)*
3) Submit a request for clearance
4) Crew List

Next, the shipping agent only needs to wait for the movement process from the Port pool to JMI Docking. The activities carried out by the agent as an agent of the shipping company when approaching the arrival of the ship are:

1) The agent communicates and coordinates with the ship via radio operator with the aim of monitoring whether the ship is experiencing problems entering the port area or experiencing obstacles.
2) Reviewing the condition of the place where the ship will dock, namely JMI, whether the condition of the dock is completely empty and the ship is ready to dock.

3. RESEARCH METHODS

Research methods are scientific ways to obtain data with specific purposes and uses Sugiyono (2016). Research methods contain knowledge that examines the provisions regarding the methods used in research.

3.1 Research Variables and Operational Definitions

3.1.1 Research Variables

The variables used in this study, namely the dependent variable (bound variable) is a variable that is influenced or that is the result, because of the existence of the independent variable (Sugiyono, 2016). In this study there are two research variables, namely the independent variable and the dependent variable. The two research variables are:

1. Independent Variable (Free Variable)

   Independent variables (free variables) are often referred to as stimuli, predictors, antecedents. Independent variables are variables that influence or cause changes or the emergence of dependent or bound variables (Sugiyono, 2016) The independent variables in this study are:

   a. Service Facilities (X1)
   b. *Administration*(X2)
   c. Port Environmental Conditions (X3)

2. Dependent Variable (Bound Variable)

   According to Sugiyono (2016) dependent variables or often called output variables, criteria, consequences. In Indonesian, it is often referred to as dependent variables. Dependent variables are variables that are influenced or that are the result, because of

the existence of independent variables. The dependent variable in this study is Customer Satisfaction (Y).

3.1.2 Operational Definition of Variables

Operational definition is an explanation or description of research variables in a measurable form. This is intended to provide convenience to respondents in choosing a category or level of assessment that is appropriate according to what the respondent feels.

1. Independent Variable

   Independent variables (free variables) are often referred to as stimuli, predictors, antecedents. Independent variables are variables that influence or cause changes or the emergence of dependent or bound variables (Sugiyono, 2016) In this thesis, the independent variables are as follows:

   a. Service Facilities (X1)

      What the author means by service facilities are service facilities provided by the port in carrying out loading and unloading activities. Complete facilities at a port must be able toconnecting the Port with its hinterland, able to serve the latest generation of ships that go directly to various international trade centers (direct call). able to anticipate the acceleration of loading and unloading of goods with complete service facilities. Handling of loading and unloading of goods is carried out at the shipping terminal which is adjusted to the type of cargo being transported. The indicators include:

      The indicators include:

      1) HR Skill Level (X1.1)

         It is the ability of Human Resources in managing the facilities available at the port. The higher the level of HR capability available, the more effective and efficient the management of the facilities owned by the port.

      2) Addition of Loading and Unloading Equipment (X1.2)

         The addition of Loading and Unloading Equipment is an important indicator that affects the activities in the port to run smoothly. When the Addition of Loading and Unloading Equipment is complete, the activities in the port can run optimally.

3) Dock Facilities (X1.3)

Pier facilities are a place to dock ships, piers have several types based on their respective functions. In general, piers have types with a shape that is parallel to the beach (types consisting of on pile, caisson, sheet pile) and jetties that jut out into the sea (finger type, slanted, complex and or added with mooring dolphin).

b. *Administration* (X2)

*Administration*has the following indicators:

1) Goods Document (X2.1)

Goods documents for coal cargo include:

One of the duties of a shipping agency is related to the management of documents, both ship documents and trade documents. The following are shipping documents that are generally used:

- Bill of Lading

Bill of Lading (B/L) or bill of lading is a document issued by a shipping company and has the following functions:

- Proof that the goods have been loaded onto the ship
- Document of title from the owner of the goods.
- Contract of affreightment.
- Purchase/sale documents (transferable documents).
- If it is only addressed to the recipient, then this BL is Non-Negotiable, whereas if it is traded, this BL is called Negotiable.

- Sea waybills

Sea waybills are a substitute for ocean B/L which is currently considered inadequate. Waybill is a non-negotiable document and is made for the consignee named in it. The recipient of the goods can take the goods by showing this waybill. However, without a waybill, as long as he can show his identity, the recipient of the goods can take the goods.The advantages of using waybills are:

- Existing consignee, without waybill can pick up the goods. Using traditional B/L will not be possible, this causes complications with traditional B/L due to delay in delivery.

- Can be done in deliveries between acquaintances, where there is no financial risk.
- It can also be done if there is mutual trust in the delivery of merchandise.
- Cargo Manifest

  Cargo manifest is a document containing information about the cargo on board the ship. Freight manifest provides information about freight, surcharges, rebates, etc. Manifest is prepared by the agent/representative of the carrier. However, it can also be done by the freight forwarder if it has to deal with customs and port officials.

- Shipping Note

  Shipping note is a document made by the shipper and addressed to the carrier to request space for its cargo. Shipping note is a sign of the shipper's commitment to ship its cargo and is also used to prepare the B/L for outbound cargo.

- Delivery Order

  Delivery Order (DO) is a document issued by the party authorized to store goods. To remove the goods from their storage location, there is a note 'fiat out', meaning that the owner of the goods has completed his obligations to the party authorized over the goods. In the DO, the shipping company has paid the freight, import duties, storage costs, and others.

- Mate's Receipts

  Mate's Receipts are receipt documents from the carrier to state that the goods have been received on board the ship (export cargo) where the mate's receipt is replaced with a B/L from the carrier.

2) Ship Documents (X2.2)

Ship Documents as Permits for Ship Operations Ship certificates and documents are important documents that must be held by every company or individual who wants to operate their ship. Certificates and documents are a form of legal evidence owned by every ship to obtain permits and fishing eligibility that are covered by government laws. These letters are intended as a

guarantee of the safety and security of humans, ships and various forms of cargo in them. As is known, so many types of accidents that occur in various waters are caused by the negligence of the crew. They do not pay attention to permits and fishing eligibility through certification that has been regulated in the regulations. This is what makes all forms of losses during the voyage very difficult to avoid.

Working at sea has quite a high risk and in fact has the most severe impact. Understandably, various things can happen during the voyage because when at sea various difficulties will occur and no one can predict them. Especially regarding the weather that is easily changed due to natural factors. This is the initial basis for the procurement of regulations regarding sailing permits that must be owned by every ship and its crew. The safety factor is the main thing to consider, in addition to the quality of machine equipment and the quality of qualified human resources.

a) Seaworthy Certificate (Seaworthy Certificate)

   The next ship document that must be owned is a seaworthy certificate. This document is proof that the ship is seaworthy. The seaworthiness of this ship is seen from various things such as the completeness of the equipment, the function of each component of the ship, and so on. This ship certificate is very important. The reason is that if there is ship equipment that does not pass the seaworthiness test, then it will cause danger. Especially if the ship in question is a passenger ship, then the seaworthiness of the ship must be considered because it concerns the safety of many people.

b) Safety Certificate (Security Certificate)

   The next ship document that must be completed to avoid a ticket on the ship is a security certificate. This document is specifically intended for passenger ships. A security certificate is a guarantee for passengers while on the ship. The security guaranteed in this certificate includes physical security, security from inappropriate actions by the crew, and social security.

c) Deratting certificate (Rat Free Certificate)

   A rat-free certificate or deratting certificate is an important document for ships that are about to depart. As is known, rats are rodents that are not

allowed on board ships. Therefore, the crew must ensure that there are no rats on board.

Rat-free certificate is a statement that the ship is free from rat pests and this is issued after the ship is inspected. In addition, the ship is also sprayed using fumigation or rat extermination.

This spraying is done to ensure that there are no rat pests on the ship that may have been missed during the inspection. Therefore, it must be ensured to be checked routinely.

d) Ship Crew Registration Letter

As the name implies, this document is a document that contains a list of the ship's crew. This document is also known as Monsterol, Surat Sijil Crew List. All the names of the ship's crew are listed in this letter complete with their positions. However, the captain's name is not listed because he is not included in the crew. The captain serves as the leader of the ship and is responsible while the ship is sailing.

e) Bill of Health (Health Certificate)

Still related to the previous ship's document, the Bill of Health or health certificate is a health certificate for the ship's crew.

As it is known that sailing is usually done in a certain time. If there is a crew member who suffers from an infectious disease or epidemic, then this can cause undesirable things.

This health certificate states that the crew and captain are free from infectious diseases and that the people on board are in good condition. To obtain this certificate, the crew is required to undergo a health check. Usually this certificate is issued when the ship is about to depart from the port.

Health certificates are not only a bureaucratic complement, but also a responsibility to ensure the health of people on board.

f) Load Line Certificate (Free Hull Certificate)

The hull is a very important part of the ship. This part affects the ship's ability to float on water. Therefore, there is a special certificate for this part of the ship.

The Free Hull Certificate or also known as the Load Line Certificate is a certificate stating that the ship's hull can be freed in accordance with the minimum and maximum rules.

The hull of the ship will rise slightly and rise more above the water surface when sailing with an empty load or in ballast. However, if the ship is sailing with a full load, then the hull that rises above the water surface becomes less.

For that, minimum and maximum limits are needed for the freeboard. This is done for the safety of navigation so that the ship can maintain its stability.

g) Mee Tebrief or Measurement Letter

This ship's letter or document is a letter stating the size of the ship. The ship itself has important dimensions such as the width, LOA or length of the ship, and LBP or Length Between Perpendicular.

In addition, the size of each hatch is also listed in this letter. Although it is only a certificate of ship size, this letter should not be underestimated. Because, the size of the ship can affect the load, number of passengers, freeboard and so on.

h) Other Documents That Must Be Completed

In addition to the documents mentioned above, there are many other important documents that must be completed. However, it should be underlined that other documents may differ, depending on each type of ship.

For example, documents on cargo ships are definitely different from passenger ships. Cargo ship documents that need to be completed are a cargo ship safety equipment safety, a cargo ship safety radio certificate and exemption certificate.

In addition, it is also necessary to complete it with a dangerous goods manifest or stowage plan and cargo ship construction certificate.

In addition, other ship cargo documents that can prevent you from being fined are warehouse receipts, cargo tracers, damaged cargo lists, out turn reports, and survey reports.

3) *Clearance in and out (X2.3)*

It is a service process for ships that will dock or refuse to the port. Includes the management of ship documents, crew, and documents required as a requirement

for the ship to dock at the port to ensure the seaworthiness of the ship.

c. Port Environmental Conditions (X3)

The cause of poor performance at the port is another thing that also complicates port performance, namely the problem of less friendly port environmental conditions, for example heavy rain accompanied by storms, so that ships cannot dock at the dock to carry out loading and unloading activities, and vice versa, operators are slightly more disturbed in carrying out their activities.

The indicators include:

1) Pier Length (X3.1)

The length of the pier affects the loading and unloading process because if a pier has an inadequate length, it will make the queue of ships at the port long and make customs activities at the port not optimal. This happens at the port of Tanjung Emas Semarang which has a short pier length and combines loading and unloading activities and passenger ships.

2) Sea Water Depth (X3.2)

Port depth is a major problem in almost every port in Indonesia. Indonesia has very few natural deep-water ports and river systems that are prone to siltation. If dredging is not carried out, ships will often have to wait until high tide before or leaving the port, which causes more time needed in the loading and unloading process which affects the Administration itself.

3) Port Road Condition (X3.3)

Road conditions at the port are an important factor in customs activities. Because the flow of goods in a port must be smooth, if the flow of goods is blocked or not optimal, then the service at the port is also considered not optimal. One of the causes of the flow of goods being blocked is the condition of the road which is potholed, uneven, or inundated by sea water because it sinks at a speed of 7-12 cm per year and most ports are underwater almost every day in a month. Every 7-10 years, expensive and time-consuming activities must be carried out at the container terminal to raise the main dock and storage area.

Perhaps the biggest obstacle to development is the general lack of private sector participation (investment) and competition in the port system. This is

largely due to the state's dominance in the supply of port services, which can exert pressure to lower prices and generally improve port services.

d. Customer Satisfaction (Y)

Satisfaction is a feeling of pleasure or disappointment that arises after comparing the performance (result) of a product that is thought to be against the expected performance (or result). If the performance is below expectations, the customer is dissatisfied. If the performance meets expectations, the customer is satisfied. If the performance exceeds expectations, the customer is very satisfied or happy (Kotler 2006:177).

So, satisfaction isfunction of perception or impression of performance and expectations. If performance is below expectations then customers are dissatisfied. If performance meets expectations then customers will be satisfied. If performance exceeds expectations then customers will be very satisfied or happy.

Customer Satisfaction Indicators include:

1) Quality of Service (Y1.1)

Users have the desire to come back with the service provided.

2) Competitive Price (Y1.2)

Prices that are comparable to the quality of service or the value of the product provided will be more preferred by customers. However, customers will be more interested in cheaper prices, but in the end customers will compare the quality between cheap and expensive products.

3) No Complaints Filed (Y1.3)

If the quality of service provided is already felt to be good by the customer, there are no obstacles or problems that occur during the service period, then the customer will not file a complaint that will add to the company's problems. Such as compensation, loss of customers, to the company's reputation becoming bad.

4. RESULTS AND DISCUSSION

Since the time of the Mataram kingdom, Semarang Harbor has been a place where merchant ships from various regions docked. Semarang at that time was a small city built facing the Java Sea around the Dutch Fort. At that time, the Semarang River

was the only artery of trade that transported goods by small boats from the city to large ships anchored far offshore and vice versa.

The Lighthouse Tower with the number 1874 written on it shows that Semarang Port was built in the early 19th century. To meet the demands of the city's development, a port plan was made in 1886 to build the Inner Harbor and Coaster Harbor. After the construction was completed, trade in Semarang Port increased rapidly. In 1925, this port was ranked third in terms of loading and unloading activities after Tanjung Priok and Tanjung Perak ports.

Along with the increase in operational activities, after the Proclamation of Independence of the Republic of Indonesia was declared in 1945, additional port facilities were needed. In 1963, the construction of Coaster Port or Nusantara Port which could accommodate ships measuring + 2,000 DWT began to be realized. However, at that time, larger ships still had to anchor and carry out loading and unloading activities at Rede Port which was + 3 miles from the port using barges.

According to data from 1970-1983, the average increase in the flow of goods each year increased by 10%. Given the limitations of port facilities, the government decided to build the Port of Semarang. The port development plan (Mater Plan) was divided into 3 stages. After the completion of the first stage of the construction project and inaugurated by President Soeharto on November 23, 1985, the port was officially named "Tanjung Emas Port". Stage II in the form of the construction of a 345 m long Container Pier with container loading and unloading facilities in the form of 4 Gantry Crane units, and 8 RTG units was then also completed in the period 1995-1997. The second stage project directed Tanjung Emas as one of the container ports in Indonesia as a manifestation of participation in the third millennium and globalization, the aim of which is to realize integrated multi-mode transportation and the full operation of the Solo - Jebres Dry Port (IDSOC).

Currently, Tanjung Emas Port is a branch of PT. Pelabuhan Indonesia III (Persero). Responding to global business developments, Tanjung Emas Port is included in the government program in the Master Plan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI). So that in the future, Tanjung Emas Port will be more solid in holding the title of International Class Port.

Respondent Overview

As stated in the research method, where the respondents in this study are agents, PT. Pelindo, and field workers to explain the characteristics of the respondents, the following will present a general description of the respondents as follows:

1. Respondent identity based on gender

   Based on the gender of respondents, Agents, PT. Pelindo and Field Workers can be grouped as follows:

Table 2
Respondents by Gender

Gender	Number of Respondents	Percentage (%)
Man	75	72.1%
Woman	29	27.9%
Total	104	100%

Source: Processed primary data, 2021 (SPSS V. 25 output)

   Based on table 2, it can be explained that Agents, PT. Pelindo and Field Workers are male with the number of respondents being 75 respondents (72.1%) while respondents with female gender are 29 respondents (27.9%).

2. Respondent identity based on age

   Based on the age of respondents, Agents, PT. Pelindo and Field Workers can be grouped as follows:

Table 3
Respondent Identity Based on Age

Age	Number of Respondents	Percentage (%)
25-30	32	30.8%
31-35	45	43.3%
>35	27	26%
Total	104	100%

Source: Processed primary data, 2021 (SPSS V. 25 output)

   Based on table 3, it shows that respondents aged 25-30 years were 32 respondents (30.8%), respondents aged 31-35 years were 45 respondents (43.3%), while respondents aged > 35 years were 27 respondents (26%).

3. Respondent identity based on occupation

   Based on the year of entry, respondents of Agents, PT. Pelindo and Field Workers can be grouped as follows:

Table 4
Respondents by Occupation

Work	Number of Respondents	Percentage (%)
Agent	25	24%
PT. Pelindo	23	22.1%
Field workers	56	53.8
Total	104	100%

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on table 4, it shows that respondents with Agent jobs are 25 respondents (24%), respondents with PT. Pelindo jobs are 23 respondents (22.1%) while respondents with field worker jobs are 56 respondents (53.8%).

Data Analysis and Discussion

Descriptive Analysis

Based on the results of the answers from 108 respondents to the questionnaire items used in this study, the following analysis can be seen:

1. Service Facilities

   Based on the results of the answers from 108 respondents, the response regarding the price factor is the first independent variable of this study with 3 indicators in it. And obtained from 3 questionnaire items. The following are the results of respondents' responses regarding the price factor:

   a. HR Skill Level

Table 5
HR Skill Level

X1.1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	0	0.0	0.0	0.0
	Quite Agree	17	16.3	16.3	16.3
	Agree	62	59.6	59.6	76.0
	Strongly agree	25	24.0	24.0	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 5, it can be explained that there were no respondents who gave answers that strongly disagreed and disagreed. 17 respondents (16.3%) answered quite agree, 62 respondents (59.6%) answered agree and 25 respondents (24%) answered strongly agree. Based on the respondents' answers above, it can be concluded that most respondents

predominantly agree thatProviding seminars on port affairs for human resources can improve the quality of human resources.

b. Addition of Loading and Unloading Equipment

Table 6
Addition of Loading and Unloading Equipment

X1.2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	0	0.0	0.0	0.0
	Quite Agree	18	17.3	17.3	17.3
	Agree	64	61.5	61.5	78.8
	Strongly agree	22	21.2	21.2	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 6, it can be explained that no respondents gave answers that strongly disagreed and disagreed, 18 respondents (17.3%) answered quite agree, 64 respondents (61.5%) answered agree and 22 respondents (21.2%) answered strongly agree. Based on the respondents' answers above, it can be concluded that most respondents predominantly agree thatThe addition of loading and unloading equipment reduces coal loading and unloading time.

c. Pier Facilities

Table 7
Pier Facilities

X1.3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	1	1.0	1.0	1.0
	Quite Agree	19	18.3	18.3	19.2
	Agree	61	58.7	58.7	77.9
	Strongly agree	23	22.1	22.1	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 7, it can be explained that no respondents gave an answer that strongly disagreed, 1 respondent (1%) answered disagree, 19 respondents (18.3%) answered quite agree, 61 respondents (58.7%) answered agree and 23 respondents (22.1%) answered strongly agree. Based on the respondents' answers above, it can be concluded that most respondents predominantly agree thatThe addition of the length of the pier will reduce ship waiting time.

2. Administration

To find out how Administration is towards customer satisfaction, respondents will determine a response regarding the Administration. The following are the results of respondents' responses regarding Administration.

a. Goods Document

Table 8
Goods Document

X2.1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	1	1.0	1.0	1.0
	Quite Agree	19	18.3	18.3	19.2
	Agree	63	60.6	60.6	79.8
	Strongly agree	21	20.2	20.2	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 8, it can be explained that no respondents gave an answer that strongly disagreed, 1 respondent (1%) answered disagree, 19 respondents (18.3%) answered quite agree, 63 respondents (60.6%) answered agree and 21 respondents (20.2%) answered strongly agree. Based on the respondents' answers above, it can be concluded that most respondents predominantly agree thatdata integration from allThe party ensures that the issuance of permits will run optimally so that the processing of goods documents can be completed immediately.

b. Ship Documents

Table 9 Ship Documents

X2.2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	1	1.0	1.0	1.0
	Quite Agree	22	18.3	18.3	19.2
	Agree	58	60.6	60.6	79.8
	Strongly agree	23	20.2	20.2	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 9, it can be explained that no respondents gave an answer that strongly disagreed, 1 respondent (1%) answered disagreed, 22 respondents (18.3%) answered quite agree, 58 respondents (60.6%) answered agree and 23 respondents (20.2%) answered strongly agree. Based on the respondents' answers above, it can be concluded that most respondents predominantly agree thatby doingIntense communication with ship owners in the form of checking the completeness of ship documents early can reduce ship waiting times.

c. *Clearance In*and Out

Table 10
***Clearance In*and Out**

X2.3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	2	1.9	1.9	1.9
	Quite Agree	24	23.1	23.1	25.0
	Agree	53	51.0	51.0	76.0
	Strongly agree	25	24.0	24.0	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 10, it can be explained that no respondents gave an answer that strongly disagreed, 2 respondents (1.9%) answered disagreed, 24 respondents (23.1%) answered quite agree, 53 respondents (51%) answered agree and 25 respondents (24%) answered strongly agree. Based on the respondents' answers above, it can be concluded that most respondents predominantly agree thatagentmust maintain good

communication and cooperative relationships with related parties, so that the ship's Clearance In and Out process is faster and smoother.

3. Port Environmental Conditions

To find out how the Port Environment Conditions affect customer satisfaction, respondents will determine a response regarding the Port Environment Conditions. The following are the results of respondents' responses regarding the Port Environment Conditions.

a. Length of Pier

Table 11

Length of Pier

X3.1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	1	1.0	1.0	1.0
	Quite Agree	14	13.5	13.5	14.4
	Agree	48	46.2	46.2	60.6
	Strongly agree	41	39.4	39.4	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 11, it can be explained that no respondents gave an answer that strongly disagreed, 1 respondent (1%) answered disagree, 14 respondents (13.5%) answered quite agree, 48 respondents (46.2%) answered agree and 41 respondents (39.4%) answered strongly agree. Based on the respondents' answers above, it can be concluded that most respondents dominantly agree that the Length of the Pier acan disrupt or even stop coal unloading activities.

b. Sea Water Depth

Table 12
Sea Water Depth

X3.2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	0	0.0	0.0	0.0
	Quite Agree	14	13.5	13.5	13.5
	Agree	55	52.9	52.9	66.3
	Strongly agree	35	33.7	33.7	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 12, it can be explained that no respondents gave answers that strongly disagreed and disagreed, 14 respondents (13.5%) answered quite agree, 55 respondents (52.9%) answered agree and 35 respondents (33.7%) answered strongly agree. Based on the respondents' answers above, it can be concluded that most respondents dominantly agree that the Depth of Sea Watercan stop or disrupt coal unloading activities.

c. Port Road Conditions

Table 13
Port Road Conditions

X3.3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0.0	0.0	0.0
	Don't agree	1	1.0	1.0	1.0
	Quite Agree	10	9.6	9.6	10.6
	Agree	50	48.1	48.1	58.7
	Strongly agree	43	41.3	41.3	100.0
	Total	104	100.0	100.0	

Source: Processed primary data, 2021 (SPSS V. 25 output)

Based on the results of the answers of 104 respondents in table 13, it can be explained that no respondents gave an answer that strongly disagreed, 1 respondent (1%) answered disagree, 10 respondents (9.6%) answered quite agree, 50 respondents (48.1%) answered agree and 43 respondents (41.3%) answered

strongly agree. Based on the respondents' answers above, it can be concluded that most respondents dominantly agree that the condition of the Port Road can hinder the flow of the coal unloading process.

4. Customer satisfaction

To find out how customer satisfaction is during the coal loading and unloading process at the Tanjung Emas port in Semarang, respondents will determine a response regarding customer satisfaction. The following are the results of respondents' responses regarding customer satisfaction.

5. CONCLUSION AND SUGGESTIONS

Based on the research results and discussion, the following conclusions can be drawn:

1. The results of the study indicate that the service facility variable has a positive and significant effect on the dependent variable of customers in coal loading and unloading at Tanjung Emas Port, Semarang. There are several things that can affect customer satisfaction related to service facilities such as the level of HR expertise, namely providing seminars on ports can increase HR understanding in all lines related to equipment operation, work safety and counseling regarding the latest regulations at Tanjung Emas Port, Semarang, Addition of Loading and Unloading Equipment, namely the addition of loading and unloading equipment reduces coal loading and unloading time, dock facilities, namely the addition of facilities at the dock such as the length of the dock to reduce ship waiting time. If this can be resolved, customer satisfaction will increase. This means that if the level of HR expertise, availability of equipment, and dock facilities, then consumer satisfaction will increase.
2. The results of the study indicate that the Administration variable has a positive and significant effect on the dependent variable of customer satisfaction in coal loading and unloading at Tanjung Emas Port, Semarang. There are several things that can affect customer satisfaction related to Administration such as goods documents, namely the integration of data from all parties makes the issuance of permits run optimally so that document processing can be completed, ship documents, namely communicating with ship owners in the form of checking ship documents at the beginning can reduce ship waiting time. Clearance In and Out, namely maintaining good communication and cooperation with related parties so that Clearance in and

out activities can run smoothly. This means that if the goods documents, ship documents, and clearance in and out, then customer satisfaction will increase.

3. The results show that the Port Environmental Condition variable has a positive and significant effect on customer satisfaction in loading and unloading coal at Tanjung Emas Port, Semarang. Poor Port Environmental Conditions can disrupt activities and even slow down coal loading and unloading activities. The condition of the pier length that is not optimal can stop coal loading and unloading activities, the depth of sea water causes land subsidence which can disrupt loading and unloading activities because sea water exceeds the land height. So it can be concluded that if the Port Environmental Conditions can be overcome, customer satisfaction will increase.

Suggestion

Based on the conclusions that have been made, the suggestions that can be given in this research are:

1. Suggestions related to service facilities are expected by the management to provide more socialization to related parties such as providing socialization regarding work safety for employees, work safety is very important in activities. The addition of loading and unloading equipment must be added, busy ports need additional loading and unloading equipment in order to create fast and safe work so as not to waste too much time.
2. For companies to be able to increase customer satisfaction, the issuance of permits must be carried out optimally so that the processing of goods documents can be completed immediately, checking the completeness of ship documents earlier so that it can reduce ship waiting time, and maintaining good cooperation with related parties.
3. Suggestions related to Port Environmental Conditions are expected so that in the loading and unloading process, especially coal cargo, coal itself cannot be exposed to water, therefore when the weather is not supportive, related parties should reduce loading and unloading activities with the aim of maintaining the quality of the coal well, for the pier itself, dredging must be carried out so that the process of activities can run smoothly.
4. Suggestions for further researchers, please add other variables or use research with other methods to create goodness in the research that will be carried out next.

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