The Effect of Guiding Services on Ship Visits Queues at PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch

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Abstract: The success of the Port can be seen from the visits of incoming and outgoing ships due to good service to service users. Then PT. Pelabuhan Indonesia II (PERSERO) should make improvements on the basic facilities owned by PT. Pelabuhan Indonesia II (PERSERO) and also plays a very important role in the service of ships is the guidance of ships under the coordination of Scouting Division of PT. Pelabuhan Indonesia II (PERSERO). The success of the service process by PT. Pelabuhan Indonesia II (PERSERO) in supporting the number of ship visits is the faster the ship scouting service, the faster the boat will lean on the dock so that service users benefit from time and costs while the company benefits from the increasing number of vessels served. The pilot operating system and also the addition of guided facilities and infrastructure can allow for a reduction in delays in guide ships to guide ships that have been embanked. The author seeks a solution to the problems that arise in increasing the timeliness of scouting services in reducing delays in guide ships when guiding ships at PT. Pelabuhan Indonesia II (PERSERO). The purpose of conducting this research is to find the relationship and influence of guide services in guiding ships in and out of the port to the number of ship visits at PT. Pelabuhan Indonesia II (PERSERO).

Keywords: Ship Visits and Scouting Services

1. Introduction

Background

The port is a place consisting of land and waters around it with certain limits as a place of government activities and economic activities that are used as a place for leaning ships, anchoring, boarding passengers and / or loading and unloading goods equipped with shipping safety facilities and supporting activities. port as well as an intra-place of transfer and between modes of transportation. In optimizing ship services in ports not only provided a pier, stacking, port ponds, warehouses, and other facilities, but also provided services for incoming and outgoing ships and to move from one pier to another by using guided boats and tugs. To serve ships that visit can lean and can carry out loading and unloading activities on time. And in its activities the port is an important and strategic means for the economic growth of a country, as evidenced by the number of ships visiting the country's ports.

Of course this requires an effort / policy of the Indonesian government to immediately prepare everything so that in time it will truly be ready to compete in the global era facing other countries. The port here is a vital device that really must be ready to support domestic and foreign trade activities (export import).

Tanjung Priok Port is one of the major ports in Indonesia that has the potential of natural resources with hinterland (an area that is limited by a beach or river) that is large enough and continues to grow, hence its role is quite important for international trade activities (export import), inter-island trade and regional and economic development in the Jakarta area.

One of the main services in port services is a ship guiding service that serves to keep cruise navigation within the port's watershed safely, orderly and smoothly for the safety of ships, people, goods and the environment.

Boat scouting work turns out that work not only requires special skilled human resources, but also demands responsibility, work performance, cooperation, initiative, honesty, obedience and excellent physical behavior.

Smoothness, security, safety issues, from guided vessels are the main things in the operational implementation of ship scouting because the consequences that can be caused from negligence on ship scouting activities can affect the smooth flow of ship traffic in the port, as well as the number of ship visits, even to the waters and the environment.

The faster the development of port activities at PT. Pelabuhan Indonesia II (Persero) Tanjung Priok Branch, it is necessary to optimize the quality of ship piloting services, especially in anticipation of the increasing number of ship visits every year. Operational scouting of the ship is the spearhead of the services of PT Pelabuhan Indonesia II (Persero) Branch Tanjung Priok, which carries out the initial and final activities of the entire series of port service activities. In improving the operational guidance of ships in ports, the human resources factor needs to be given attention in its development, so that its role in the scouting service activities at the port will result in a maximum number of ship visits. The importance of the role of guiding the shipping safety and port service activities in Tanjung Priok port.

2. Identification of problems

Based on the background of the problem, identification of research problems can be made as follows:

1. Decreasing number of ship visits guided by scouting services at PT. Pelabuhan Indonesia II (Persero) Tanjung Priok Branch.

2. The limited number of guide personnel owned by PT. Pelabuhan Indonesia II (Persero) Tanjung Priok Branch.

3. Lack of scouting service facilities owned by PT. Pelabuhan Indonesia II (Persero) Tanjung Priok Branch.

4. Low quality of Human Resources and lack of discipline and work ethic in the Scouting Division.

5. Bad weather conditions and navigation navigation aids that are not functioning properly so that they interfere with the scouting process.

Scope of problem

From the identification of the problems above, the authors limit the research on the influence of competence and compensation on the job satisfaction of PT Amas Iscindo Utama's crew

Formulation of the problem

Based on the description above, the main problem can be formulated as follows:

1. What is the effect of ship piloting services on the number of ship visits at PT. Indonesian Port II (PERSERO) Tanjung Priok Branch?

2. How to optimize guide performance on ships visiting Tanjung Priok?

3. How big is the influence of ship guiding services on the number of ship visits?

Objectives and Benefits of Research

1. Research Objectives

a. To find out the guided service at Pelabuhan Indonesia II (Persero) Tanjung Priok Branch

b. To find out the cause of the delay in guiding services in serving ships.

2. Benefits of Research

a. As input and increase knowledge about operational guidance that is applied to the company concerned.

b. As input for the Tanjung Priok Branch of PT Pelabuhan Indonesia II (Persero) to increase the number of special guidance facilities for ships that will carry out loading and unloading activities at Tanjung Priok Port.

c. Reducing waiting time for ships to dock at Tanjung Priok Port.

3. Literature review

Service

The definition of service in the Indonesian Language Dictionary online https://kbbi.web.id/pelayanan.html is an effort to serve the needs of others by obtaining rewards (money).

The following are the services provided to ships in the Port according to (Suyono, 2005):

- Full service

Services provided to ships to be able to dock safely for anchoring in ports or for loading / loading or waiting for other services.

- mooring services

Services provided for ships and technically can carry out loading / unloading activities safely and smoothly

- Guide services

One effort is to safeguard the safety of ships, passengers and their cargo when the ship enters the shipping lane to the dock or port pool to dock and vice versa.

- Delay and bill service

This service includes a series of ship guidance services. In its implementation, in addition to the availability of guiding personnel, there is also a need for guided motors, tugboats and motorbike motors, and is equipped with the assistance of the kepil squad task.

Pandu's obligation
a) Assist the captain or leader of the ship to take appropriate action in ensuring sailing safety.
b) Give all instructions to the captain to sail safely and to order ship traffic.
c) Fulfill the request of the skipper to take shipbuilding.
d) Knowing the depth of the shipping flow within the guide waters boundary
e) Report to the guiding supervisor about changes in the depth of the shipping channel in the guided waters obtained and the results of the casting, as well as the placement of fishing traps or other shipping channel barriers, changes in the position of light and / or period of beacon / buoys.
f) Participate in observing the possibility of making garbage and / or oil from ships which can result in contamination and pollution in the shipping flow environment.
g) Report on the possibility of anchors, chains and ropes of shipping lines that could endanger other vessels.
h) Uniforms of scouting services and equipped with safety equipment and communication equipment.
i) Helping the skipper to obey and understand the applicable local regulations and changes.
j) Report to the guiding supervisor if the skipper deviates from the instructions given or makes it difficult for the guiding officer on duty.
k) Provide guidance to prospective guiding officers and fellow guiding officers about the introduction of local shipping lines.
l) Observing the full face of the ship's back, the condition of the stability of the ship every time before guiding.

Guide function
According to (Ramadhani & Karsafman, 2017) concerning guide functions, namely:
a. As advisor to the captain
Pandu is required to provide all the instructions needed to sail safely and good traffic.
b. Service provider
Guiding ships becomes part of the agency that provides port services managed by Indonesian port business entities.
c. As a Law Enforcement Officer
City Regulation of 1925 / KM.208 / Phb-82 "Regarding the Review of Permanent Procedures for Ship Guiding at Indonesian Ports" in mandatory guide ports, syahbandar as an operational supervisor of scouts and guides is obliged to assist the shahbandar in matters relating to shipping and shipping law.

Ship Guiding Procedure and Ship Guiding Implementation.
Based on SK. GM No. HK. 55/6/9 / c. TPK. 99 dated 15 December 1999, (Menteri, 2002) (Pemerintah, 2010) (Pemerintah, 2001) regarding the fixed procedures for guiding ships in ports as follows:
a. Shipping companies or ship agents submit Ship and Goods Service Requests (PPKB) via computer on-line to the One-Stop Service Center (PPSA) of PT. Pelabuhan Indonesia II (PERSERO) with the following conditions:
1) For ships entering no later than 4 (four) hours before the service time is determined.
2) For ships going out or moving, no later than 2 (two) hours before the time of service specified.
3) Cancellation or change, no later than 1 (one) hour before the specified service time.
b. After obtaining approval or stipulation of service time by the One Roof Service Center (PPSA) of the Indonesian Port (Persero) II (PERSERO) Branch Office in Tanjung Priok Branch, shipping companies or ship agents wait and monitor vessel readiness and if there is a change immediately submit their changes to PPSA .
c. The delay in submitting the request as appropriate is subject to additional fees in accordance with the applicable rules and regulations.
d. Pandu ID
Daytime :
Dinas Pandu flag (Sign H flag)
Flag Request Pandu (Flag Sign G)
Evening :
The lights above the green and red below on the guide mast.

Ship
Based on Law No. 17 of 2008 (UUD, 2008) concerning Shipping, referred to as ships, namely "ships are water vehicles with certain forms and types that are driven by wind power, mechanical power, other energy, withdrawn or postponed, including vehicles capable of supporting dynamic vehicles under the water surface, as well as tools floating and even buildings that don't move ".

Ship Visits

According to the Law of the Republic of Indonesia No. 17 of 2008 (UUD, 2008) "About Shipping" article 1 paragraph 36 ships are water vehicles with certain forms and types, which are driven by wind power, mechanical power, other energy, are withdrawn or delayed including dynamic support vehicles, vehicles under the surface of the water, and floating tools and non-moving floating buildings.

Port

According to law No. 17 of 2008 (UUD, 2008) concerning Shipping:

"Port is a place consisting of land and / or waters with certain limits as a place of government activities and business activities that are used as a place for leaning ships, boarding passengers and / or loading and unloading goods, in the form of terminals and berths of ships equipped with shipping safety and security facilities and port support activities as well as intra and intermodal transportation facilities ".

Facilities and infrastructure

To support the smooth activities at the port, various facilities are available at the port. The completeness of this facility can also be a measure of the good or bad of a port. The following are some of the main facilities available at the port:

1) Wave resistance is used to hold waves and waves because inside the harbor there are docks on which the ship rests.

2) A bridge (jetty) is a building formed by a bridge that is made jutting out towards the sea from the coast or land.

3) Dolphin is a collection of baskets from bes, wood or concrete so that the ship can lean there to carry out loading or loading activities on barges.

4) The float reminder (Mooring Bouy) is a float where the ship is tethered to carry out an activity.

5) The place of anchorage is the place where the boat sells its anchor to carry out activities.

6) Single bouy mooring is a binding buoy where tankers can unload their cargo through a pipe in the buoy that connects land or research sources.

7) Shipping lines and port pools are parts of the waters at the port of entry / exit of the ship.

8) Ship signs are signs that are installed in the waters leading to the harbor to guide ships to anchor.

9) Warehouse is a place to store goods that are closed so that they are protected from the weather.

10) Pier is a place where ships can dock or dock to carry out their activities, either loading / unloading or other activities.

From the data available, the ships visiting the Tanjung Priok port are classified sequentially based on:
1) GRT size, namely:
a) GRT 500 tons or more (compulsory guidance vessel).
b) GRT below 500 tons (non-mandatory pilot ship).

2) Types of shipping, namely:
a) Indonesian flag shipping.
b) Foreign-flag shipping.
3) Types of ships, namely:
a) Tankers
b) Passenger boats / ferries
c) General cargo ship
d) Boat tug boat with barges
e) Bulk carrier carriers
f) Government-owned vessels or private vessels for government, social and other purposes.

Framework

The success of the Port can be seen from the visits of incoming and outgoing ships due to good service to service users. Then PT. Pelabuhan Indonesia II (PERSERO) should make improvements on the basic facilities owned by PT. Pelabuhan Indonesia II (PERSERO) and also plays a very important role in the service of ships is the guidance of ships under the coordination of Scouting Division of PT. Pelabuhan Indonesia II (PERSERO). The success of the service process by PT. Pelabuhan Indonesia II (PERSERO) in supporting the number of ship visits is the faster the ship scouting service, the faster the boat will lean on the dock so that service users benefit from time and costs while the company benefits from the increasing number of vessels served. The pilot operating system and also the addition of guided facilities and infrastructure can allow for a reduction in delays in guide

ships to guide ships that have been embanked. The author seeks a solution to the problems that arise in increasing the timeliness of scouting services in reducing delays in guide ships when guiding ships at PT. Pelabuhan Indonesia II (PERSERO) through the following frame of mind:

1. Consideration of the authors conducting this research to find the relationship and influence of guide services in guiding ships in and out of ports to the number of ship visits at PT. Pelabuhan Indonesia II (PERSERO).

2. Guiding officers are required to provide maximum guiding services because the quality of scouting services can not only reduce the total time the ship is in the port.

3. By looking at the problems that exist, then the author provides a solution that is expected in the future PT. Pelabuhan Indonesia II (PERSERO) can be even better through the addition of guided boat facilities in accordance with operational needs in addition to the welfare of personnel / employees. As well as empowering every element that is owned and invested in new facilities to support scouting activities, namely a tool for assisting ship guidance by replacing tugboats or guided motors that are not optimal.

4. Research methods

Research time
The research was carried out when the author carried out the Land Practice (Prada) from August 2017 to August 2018 at PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch.

Research Place
The place for conducting the research is the shipping company PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch.
Here is general information about company data:
Address: Jln. Harbor Port No. 9 Tanjung Priok
Phone: (021) 4301080
  (35 channels)
Fax: (021) 4372947
Post box: 1097 / JKT 14010
Year established: 1992

Research methods
In this study, the author will discuss the influence of Idle Time on Berthing Time vessels at the Tanjung Priok Port Conventional Pier. So that in this study the authors used a quantitative correlation approach.

Data collection technique
For the sake of collecting the data and information needed, the authors conduct research using several data collection techniques as follows:
a. Observation
Data collection techniques that are commonly implemented are through observation, through direct observation at PT. The Port of Indonesia II (PERSERO) Tanjung Priok Branch and the author observed ship scouting activities starting from tugboats serving delayed rope, until the kepil ship received a rope and delivered ketambatna at the dock so the ship could dock well.
b. Documentation
Data obtained by authors from PT. The Indonesian Port II (PERSERO) Tanjung Priok Branch includes the number of ship visits per day, monthly, and guided movement reports.
c. Literature review
Literature study is the collection of data by reading, seeing, researching, quoting from books or references presented, input or material considerations and comparisons of what can be seen from existing theories.

Research subject
1. Population
The population taken is from the daily motion data of the ship that goes in and out of Tanjung Priok port in August 2017 to August 2018.

2. Samples
The samples taken are from scouting the ship with a visit of a ship at PT (PERSERO) Port Indonesia II, Tanjung Priok Branch.

5. Technical Data Analysis
1. Quantitative Descriptive Analysis

This study uses quantitative data analysis techniques, namely data in the form of numbers and numbers, especially statistical analysis or the strength of the relationship (correlation).

2. Analysis Techniques

a. Correlation coefficient

1. If r = 0 means there is no relationship between x and y variables or the relationship is very weak;

2. If r = +1 or close to 1 there is a relationship between the variables x and y, very strong and positive;

3. If r = -1 or close to -1 there is a relationship between the variables x and y, where the relationship is very strong and negative.

Correlation analysis is used to find mutual relations or closeness of the relationship between variables X and Y as explained in the following table:

Table 1. Interpretation of r Correlation Coefficients

Interpretation of Relationship	Level Coefficients
0,00 – 0,199	Very Low
0,20 – 0, 399	Low
0,40- 0, 599	Enough
0,60 – 0,799	Strong
0,80 – 1,000	Very strong

b. Determinant Coefficient of Analysis

This analysis is used to find out how much the contribution or influence of the x variable on the nail of the decline in the variable y.

Formula:

Kp = r2 x 100%.

Information :

Kp: determinant coefficients

R2: Squared correlation coefficient

c. Simple Linear Regression Analysis

To find out the relationship between the variable number of delays in guiding services expressed by the variable X on the vessel visit variable expressed by variable Y.

Regression analysis aims to predict how much influence the change of one independent variable (independent) on the dependent variable (dependent). The coefficient of determination measures how well the regression line as estimated according to the observed sample data, expressed in (%) Y changes caused by factor X and the remainder caused by other factors.

Formula:

Y = a + bx

a = ∑y - b (∑x)

n

b = n (∑xy) - (∑x). (∑y)

n

Where :

a = konstansta

b = regression coefficient

y = dependent variable

x = independent variable

n = number of measurements

d. Hypothesis testing

to find out how far the research hypotheses that have been prepared that were originally acceptable based on the data that has been collected. Hypothesis test analysis does not test the truth of the hypothesis, but test the acceptance or rejection of the hypothesis in question.

The equation is:

a) Hypothesis testing for correlation coefficients:

Ho: r = 0, meaning that there is no influence between variable X and variable Y.

Ha: r> 0, meaning that there is an influence between variable X and variable Y

b) Test the hypothesis for the regression coefficient:

Ho: b = 0, meaning that there is no influence between variable X and variable Y.

Ha: b> 0, meaning that there is an influence between variable X and variable Y

α = 0.05 (error rate)

information :

Ho = original hypothesis or hypothesis 0, where there is no influence between the variable x and the variable y

Ha = statistical hypothesis or analysis hypothesis, where there is no influence between variables x and y

6.   Analysis and discussion

PILOT WATER

Mandatory water guide

It is a waters region that must be guided by ships with GT 500 or more

Guided waters are extraordinary

It is a waters region that is not obligatory for scouting, but if the skipper needs to be able to propose scouting training.

Pilot facilities

The port provides facilities and services for ships that visit, the service is divided into two groups, namely service for ships and services for goods, one of the services for ships is ship piloting services. Guide services at the port have an important role for ship service, both the service of ships entering, exiting and moving within the port's marine environment.

Scouting division in Tanjung Priok Port has an important role in maintaining service quality as the main supporting factor for the continuity of the development or growth of the flow of sea transportation.

One way to be done by the scout division is to look at the shortcomings that exist by evaluating the scouting facilities available at the port. In carrying out ship guidance activities sometimes experience delays caused by damage to the ship. At least a tugboat or backup guide is provided for the ship piloting process can be continued after the tugboat is replaced. This can cause the port to wait because the ship guiding activities are delayed, so it is no longer in line with the plans previously made. This resulted in the services provided to service users not maximally, because as we have seen, the level of satisfaction of service users has never been limited.

Facilities available at Tanjung Priok branch of Indonesia II Port, namely:

a. Shipping Line

The shipping flow that is owned at the Port of Indonesia II Tanjung Priok branch with a length of 16,853 Km from the port gate to the pier.

b. Port Pool

The area of the port pool owned by the Tanjung Priok branch II Indonesia port 424 Ha, includes:

• Nusantara Port I: 1448.20 M

• Pelabuhan Nusantara II: 1344.20 M

• Port I: 3077.20 M

• Port II: 1983 M

• Port III: 1040.60 M

• JICT II: 516,60 M

• JICT I: 1833.40 M

• Koja Container Terminal: 650 M

• Pertamina Special Pier: 100 M
• Bogasari Special Pier: 376.50 M
• Sarpindo Special Pier: 277 M
• Special Pier DKP: 304 M
• Car Terminal: 308 M
c. Warehouse
The capacity of 26.35 T / M2 with an area of 128,679.41 M2 is used to serve dangerous cargo bulk cargo and CFS warehouse (container freight station) at Tanjung Priok branch II Indonesia Port.
d. Stacking Field
The stacking field at the port of Indonesia II, Tanjung Priok Branch includes:
• Public square: 361,627.20 M2
• Container field: 156.7 Ha
• Field stacking for cars: 5 Ha
e. Passenger Terminal
The passenger terminal capacity can accommodate 5000 people with an area of 7,266 M2
f. Loading and unloading equipment
1) Container crane: 30 units
2) Transtainer: 94 units
3) Forklifts: 20 units
4) Top loader: 1 unit
5) Side loader: 1 unit
6) Truck and chassis: 215 units

A. Ship Data
To carry out its functions and duties in scouting services, the scout division prepares facilities and infrastructure for scouting facilities at Tanjung Priok Port which consist of:
1. tug boat
Class in tugboats:
a. Class A
Push and delay above 35 tons bollard pull, engine powered above 3600 DK.
b. Class B
Thrust and delay between 23-35 tons bollard pull, the engine is powered between 2600 to 3600 DK.
c. Class C
Push and delay above 12 to 24 tons bollard pull, engine powered above 800 to 2600 DK.

The vessel is used by Tanjung Priok Port to provide services to ships that have a length of more than 70 m which make a movement (movement) in mandatory guided waters, both those who will dock or leave the port, by holding, pushing and pulling. Guiding the ship is intended for the benefit of shipping safety considerations.
The following is a list of tugs operated by the Scout Division.

Table 2. List of tugs operated by the Scouting Division

No.	Name of Tugboat	Year	HP
1	TB. BIMA II	1987	2 X 1190
2	TB. BIMA III	1987	2 X 1190
3	TB. BIMA IX	1997	2 X 1200
4	TB. JAYAKARTA 1	2002	2 X 1200
5	TB. JAYAKARTA 2	2002	2 X 1200
6	TB. JAYAKARTA 3	2002	2 X 1600
7	TB. JAYAKARTA 4	2004	2 X 1200
8	TB. BIMA 034	2003	2 X 1600
9	TB. BIMA 035	2003	2 X 1600
10	TB. BESTWIN 88	2004	2 X 607
11	TB. SDS 36	2004	2 X 620
12	TB. ARJUNA I.206	2007	2 X 620
13	TB. ARJUNA II. 206	2007	2 X 620
14	TB. BATAVIA I.216	2011	2 X 1600
15	TB. BATAVIA II. 216	2011	2 X 1600

| 16 | TB. BATAVIA III 216 | 2012 | 2 X 1600 |
| 17 | TB. BATAVIA IV 216 | 2012 | 2 X 1600 |

2. Guide ships

The type of ship depends on the power of the ship which is currently grouped into 3 groups, namely:

a. Guided motor II with a power of 150 HP to 200 HP

b. Guide motor I with a power of 300 HP to 350 HP

c. A guide motor with a power of 600 HP to 800 HP

Table 3. List of guided ships operated by the Scouting Division

No.	Name of Guide Boat	Year	HP
1	MP. I-F.01	1995	2 X 255
2	MPC – 04	2001	2 X 255
3	MPC – 05	2002	2 X 255
4	MP II – 012	1980	1X 170
5	MP II – C. 01	1984	1X 255
6	MPA. C – 01	2010	2 X 255
7	MPA. C – 02	2010	2 X 255
8	MPW. AC – 01	2011	2 X 350
9	MPW. AC – 02	2011	2 X 350

3. Mooring Boat

The type of ship kepil based on its power is divided into two, namely by the power of 120 s / d 150 HP and 200 s / d 350 HP with a total ABK of 4 people

Table 4. List of Motorbike Motors operated by the Scouting Division

No.	Name of Mooring Boat	Year	HP
1	MK II – A 01	1991	1 X 105
2	MK II B 01	1990	1 X 70
3	MK II – C 01	1991	1 X 105
4	MK II – D 01	1997	1 X 115
5	MPS – 009	1989	1 X 115
6	MK – M - 01	2001	1 X 170
7	MK – M – 02	2010	1 X 175

The average number of tugboat services from departing to returning to the port can be seen as follows:

Table 5. The average number of tugboats departs and returns to base

No	Month	Guide Movement (X)
1	AGUSTUS 2017	2022
2	SEPTEMBER 2017	1971
3	OKTOBER 2017	2105
4	NOVEMBER 2017	1867
5	DESEMBER 2017	2015
6	JANUARI 2018	1899
7	FEBRUARI 2018	1692
8	MARET 2018	1815
9	APRIL 2018	2026
10	MEI 2018	1968
11	JUNI 2018	2091
12	JULI 2018	1997
13	AGUSTUS 2018	1973
	TOTAL ∑X	25441

B. Data Analysis
1. Variable Analysis X
To find out the number of ship guiding services in twelve months as a factor variable X, it can be analyzed with the following data:

T
able 6. Guided Movement Data (X) (August 2017 to August 2018)

MANDATORY AND AMAZING WATER	DELAY LOCATION	AMOUNT OF AVAILABLE AND BACK FROM / TO PANGKALAN
1	2	3
Tanjung Priok	Pangkalan I+II	

	Pangkalan II +	
	Buoy Barat	2 X 20 Menit
	Pangkalan IV	2 X 15 Menit
	DKP/Car	
	Terminal	2 X 30 Menit
	Bogasari /	2 X 30 Menit
	Pertamina	2 X 30 Menit
	TPK Koja	2 X 30 Menit
	Muara Karang/	2 X 60 Menit
	Muara Tawar	

2. Variable Analysis Y

To find out the number of ship visits within six months as Y factor variables, it can be analyzed as follows:

Table 7. Ship Visit Data (Y) (August 2017 to August 2018)

No	Month	Ship Visit (Y)
1	AGUSTUS 2017	2712
2	SEPTEMBER 2017	2562
3	OKTOBER 2017	2898
4	NOVEMBER 2017	2520
5	DESEMBER 2017	2582
6	JANUARI 2018	2445
7	FEBRUARI 2018	2291
8	MARET 2018	2436
9	APRIL 2018	2640
10	MEI 2018	2569
11	JUNI 2018	2640
12	JULI 2018	2575
13	AGUSTUS 2018	2508
	TOTAL $\sum Y$	33378

3. Analysis of Variables X and Y

To find out the strength of the relationship between scouting services and the flow of ship visits at PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch can be seen from the analysis table and calculation as follows:

Table 4.6

Table of Effects of Ship Guiding Services with Ship Visit Flow

at PT PERSERO Pelabuhan Indonesia II, Tanjung Priok Branch

(August 2017 to August 2018)

MONTH	X	Y	XY	X^2	Y^2
AGUSTUS 2017	2022	2712	5483664	4088484	7354944
SEPTEMBER 2017	1971	2562	5049702	3884841	6563844
OKTOBER 2017	2105	2898	6100290	4431025	8398404
NOVEMBER 2017	1867	2520	4704840	3485689	6350400
DESEMBER 2017	2015	2582	5202730	4060225	6666724
JANUARI 2018	1899	2445	4643055	3606201	5978025
FEBRUARI 2017	1692	2291	3876372	2862864	5248681
MARET 2018	1815	2436	4421340	3294225	5934096
APRIL 2018	2026	2640	5348640	4104676	6969600
MEI 2018	1968	2569	5055792	3873024	6599761
JUNI 2018	2091	2640	5520240	4372281	6969600
JULI 2018	1997	2575	5142275	3988009	6630625
AGUSTUS 2018	1973	2508	4948284	3892729	6290064
$\sum$	25441	33378	65497224	49944273	85954768

From the data contained in the table above, an analysis of the relationship between ship scouting services and the flow of ship visits at PT (PERSERO) Pelabuhan Indonesia II Tanjung Priok Branch was carried out by calculating

a. Correlation coefficient analysis

To find out the strength or weakness of the relationship between scouting services to ship visits at PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch can be seen using calculations using a correlation coefficient (r). If r is positive, then the variables X and Y are unidirectional, which means an increase or decrease in the value of Y, whereas if r is negative then the correlation of variables X and Y moves in the opposite direction. In order to obtain a correlation value, calculations are carried out using the following formula:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{n\sum X^2 - (\sum X)^2} \cdot \sqrt{n\sum Y^2 - (\sum Y)^2}}$$
$$= \frac{13(65497224) - (25441)(33378)}{\sqrt{13(49944273) - (25441)^2} \cdot \sqrt{13(85954768) - (33378)^2}}$$
$$= \frac{851463912 - 849169698}{\sqrt{649275549 - 647244481} \cdot \sqrt{1117411984 - 1114090884}}$$
$$= \frac{2294214}{\sqrt{2031068} \cdot \sqrt{3321100}}$$
$$= \frac{2294214}{1425,15 \cdot 1822,38}$$
$$= \frac{2294214}{2597165} = \mathbf{0,88}$$

From the calculation above, the correlation coefficient is 0.88, which means that there is a strong influence between scout services and the number of ship visits is positive and strong. With positive results, the relationship between scouting services and the number of ship visits, is unidirectional and can be interpreted if scouting services experience an increase or decrease, then it will be followed by an increase or decrease in the number of ship visits at PT (PERSERO) Tanjung Priok Port Indonesia II .

b. Determining coefficient analysis

To be able to know the size of the contribution of the variable variable X to the change in variable Y can be known, using the coefficient of determination (r^2):

KP = r^2 x 100%
       = $(0,88)^2$ x 100%
       = 0,77 x 100%
       = 77%

Based on the calculation obtained r2 value of 0.88 which means the contribution of guiding services to the number of ship visits is 77% while the remaining 23% is a contribution from other factors that are not accounted for by the author.

c. Simple Linear Regression Analysis

This analysis is used to determine the magnitude of the relationship between variables X and Y. To determine the strength of the effect caused by variable X on the Y variable and to predict the value of Y the author calculates it using the regression coefficient formula, namely:

$$b = \frac{n.(\sum XY) - (\sum X).(\sum Y)}{n.(\sum X^2) - (\sum X)^2}$$

$$b = \frac{13\,(65497224) - (25441).\,(33378)}{13\,.\,(49944273) - (25441)^2}$$

$$b = \frac{851463912 - 849169698}{649275549 - 647244481}$$

$$b = \frac{2294214}{2031068}$$

$$b = 1{,}12$$

$$a = \frac{\sum Y - b.(\sum X)}{n}$$

$$a = \frac{33378 - 1{,}12.\,(25441)}{13}$$

$$a = \frac{33378 - 28493{,}92}{13}$$

$$a = \frac{4884{,}08}{13}$$
$$a = 375{,}69$$

$$Y = a + bX$$
$$Y = 375{,}69 + 1{,}12X$$

Jika X = 0, maka $Y = 376{,}81$

Jika Y = 0, maka $0 = 376{,}81 + 1{,}12X$

$$X = \frac{-376{,}81}{1{,}12}$$
$$X = -336{,}43$$

d. Conduct a Hypothesis Test

The formula for finding t count is to enter the value r into the formula, the value of n (number of samples) is known to be 13 (thirteen), then compared to t table in

d. Conduct a Hypothesis Test

The formula for finding t count is to enter the value r into the formula, the value of n (number of samples) is known to be 13 (thirteen), then compared to t table in

$\alpha = 0{,}05$;df = n-2 is 1,812

$$t_0 = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

$$= \frac{0{,}88\sqrt{13-2}}{\sqrt{1-(0{,}88)^2}}$$

$$= \frac{0{,}88.\sqrt{11}}{\sqrt{1-0{,}77}}$$

$$= \frac{2{,}91}{0{,}47}$$

$$= \mathbf{6{,}2}$$

So from the hypothesis test t0> t table for 5% errors tested on two parties obtained 6.2> 1.812, then H0 is rejected while Ha is accepted. Hypothesis test results indicate the influence of scouting services with the number of ship visits.

From the results of the analysis of the relationship of ship piloting services to the number of ship visits at PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch by using correlation coefficient analysis shows the

value of r = 0.88. This proves that there is a very strong influence between ship guidance services on the number of ship visits at PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch. From the results of the determinant coefficient shows that the influence of ship scouting services on the number of ship visits at PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch amounting to 77%, the remaining 23% is the influence of other factors.

This analysis is also strengthened by testing hypotheses which get numbers where thitung (6.2) and ttabel (1,812), the conclusion is tcount> ttable or (6.2)> (1,812) so that Ho is rejected and Ha is accepted. This means that the relationship is significant and direct (positive) between ship piloting services to the number of ship visits at PT. Pelabuhan Indonesia II (PERSERO) Tanjung Priok Branch. The relationship is positive, so that if the ship guidanceserviceincrease

the number of ship visits is higher or better or vice versa if the guiding service falls or decreases, the number of ship visits is lower.

7. Solution to problem

Problem solving is a solution that can be used to solve problems. Therefore the Tanjung Priok Branch of PT Pelabuhan Indonesia II (PERSERO) and other related parties in determining problem solving, must first evaluate before determining how far the problem solving is. Every problem solving must also be evaluated in order to reach the best problem solution by trying one or more alternatives in different parts to see which alternatives are most effective in increasing scouting performance. In general, decision making will use knowledge, consideration, and experience to decide which alternative is best for solving existing problems. If the best alternative problem solving available has been chosen by the port and other related parties must make a plan to overcome the problems that may be faced when implementing alternative solutions to the problem through the proposed solution, and problem solving chosen by the author are:

1. Increased professionalism of guide human resources (HR), with the argument that guiding officers are the main implementers in the guiding process and are the initial performance of the good and bad quality of a port's service, so that the company should pay attention to matters that can increase productivity guiding staff work, such as the level of welfare of suitable guiding officers, improvement of appropriate formal and non-formal education and attention to occupational safety and health (K3) level of guiding officers.

2. Increasing scouting facilities and infrastructure such as pilot stations with navigation and communication equipment, tugboats, motorbikes and kepil boats to be ready at any time to operate with the hope that ships visiting the Tanjung Priok port will not experience delays in guiding.

3. The decline in the number of ship visits caused by lack of discipline of Human Resources, therefore the company must improve HR as follows:

a. Improve discipline of Pandu Officers

Discipline of guiding officers is caused by lack of responsibility in carrying out their duties. To improve the discipline of Pandu can be done in 2 ways:

1) Persuasive action, namely an action taken so that the guiding officer does not take actions that are less or undisciplined when working. The example in reality is: if a guide performs an undisciplined action in conducting scouting services, the guide must get a reprimand in the form of sanctions for violations committed.

2) Preventive actions, namely actions taken by the Scouting Division on guiding officers who have taken undisciplined actions at work. An example in life reality is that if the guide has violated the rules that have been made, the Division has the right to give a special warning to the guide by taking sanski actions such as making salary deductions, difficulties in promotion, or most fatal is to stop the guide.

8. Conclusions and suggestions

A. CONCLUSION

From the results of analysis and problem solving that has been described by the author regarding the effect of ship piloting services on the number of ship visits at PT. Indonesian Port (PERSERO) II Tanjung Priok Branch, the authors can draw conclusions as follows:

1. There is a very strong influence between ship guidance services on the number of ship visits at PT. Indonesian Port (PERSERO) II Tanjung Priok Branch.

2. There is an influence on the performance of ship scouting services with an increase in ship visits at Tanjung Priok Port.

The correlation coefficient analysis was 0.88 which is a very strong influence between the guiding services on ship visits is positive. With positive results, the relationship between scouting services and boat visits is in the same direction. The determining coefficient of 77% is the guiding service contribution to the number of ship visits.

A deficiency of 23% is a contribution from other factors. From the results of the hypothesis t0> t table the results are 12.6> 1,812, then H0 is rejected while Ha is accepted.

Thus the performance of scouting services has an effect on ship visits, so it is concluded that if scouting services decrease, the number of ship visits also decreases and if scouting services increase, the number of ship visits will also increase.

B. SUGGESTIONS

Based on the results of the conclusions above, the authors try to provide suggestions that can be used as input for managers, namely PT. The Port of Indonesia (PERSERO) II Branch of Tanjung Priok at the scouting service by supporting the ship's in and out flow is as follows:

1. Perform repairs and maintenance of use guiding facilities and infrastructure.

improve scouting services at PT. Indonesian Port (PERSERO) II Tanjung Priok Branch

2. Add tugs to improve scouting services.

3. Increasing discipline of guide officers for smooth guidance so that the ship scouting services can be handled maximally at PT. Indonesian Port (PERSERO) II, Priok Branch.

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