Changes to Ship Passenger Terminal Circulation Flow to Streamline Activities at Tanjung Priok Passenger Terminal

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Abstract

Sea transportation is a means of transportation that is in great demand by various groups of people in Indonesia. This is, of course, inseparable from the geography of this country, which consists of various islands and is dominated by the ocean, which makes sea transportation quite effective. The port itself is a supporting infrastructure in the process of sea transportation flows and is an important node in the circulation of goods as well as passengers (humans). In its service, the port certainly has basic and supporting facilities. The passenger terminal is one of the facilities with various activities regarding the arrival and departure of ships. The circulation that occurs in the flow of embarkation and disembarkation activities at ports is an important component that must be planned properly and clearly so that the impact that will be felt later is good, smooth, and orderly port services. Therefore, aspects of circulation and facilities at the port passenger terminal that function as support for passenger circulation must be able to fully support it and be efficient and effective. If the opposite happens, then it is not impossible that there will be irregularities that cause inconvenience to the passengers. Thus, changing the flow of passenger circulation is one way to overcome it, as is being pursued by the Port of Tanjung Priok. This study aims to determine the causes of changes to the flow of passenger circulation at Tanjung Priok Port and to measure passenger satisfaction with the port passenger terminal facilities as a support for the flow process. The research method used is descriptive analysis with a qualitative quantitative approach through direct observation, interviews, and questionnaires with passengers and related people at Tanjung Priok Port.

Keywords: harbor; facility, passenger terminal, circulation aspect.

A. INTRODUCTION

Sea transportation is a means that is still the prima donna for the wider community in its function as a sea transportation service to transport passengers, goods, and animals with very large capacities. In view of the geographical location of the State of Indonesia, which is an archipelagic country separated by seas, sea transportation requires adequate facilities and infrastructure so that the functions of sea transportation can run optimally and the objectives of sea transportation for the people of Indonesia can be fulfilled.

The port as a sea transportation infrastructure plays an important role in the continuity of the provision of port services for the wider community as a target for the running of the business within it. This is in line with the opinion of the expert, namely, that a port is a place consisting of land and waters around it with certain boundaries as a place for government activities and economic activities used as a place for ships to lean on, anchor, board passengers, and/or load and unload goods equipped with shipping safety

facilities and port support activities, as well as a place for intra- and inter-modal transfers of transportation (Suyono, 2007).

Pelabuhan Indonesia II (Persero) Tanjung Priok Branch is one of the port work units under the auspices of the Ministry of Transportation of the Republic of Indonesia for operational management and port development in the Jakarta area. This port is also the largest and busiest port in Indonesia, and it is located in North Jakarta. Especially at the passenger terminal at the Port of Tanjung Priok, which plays an important role as infrastructure in the operation of sea transportation to deliver passengers in the Jabodetabek area and its surroundings, In a sense, the passenger terminal is the main component in the sub-system at the port as a container for the process of passenger movement activities from one passenger shipping sea transportation system to another transportation facility or vice versa (Marlok, 1991; Haronjeff, 1993; Andiani, 2011).

The Tanjung Priok passenger terminal serves all types of passenger shipping connecting Jakarta with domestic and international destinations with 8 ships to sail in the Indonesian region, 6 ships for the eastern region, and 6 ships for the western region. As for the pier itself, at Tanjung Priok Port, the passenger terminal area has 2 piers, namely piers 106 and 107, through Nusantara 1 and Nusantara 2 terminals. The availability of facilities or components at the passenger terminal which will later be used and felt by passengers should generate a sense of comfort. as a component in service at the passenger terminal. According to Andiani (2011), the components of the passenger terminal consist of the dimensions of the pier, the pier area, the pier facilities, the terminal building and the public service area.

Good service will be felt by passengers if the facilities at the Tanjung Priok passenger terminal can create a smooth, effective flow of passenger circulation and without congestion in embarkation and disembarkation activities for passengers. Embarkation and debarkation are the departure and disembarkation of passengers by ship which are carried out from predetermined places to their destination (W.J.S Poerwarda Minta, 1993). However, at the Tanjung Priok passenger terminal in the determination of places in the passenger embarkation and debarkation routes, it was found that there was a change or rearrangement in the routes therein. This is continuous with the successful functioning of the facilities available at the terminal Tanjung Priok passengers as a support or component in the passage of passenger embarkation and disembarkation routes.

Based on the things that have been explained above, this study aims to find out the causes of changes or rearrangements in passenger traffic and to measure the success of the functions of the facilities available at the passenger terminal aimed at passengers or respondents who have experience using passenger shipping services at the Tanjung Priok passenger terminal port as an indicator of the success of the facilities felt by passengers after the change in passenger flow was made.

B. METHOD

This research was conducted at the Tanjung Priok branch of the Port of Indonesia II (Persero) section of the passenger terminal. This method is carried out to determine the causes of changes in passenger flow and the successful function of supporting facilities for embarkation and disembarkation routes through the level of passenger satisfaction. The research method is a step used to collect information or data needed for research. The research method used for making this journal uses a mixed approach, or a combination of qualitative and quantitative methods with descriptive methods, with the aim of better

understanding the research problem by combining qualitative data in the form of descriptive details and quantitative data in the form of numbers. According to Creswell (2019), mixed research methods are a combination of qualitative and quantitative research methods that include a philosophical foundation, the use of qualitative and quantitative approaches, and the combining of the two approaches in research.

Data Collection Techniques

1. Observation

Observation is a way to collect data through direct observation. According to Widoyoko (2014: 46), observation is the activity of observing and systematically recording something that appears in the form of an object of research. According to Riyanto (2010: 96), observation is a way to collect data by observing directly or indirectly. Observations made in this study were made by observing every activity regarding passenger traffic at the Tanjung Priok Port terminal.

2. Interview

An interview is an activity between two or more people carried out by an interviewer and a source with the aim of obtaining data and used as a source of data collection. According to Lexy Moloeng (2000: 186), when conducting interviews, one must remain focused on the problem being studied. Therefore, researchers are often active in questioning the issues being discussed with informants in seeking information regarding the causes of changes in circulation flow at the Tanjung Priok Port passenger terminal.

3. Documentation

According to Sukmadinata (2007:221), documentation is a method for collecting data by analyzing written documents, images, or electronics. The purpose of the documentation is to add the necessary information and data related to the research object. This documentation is also used as an attachment.

4. Study literature

Literature study is a method in research that aims to complete tasks by collecting data from books, journals, and other literary sources. According to Darmadi (2011) to search for literature studies that will be used must first determine the research topic and problem formulation. Where this literature study is used to help collect data during the field. Therefore researchers are looking for other sources as additional data to assist this research.

5. Questionnaire distribution

According to Narbuko and Achmadi (1999), a questionnaire is a number of arrangements of questions related to problems or matters relating to the object of the research being studied. The distribution of questionnaires was carried out with the aim of analyzing the advantages and satisfaction related to the embarkation facilities at the Tanjung Priok passenger port.

Research variable

Based on one of the objectives of this study, namely measuring passenger satisfaction with facilities and services at the Tanjung Priok Passenger Terminal, the researchers grouped several variables regarding comfort, feasibility, safety, and efficiency. The following are the variables and indicators used in this study.

Table 1. Research Variables

Variable	Dimensions	Indicator	No. Instrument
Comfort	The waiting room Medical room	1. Adequate within the limit of shelter 2. Health and service checks	1,2
Qualifications	Garbarata Escalator	1. Assist with passenger crossings 2. Facilitate the movement of passengers	3,4
Security	WTD (Walk Through Detector) X-Ray	1. Good at dealing with risks 2. Guarantee the safety of prohibited items	5,6
Efficiency	Print Tickets Boarding Pass	1. Officer services in ticketing 2. No accumulation	7,8

Population and Sample

The technique used in sampling was carried out in random stages (random multistage) in two stages. The first stage is the daily passenger ship within 1 month since the research was conducted (in May). Then the second stage is the sample obtained in the first stage, which is taken randomly with reference to opinions Slovin (Umar, 2005). The formula for this data collection technique is:

$$n = N1 + (Ne2)$$

Information:

N = population size
n = sample size
e = the percentage of inaccuracy due to sampling errors that can still be tolerated in the study 10%

Sample size:

a. The number of ship passengers at Tanjung Priok Port is 109 people (first stage)
b. The number who met the second level was 42 people

$$n = 421 + (42(0,12)) = 29,5$$

So, the sample passengers in this study were as many as 30 respondents

Data Processing and Analysis Methods

1. Data Validity Test

Validity test is used to measure the validity or validity of a questionnaire (Imam Ghozali, 2013). The questionnaire is said to be valid if the questions on the questionnaire can reveal something that will be measured by the questionnaire.

This validity test measurement can be tested by comparing the value of r count with r table with the terms degree of freedom (df) = n-2. n is the number of samples with (alpa) = 5%, the following are the criteria for assessing the validity of the data:

a. If r count is greater (>) r table, then the items in the questionnaire can be said to be valid
b. If r count is smaller (<) r table, then the items in the questionnaire can be said to be invalid

2. Data Reliability Test

A reliability test is an index that shows the extent to which a measuring instrument is reliable and consistent if the measurement is carried out more than once on the same symptoms and shows the same results even though it is used many times by different researchers. This measurement uses the Cornbach Alpha method in Excel with the following test criteria:

a. If the Alpha value is greater (>) 0.6 it means the statement is reliable
b. If the Alpha value is smaller (<) it means the statement is not reliable

Likert scale

The scale used for this measurement is the Likert scale, which is a tool for measuring the opinions and attitudes of a person or group of people about a phenomenon that occurs. The Likert scale is used as an indicator in the form of instrument items obtained from statements or questions to be further measured by the Likert rating scale, which has four levels of preference for answers, each of which is given a weight of 1-4.

Table 2. Likert Scale

Index Numbers	Interpretation
0% - 24,99%	Strongly agree
25% - 49,99%	Agree
50% - 74,99%	Disagree
75% - 100%	Don't agree

C. RESULTS AND DISCUSSION

1. Causes of Flow Changes in Passenger Departures at Tanjung Priok Passenger Terminal

As a port that also serves passenger shipping services, the existence of a passenger terminal and supporting facilities in it affect the continuity of the passenger flow process. The situation that must be created is the flow of embarkation and disembarkation passengers, which can run smoothly and effectively without any disturbances or inconveniences. felt by passengers.

Based on the results of interviews and joint presentations with related parties at the Tanjung Priok passenger terminal, it was said that the flow of prospective ship passengers when they wanted to use shipping services was not much different from that of prospective passengers who wanted to use aircraft flight services. Starting from buying tickets online or purchasing them directly to boarding the mode of transportation you want to use. The following are several stages in detail in the flow of circulation of prospective ship passengers at the Tanjung Priok passenger terminal, which include embarkation and disembarkation:

a. Embarkation Service Flow

In the process of embarkation, prospective passengers must follow the implementation procedures in accordance with the stages determined by the port. The procedures for carrying out the flow of embarkation for prospective passengers are as follows:

1) Prospective passengers buy tickets online or offline (buy directly at the counter available at the passenger terminal
2) Verify travel requirements documents and print tickets
3) Examination via X-Ray
4) Medical examination
5) Boarding di counter DCS
6) Taping the ticket through the tripod turnssteel door
7) Enter the embarkation room
8) Entering the garbarata facility
9) Entering the ship by aerobridge

b. Debarkation Service Flow

As with embarkation, in the flow of debarkation, implementation must also follow the implementation procedure in accordance with the stages determined by the port. The following is the procedure for carrying out passenger debarkation:

1) Passengers get off the ship through the aisle garbarata
2) Passengers get off via the travelator
3) Medical examination
4) Passengers enter the debarkation room
5) Examination via X-Ray
6) Passengers exit the debarkation room

In the passenger flow process, even though it is in accordance with established procedures, in reality what is happening in the field is that there are obstacles faced by the

passenger terminal in managing the flow of passenger circulation so that it is always smooth, efficient, and without any congestion or accumulation in terms of passengers. However, it turned out that it was not only the flow of passengers that experienced problems; several problems were also found in several facilities that affected passenger comfort. The constraints found are as follows:

a) **The passenger waiting room is occupied more by passengers' belongings than the passengers themselves**

One of the places that becomes the infrastructure for passengers waiting for the departure of the ship they want to board is the waiting room. It is a hall-like room that separates the outside of the passenger port terminal from the pier where the ship will later moor. It does not function optimally because the seats that should be intended for passengers are instead used to store excess goods from passengers. The escorts who also helped carry the passengers' belongings also entered the waiting room, and this caused the passengers or other delivery people to jostle each other and disturb the comfort.

b) **Turn Steel Tripod/Autogate which is in the passenger terminal building causes a separation in advance between passengers and deliverymen**

Due to facilities Turn the steel tripod or autogate As a stage of passenger flow before entering the embarkation room, where passengers will later board the ship using the garbarata inside, passengers often accumulate due to pre-screening between passengers and escorts so that the embarkation room is sterile from someone who does not have a ticket or stowaway. and in this case, the cases that often occur are those of the deliverymen who help carry the passengers' goods. This is also inseparable from disputes and arguments between the delivery person and the security officer who checks the individual delivery person on the passenger queue line for several reasons. For example, if the delivery person enters inside, there is no description of the passenger's goods, which have been checked and marked by the officer and include the weight of the goods, the owner of the goods, and others as a sign that the goods really belong to the passenger.

The existence of the problems above requires parties from the Tanjung Priok passenger terminal to provide solutions to these two problems so that the holding terminal also makes improvements, namely in the form of changes to the passenger circulation flow, especially for the embarkation flow process. This change is in embarkation stage point no. 6, namely, taping tickets through the doorturn steel tripod. At this stage, which was originally carried out after several stages until it reached the stage of boarding at the DCS counter before finally going to the ticket taping level, it was transferred to the initial level, or the level that prospective passengers will pass through for the first time.

The transfer of ticket taping to the one that is at the earliest stage that will be passed by passengers is a solution to two main problems that occur at the passenger terminal at the same time. This is because the two problems are interrelated, and flow changes at the ticket taping stage are the key to solving them. The reasons why moving the taping stage is a solution so that it is moved at an early stage are as follows:

a) **Can reduce the buildup of queues and the risk of stowaways or passengers without tickets.** Ticket taping is a stage in the flow of passengers together with an escort who will later help carry goods to the waiting room or embarkation. This, of course, causes a buildup of queues and the possibility of an escort coming on board, who may become a stowaway on the departing ship later.

b) **Reducing pressure and discomfort in the passenger waiting area.** Due to the close proximity of the passenger stage to tap the ticket with the passenger waiting room, this makes it easier for the delivery person to meet the needs of helping carry the passenger's luggage. However, this actually causes pressure between passengers which ultimately creates a feeling of discomfort while in the waiting room. As a substitute for delivery people who help carry goods, the passenger terminal itself provides workers or official officers who also assist in carrying passenger goods.

After knowing the cause of an obstacle that requires the Tanjung Priok passenger terminal to change the flow of passenger circulation at the tapping ticket stage, the next step is to recapitulate the respondents' answers on measuring the success of the function of supporting facilities for passenger flow at the level of efficiency, safety, comfort, and feasibility.

2. Measurement of Passenger Satisfaction in Services of Facilities at Tanjung Priok Passenger Terminal

The results of the recapitulation of respondents' answers regarding passenger satisfaction with the level of comfort, feasibility, safety and efficiency of the passenger terminal are presented in the following table.

Table 3. Opinion on the Level of Satisfaction of Tanjung Priok Passenger Terminal

No.	Indicator	Mark	Interpretation
1.	In my opinion, the waiting room at the Tanjung Priok passenger terminal can accommodate waiting passengers	2,67	Agree
2.	In my opinion, the health check has been good in serving pe health requirements	3,00	Strongly agree
3.	With the garbarata very helpful in crossing for the passengers	3,17	Strongly agree
4.	With the escalator can facilitate and speed up the movement of passengers	2,97	Agree
5.	The WTD facility is quite safe in tackling the risk of metal-prohibited goods	2,93	Agree
6.	The X-Ray facility is functioning properly so that security can be guaranteed against prohibited items	2,90	Agree
7.	In my opinion, the service of the clerk in helping to print tickets was good	2,83	Agree
8.	In my opinion, the boarding pass stage has been running smoothly without any buildup	2,90	Strongly agree
	Amount	23,37	

Average interpretation	2,92	Agree

Opinions in the form of statements regarding the facilities and services of the Tanjung Priok Passenger Terminal were given to respondents, and the average interpretation of the satisfaction level obtained was 2.92, so based on the Likert scale index number, this acquisition indicated the result of the customer satisfaction level "Agree", which means passengers have felt satisfied with the facilities and services available at the Tanjung Priok Passenger Terminal. Passenger satisfaction with these facilities and services includes tools that are directly related to the passenger flow process, and of course, it is felt directly by the passengers themselves.

This shows that the facilities and services provided by the Tanjung Priok Passenger Terminal are good and function optimally in handling and serving passengers using shipping and crossing services at the Tanjung Priok Passenger Terminal. Therefore, the services and facilities available there do not require significant changes regarding services, but supervision, monitoring, and checking must still be carried out periodically in order to reduce or even reach the stage of preventing bad things that can later occur and cause losses. both in terms of passengers and the port.

a. Validity and Reliability Test Results

Table 4. Validity Test

Variable	R count	R table	Information
Tickets	0,422	0,361	Valid
Boarding	0,829	0,361	Valid
WTD	0,661	0,361	Valid
X-ray	0,098	0,361	Invalid
The waiting room	0,535	0,361	Valid
Health	0,515	0,361	Valid
Garbarata	0,611	0,361	Valid
Escalator	0,579	0,361	Valid

Table 5. Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.629	8

D. CONCLUSION

Changes that occur in the flow of passenger circulation at the Tanjung Priok Passenger Terminal are caused by two main factors: the function of the supporting facilities available there and the presence of freelance workers, namely, delivery people carrying passenger goods. If you look at the reality on the ground, this can cause inconvenience, a buildup of queues, and conditions that are not conducive. These two things are certainly very related, so efforts are made to change the flow of passenger circulation there to create comfort that passengers will feel.

Convenience is one of the elements of the level of passenger satisfaction, which is measured through the distribution of questionnaires as a reference in the formulation of the results of the level of success. The questionnaire contains statements regarding the services

and functions of the facilities there, with four discussion variables: convenience, feasibility, safety, and efficiency. The results show that the level of passenger satisfaction is on a scale of 4, namely "Agree" with a score of 2,92 This indicates that there is no need for significant and urgent changes in service improvement and the function of the facilities that will be felt by passengers.

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