

Analysis Of The Influence Of Port Business Management By PT. Pelabuhan Cilegon Mandiri On The Satisfaction And Loyalty Of Vessel Service Users In Banten Port

Ariel Vicrihadi^{1*}, Agus Kurniawan², Eko Didik Harnoko³, Idham Maulana⁴

^{1,2,3,4} College of Maritime Science, Jakarta, Indonesia

*Corresponding Author:

Email: arielvicri@gmail.com

Abstract.

There are more than 30 port potential industrial ports which are directed to be developed and advanced, so the Banten Provincial government formed a Regional Company or Regional Owned Enterprise (BUMD), namely PD. PCM which is now PT. Cilegon Mandiri Port which has the main task of providing management and services in the field of ship guidance and towing. This research aims to determine and develop the influence of the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users through customer satisfaction at the Port of Banten. The research strategy used in this research is quantitative with an explanatory research approach. The research sample was 108 service users at Banten Port. The analytical tool used by SEMPLS with SmartPLS is to answer the problem formulation. The results of the research show that there is a significant positive influence of the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the satisfaction of ship service users. There is a significant positive influence of the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users. There is a significant positive influence on customer satisfaction. on the loyalty of ship service users, satisfaction of ship service users is able to mediate the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users at Banten Port. It can be concluded that both directly and indirectly, there is an influence of the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users through satisfaction at the Port of Banten.

Keywords : Satisfaction of ship service users, Loyalty of ship service users and PT. Pelabuhan Cilegon Mandiri.

I. INTRODUCTION


Ports are key infrastructure in international trade, and in line with the increasingly advanced development of the business world today, such as port services related to the maritime era launched by the President of the Republic of Indonesia Joko Widodo. Namely, he wants to make Indonesia the world's maritime axis, including port management. Since the enactment of Shipping Law no. 17 of 2008, provides a direct opportunity for Regional Governments to play an active role in the world of shipping. With this law, it is hoped that the Indonesian nation, which has thousands of islands spread throughout the archipelago, can be navigable by ships and of course will need port facilities. The low quality of service at the port cannot be separated from the errors of the port management system which is centralized, monopolistic and inefficient. The government's role, which should be as a regulator, is in reality still colored by the interests of one business entity (PT Pelindo). This confusion of functions has stalled port development and hampered efforts to create a healthy business competition climate. Therefore, port deregulation that is accommodative and leads to the restructuring of the port structure should be the main consideration for improving port management in Indonesia. Deregulation and restructuring of the port structure must be directed at creating a climate of healthy business competition in economic operations at ports so that it can attract investors, both foreign and domestic, to invest their capital in Indonesia. Thus, the Banten Provincial Government, in order to maximize revenue from Port Service Tariffs, needs to collaborate with related agencies, in this case PT. PCM to provide docks and shipping facilities. A climate of healthy business competition will be able to create modern and globally competitive port services.

The influx of investment will lead to the modernization of port facilities and increase the quality of port service performance as well as providing a chain effect (multiplier effect) in other sectors, so that hopes of higher national economic growth can be achieved. The Banten region is one of the economic supporting regions of Jabotabek, which has 8 industrial areas concentrating on processing food, animal feed, chemicals and the steel industry and their derivative products. Banten Port is supported by 9 Public Terminals, 1 Ferry

Terminal and 59 Terminals for Own Use (TUKS). The port in Banten province has a natural depth of between 6 – 20 meters, so it can handle ships up to 170,000 DWT. One of the areas in Banten Province is Banten Harbor. Geographically, it is located on the east coast of the Sunda Strait and is a strategic location where this location is between the continents of Asia and Australia, and is part of the international trade route that passes through the Sunda Strait, the Indonesian Ocean and the South China Sea. Banten Province has a natural landscape that supports regional development, especially in terms of marine potential with a coastline of \pm 25 km and a physical beach that is very supportive of port development. The advantage is that the natural depth of the sea is an average of more than 15 meters and the level of shallowing of the coast is small, thereby reducing the costs of building and maintaining ports to relatively small levels.

Port potential there are more than 30 industrial ports which are directed to be developed and advanced, so the Banten Provincial government formed a Regional Company or Regional Owned Enterprise (BUMD), namely PD. PCM which is now PT. Cilegon Mandiri Port which has the main task of providing management and services in the field of ship guidance and towing. Ports are one of the infrastructures that can support the national logistics system in Indonesia because it is an archipelagic country (BPS, 2019; Achmadi & Alwi, 2020). The existence of ports can also support economic growth in Indonesia and to date there are 223 Port Business Entities (BUP) registered with the Directorate General of Sea Transportation, Ministry of Transportation. Of the total number of BUPs, they consist of the Association of Indonesian Port Business Entities (ASBUPI), the Association of Indonesian Port Business Entities (ABUPI), and non-ASBUPI/ABUPI. (Ministry of Transportation, 2023). ASBUPI has 12 members and 4 BUPs have made 12 concessions, while ABUPI has 67 members and 5 BUPs have made 9 concessions. Apart from that, Non-ASBUPI/ABUPI has 144 BUP members and only 1 BUP has made concessions (Samawati, 2021). Port Business Entity is a business entity whose business activities are specifically in the field of operating terminals and other port facilities. A port based on Government Regulation Number 61 of 2009 concerning Ports is a place consisting of land and/or waters with certain boundaries as a place for government activities and business activities which are used as a place for ships to dock, boarding and disembarking passengers, and/or loading and unloading of goods, in the form of a terminal and ship berth equipped with shipping safety and security facilities and port supporting activities as well as a place for intra- and inter-mode transportation transfers. The following is data on ship services:

Table 1.1.

 **PT. PELABUHAN CILEGON MANDIRI**
PELAYANAN BUP BANTEN INTERNASIONAL DAN DOMESTIK WILAYAH SELATAN 2023

No.	TUKS	Bendera	Tahun 2023						Total
			Jan	Feb	Mar	Apr	Mei	Jun	
1	PELINDO	INTERNASIONAL	41	37	47	38	48	43	254
		DOMESTIK	164	195	186	204	211	220	1.180
2	KBS	INTERNASIONAL	44	30	32	37	38	50	231
		DOMESTIK	19	19	32	50	22	17	159
3	PCM	INTERNASIONAL	58	60	70	54	65	59	366
		DOMESTIK	20	19	24	47	46	49	205
TOTAL		INTERNASIONAL						851	
		DOMESTIK						1.544	

Source: PT. Cilegon Mandiri Harbor (2023)

With a growth in the number of ships of 5% per year, by 2027 24 tugboats will be needed at Banten Port. PCM needs to increase the number of at least 4 tugboat units to maintain its market share and service quality. The following are the results of the SWOT analysis in PCM as follows:

2020. Cost of goods sold generally increases from year to year. PT PCM's gross profit in 2021 fell 18.98% from 2020. Operating expenses generally increased from year to year. Operating Profit generally fell from year to year. Net Profit generally fell from year to year. Operationally, PT PCM experienced a decline

in financial performance In terms of percentage of movements, the comparison of foreign vs. domestic ships in 2019-2022 is around 14% -28%, but in terms of revenue contribution, it only contributes 4% of total revenue. Perception of ship movement generally uses vessel movement calculations. However, to get an accurate analysis for calculating operational costs, it is necessary to carry out a Movement Analysis per Tugboat. The most productive ship is the Martha Venture which contributes 44% of total movements. There is a tendency to maximize chartered vessels (Martha Venture, Martha Green) in anticipation of cost efficiency in repairing one's own vessels (Mt. Batur, Mt. Santri, Mt. Cipala) because the ships are relatively old (>15 years).

In connection with the problems or phenomena that exist above the initial observations and observations made by the researcher, the researcher saw that there were several problems in the provision of public services by the Port Business Entity as the operator at the terminal. 1. It is suspected that there is still a lack of provision of public services in the facilities and infrastructure carried out or provided by Port Business Entity operators as service delivery officers at the terminal. Not yet in accordance with existing regulations, especially within the limits of the author's title, namely in the Regulation of the Minister of Transportation of the Republic of Indonesia No PM 37 of 2015 concerning Sea Transport Passenger Service Standards. 2. It is suspected that there are still limited facilities needed by port officers in providing services to the community as port service users, and location limitations in the port environment are also still narrow. As for the research gap in previous research by (Mulatsih et.al., 2018) found that there was a positive and significant influence between the loading and unloading service speed variable on customer satisfaction, loading and unloading facilities/equipment factors on customer satisfaction, and officer concern (empathy) on customer satisfaction. Research (Han, 2018) shows that customer integration has an important influence on quality performance. Additionally, cost performance has a positive impact on vessel calls and cargo throughput. Based on research phenomena and research gaps, researchers are interested in discussing a thesis entitled **"ANALYSIS OF THE INFLUENCE OF PORT BUSINESS MANAGEMENT BY PT PELABUHAN CILEGON MANDIRI ON THE SATISFACTION AND LOYALTY OF VESSEL SERVICE USERS IN BANTEN PORT"**

II. LITERATURE REVIEW

2.1. Customer loyalty

According to Mowen & Minor (2005), loyalty can be explained as a situation where customers show a positive attitude towards a brand, have an attachment to the brand, and have the intention to continue buying the product in the future. Consumer loyalty is consumer loyalty to shopping for a particular product (Utami, 2017).

2.2. Customer satisfaction

Customer satisfaction or dissatisfaction is the customer's response to evaluating the perceived discrepancy between previous expectations and the actual performance of the product that is felt after using it. Tjiptono (2012: 24). In principle, there are 3 keys to providing customer satisfaction, namely: the ability to understand customer needs and desires (including understanding customer types); developing an accurate database of customers (including the needs and wants of each customer segment); and the use of information obtained from market research within a strategic marketing framework. To maintain customer satisfaction, service organizations must do 4 things, namely identifying each customer, understanding the level of customer expectations for loading and unloading facilities, understanding the strategy of customer loading and unloading facilities, and understanding the measurement and feedback cycle of customer satisfaction.

2.3. Port Business Entity

Port Business Entities can be used to determine the level of port service to port users (ships and goods) which depends on the ship's service time while at the port. A high port business entity shows that the port can provide good services (Triatmodjo, 2017). Port business entities can be evaluated from the viewpoint of technical efficiency, cost efficiency and effectiveness. Talley (2007), said that effectiveness is related to how well port business entities can provide goods flow services to users of shipping companies or expeditions.

2.4. Framework

Based on the problem formulation in this research, it can be outlined in a conceptual framework as in the image.

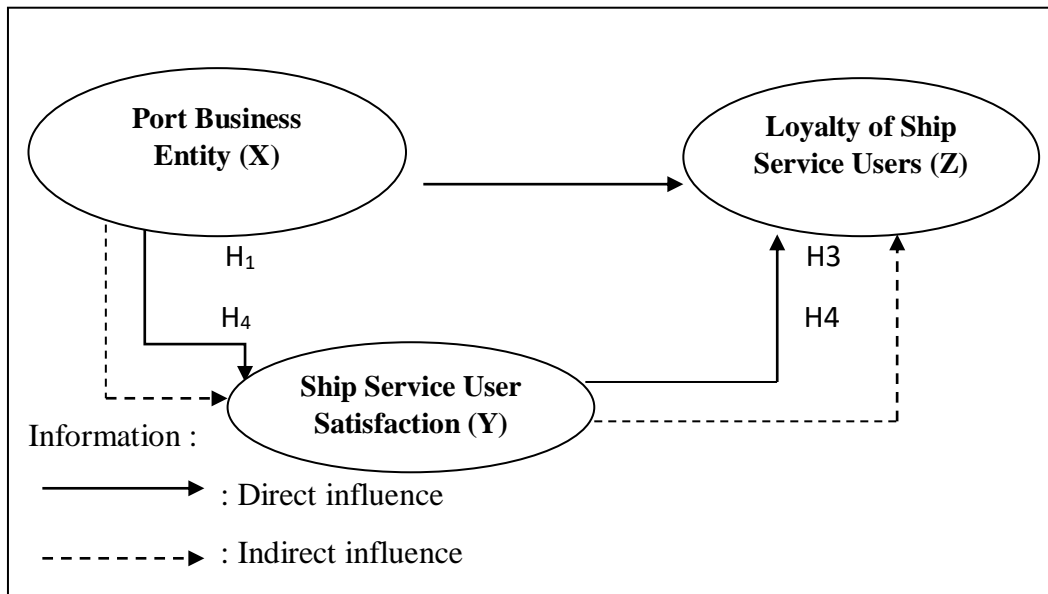


Fig 2.1. Conceptual Framework

2.5. Hypothesis

Based on the framework above, the research hypothesis can be formulated as follows:

- H1 It is suspected that there is an influence of Port Business Entities on the satisfaction of ship service users at Banten Port which is managed by PT Pelabuhan Cilegon Mandiri
- H2 It is suspected that there is an influence of Port Business Entities on the loyalty of ship service users at Banten Port which is managed by PT Pelabuhan Cilegon Mandiri
- H3 It is suspected that there is an influence of customer satisfaction on the loyalty of ship service users at Banten Port which is managed by PT Pelabuhan Cilegon Mandiri
- H4 It is suspected that there is an influence of Port Business Entities on the loyalty of ship service users through satisfaction at the Port of Banten which is managed by PT Pelabuhan Cilegon Mandiri

III. METHODS

3.1. Design Study

Sugiyono (2017:2) said that research methods are basically scientific characteristics for obtaining data with certain purposes and uses. The method used in the quantitative approach. The research approach in this thesis uses a quantitative research approach, as stated (Sugiyono 2017: 8) that quantitative research methods are defined as research methods that are based on the philosophy of positivism, used to research certain populations or samples, collect data using research instruments, analyze data quantitative/statistical in nature, with the aim of identifying predetermined hypotension.

3.2. Population and Sample

Population is the scope or magnitude of the characteristics of all objects studied. One definition of population was conveyed by Sugiyono. Sugiyono (2019: 130) states that population is a generalized area consisting of objects/subjects that have certain qualities and characteristics that are determined by a researcher to be used for study so that conclusions can then be drawn for the final results. Based on data obtained at the Port of Banten which is managed by PT Pelabuhan Cilegon Mandiri Jakarta Branch where in January - July 2023 the population used in this research was 36 companies with 3 people taken from each company, consisting of leaders, supervisors and field (operational)) at Banten Harbor which is managed by PT Pelabuhan Cilegon Mandiri. The sampling technique used in this research was obtained using a nonprobability sampling technique with saturated sampling. I used this sampling technique because the

population was 108 service users/companies at Banten Port which is managed by PT Pelabuhan Cilegon Mandiri. According to Riduwan (2016: 64), "saturated sampling is a sampling technique when the entire population is used as a sample and is also known as a census". So saturated sampling was carried out with a sample of 108 service users/companies at the Port of Banten which is managed by PT Pelabuhan Cilegon Mandiri

3.3. Data Processing and Data Analysis Techniques

Researchers used data analysis in the form of descriptive data analysis using Smart PLS software. version 4.0. Researchers chose to use this software so that calculation results could be obtained better and more easily.

3.3.1. Descriptive statistics

Descriptive statistics are statistics used to describe and explain data collected from a phenomenon. Descriptive statistics are used to provide information without making general conclusions or generalizations. In this research, descriptive statistical analysis is used to explain the characteristics of the research variables. (Sekaran & Bougie, 2016).

3.3.2. Inferential statistics

Inferential statistics has the aim of drawing conclusions about data through a more general analysis of the population by analyzing data samples. Data conclusions were analyzed through the relationship between two variables, differences in variables between subgroups and explaining the relationship between the independent variable and the dependent variable (Sekaran & Bougie, 2016). There are 2 types of inferential statistics, namely statistics parametric and non statistical parametric. Statistics Parametrics are used to analyze data on a ratio and interval scale, as well as paying attention to whether the data is distributed normally or not. Non-parametric statistics is used to analyze data on an ordinal scale or nominal scale, and does not use statistical parameters (mean, median, mode) as a reference (Sekaran, 2016).

3.3.2.1. Partial Least Square (PLS) - Structural Equation Modeling (SEM)

Structural Equation Modelling(SEM) is a hybrid statistical technique used in testing statistical models in the form of causal models, where this technique is confirmatory rather than explanatory (Sarwono Y., 2010). These techniques include factor analysis, path analysis, and regression. SEM is a statistical technique that analyzes the relationship patterns between latent constructs and each other, by measuring based on dimensional constructs, to determine the existence of reciprocal relationships (Sugiarto, 2017).

3.3.2.2. Evaluation of Measurement Models

Evaluation of the measurement model (outer model) is carried out to describe the relationship between dimensions and latent variables. This model is used to test the validity of the structure and reliability of the equipment. The validity test is carried out to determine the ability of the research tool to measure what it wants to measure, while the reliability test is carried out to measure the consistency of the dimensions of the concept and the consistency used to measure the degree. Respondents answer questions about the survey.

The criteria for measuring and assessing the external model are through 4 criteria, namely convergent validity, discriminant validity, composite reliability and Cronbach's alpha (Abdillah & Jogiyanto, 2015)

1. Convergent Validity
2. Discriminant Validity
3. Cronbach's Alpha
4. Composite Reliability (Construct Reliability)

3.3.2.3. Structural Model Evaluation

Model evaluation structural (inner model) done to relate latent variables to each other (Sarwono, 2012). In this research, there are several stages in evaluating the inner model, namely by using path coefficients (Path Coefficient), R-square (R^2), collinearity statistics (VIF), and T-statistics for each path to test significance between constructs.

1. Evaluation *Goodness of Fit*

Goodness of Fit used For assessing the suitability of a model with data, for testing a model can be measured using the Normed Fit Index value (NFI). According to Wijanto and Heri (2015), NFI values

ranging from 0-1 are derived from a comparison between the hypothesized model and a certain independent model. A model has high suitability if the value is close to 1.

2. Uji Effect Size

The next step is testing the effect size or f^2 . This test is used to simultaneously see the influence of the independent variable on the dependent variable. According to Ghazali and Latan (2015), the small f^2 value is 0.02, medium is 0.15, and large is 0.35. Values less than 0.02 can be ignored or considered ineffective.

3. R Square

R Square (R^2) or coefficient of determination is a model for measuring the substantive effect of exogenous latent variables on endogenous latent variables. The change in value (R^2) shows that the magnitude of the endogenous variable can be explained by the exogenous variable. A value (R^2) greater than 0.25 is categorized as weak, greater than 0.50 is categorized as moderate, and more than 0.75 is categorized as strong (Sarwono J., 2012; Ghazali, 2015)

4. T-statistics

The T-Statistics test or significance test is a resampling method through the bootstrap process. This test shows the extent to which independent variables partially have a significant relationship with the dependent variable. The t test was carried out to predict the causal relationship. The t value in the path coefficient must be more than the t table value of 1.65 for a one-sided hypothesis with a significance level of 5% (Henseler, Ringle, & Sarstedt, 2014; Ghazali, 2015)

Hypothesis testing is carried out by considering the probability values and t-statistics. For probability values, the p-value with alpha is 5% or $t_{count} > t_{table}$ (Ghozali, 2016: 42). Hypotheses can be accepted or rejected statistically, and significance levels can be used for calculations. The significance level used in this research is 5%. If the significance level chosen is 5%, then the significance or confidence level is 0.05 to reject the hypothesis. In this study, the probability of making a wrong decision was 5%. The probability of making the right decision is 95%.

Based on the statistical formula, the following statistical hypothesis is outlined:

1. The influence of Port Business Entities (X) on customer satisfaction (Y).

Determining H10 and H1a:

H0: $\beta = 0$ There is no significant influence of Port Business Entities on customer satisfaction.

Ha: $\beta \neq 0$ There is a significant influence of Port Business Entities on customer satisfaction.

2. The influence of Port Business Entities (X) on the loyalty of ship service users (Z).

Determining H30 and H3a:

H0: $\beta = 0$ There is no significant influence of Port Business Entities on the loyalty of ship service users.

Ha: $\beta \neq 0$ There is a significant influence of Port Business Entities on the loyalty of ship service users.

3. The influence of customer satisfaction (Y) on the loyalty of ship service users (Z).

Determining H50 and H5a:

H0: $\beta = 0$ There is no significant influence of customer satisfaction on the loyalty of ship service users.

Ha: $\beta \neq 0$ There is a significant influence of customer satisfaction on the loyalty of ship service users.

4. The influence of Port Business Entities (X) on the loyalty of ship service users (Z).

Determining H60 and H6a:

H0: $\beta = 0$ In terms of customer satisfaction, it is not able to mediate the significant influence of Port Business Entities on loyalty of ship service users.

Ha: $\beta \neq 0$ In terms of customer satisfactionable to mediateThe significant influence of Port Business Entities on the loyalty of ship service users.

IV. RESULTS AND DISCUSSION

4.1. Research result

4.1.1. Evaluation Measurement (Outer Model)

This model defines the relationship between each indicator and its latent variable or it can be said that the outer model can determine the relationship between the latent variable and its indicators. Data analysis was obtained from the results of PLS algorithm calculations which were shown by the loading or outer loading factor values to determine convergent validity, cross loading to determine discriminant validity, composite reliability, Cronbach Alpha and AVE (Average Variance Extracted) values to determine reliability.

1. Validity test

Based on the PLS method, testing the validity of reflexive indicators is carried out in 2 stages. The first stage is convergent validity testing, namely validity testing based on the loading factor value of each construct, and the next stage is discriminant validity testing, namely validity testing based on comparison.

a. Phase 2 Convergent Validity Testing Results

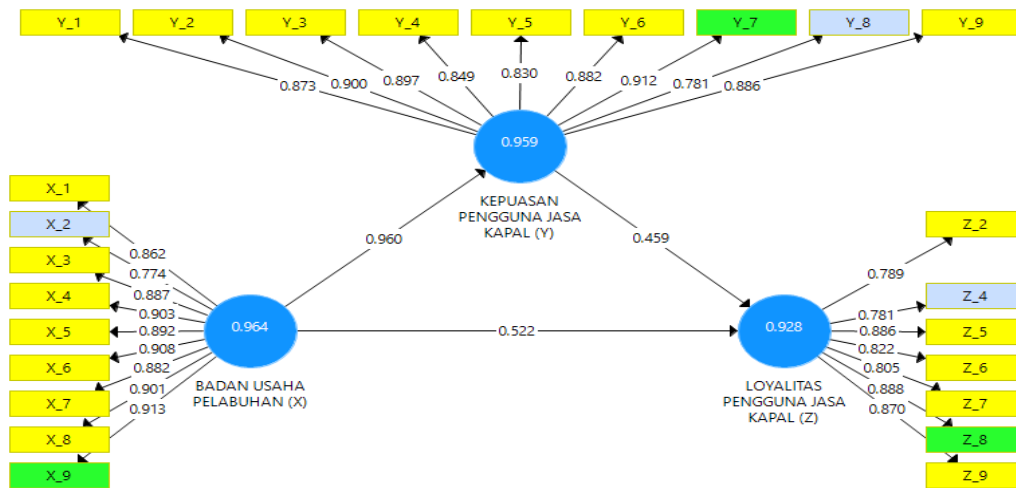
The following results from validity testing are shown in the following table:

Table 4.2. Stage 2 Loading Factor Value

	Body Business Port (X)	Satisfaction User Ship Services (Y)	Loyalty User Ship Services (Z)
X_1	0.862		
X_2	0.774		
X_3	0.887		
X_4	0.903		
X_5	0.892		
X_6	0.908		
X_7	0.882		
X_8	0.901		
X_9	0.913		
Y_1		0.873	
Y_2		0.900	
Y_3		0.897	
Y_4		0.849	
Y_5		0.830	
Y_6		0.882	
Y_7		0.912	
Y_8		0.781	
Y_9		0.886	
Z_2			0.789
Z_4			0.781
Z_5			0.886
Z_6			0.822
Z_7			0.805
Z_8			0.888
Z_9			0.870

Source: Data Processing Results with SmartPLS 3.2.9 (2023)

All indicators are Valid because they are above 0.70 The following are the results of the convergent validity test, shown in the overall loading factor image as follows:



Source: Data Processing Results with SmartPLS 3.2.9 (2023)

Fig 4.2. Results of Outer Model Stage 2

From the results of the loading factor data processing which can be seen in Figure 4.2 above, it is said to be valid, meaning that it has fulfilled the rule of thumb, which means that the loading factor value for each indicator has a value greater than 0.7. Below is an explanation of the loading factor values for each indicator which has the largest and lowest values. In the indicator for the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri which has the largest loading factor value, it is found in statement X_9 of 0.913. Meanwhile, the lowest indicator is at X_2 of 0.774. This shows that each indicator of Port Business Entity management by PT Pelabuhan Cilegon Mandiri is valid in measuring the construct so that it can be used in research. The indicator of satisfaction of ship service users which has the largest loading factor value is in the statement Y_4 of 0.781. Meanwhile, the lowest indicator is at Y_8 at 0.888. This shows that each indicator of ship service user satisfaction is valid in measuring the construct so that it can be used in research. The indicator of service user loyalty which has the largest loading factor value is in the Z_1 statement of 0.897. Meanwhile, the lowest indicator is at Z_7 at 0.705. This shows that each indicator of service user satisfaction is valid in measuring the construct so that it can be used in research.

b. Discriminant Validity Test Results

The next stage is testing discriminant validity. This test is based on the cross loading value of the measurement with the construct and the Average Variance Extracted (AVE) value. According to Ghozali and Imam (2018), each construct has a correlation between the construct and other constructs in the model. If the AVE square root value for each construct is greater than the correlation value between the construct and other constructs in the model, then it is said to have a good discriminant validity value.

Table 4.3. Discriminant Validity Test Results (Cross-Loading)

	Body Business Port (X)	Satisfaction User Ship Services (Y)	Loyalty User Ship Services (Z)
X_1	0.862	0.868	0.870
X_2	0.774	0.698	0.684
X_3	0.887	0.868	0.853
X_4	0.903	0.857	0.844
X_5	0.892	0.842	0.826
X_6	0.908	0.860	0.881
X_7	0.882	0.851	0.844
X_8	0.901	0.891	0.870
X_9	0.913	0.861	0.861
Y_1	0.863	0.873	0.872
Y_2	0.861	0.900	0.836
Y_3	0.875	0.897	0.864
Y_4	0.813	0.849	0.827
Y_5	0.779	0.830	0.740
Y_6	0.802	0.882	0.804
Y_7	0.891	0.912	0.872

Y_8	0.731	0.781	0.706
Y_9	0.873	0.886	0.878
Z_2	0.727	0.691	0.789
Z_4	0.762	0.684	0.781
Z_5	0.864	0.846	0.886
Z_6	0.803	0.742	0.822
Z_7	0.725	0.773	0.805
Z_8	0.877	0.789	0.888
Z_9	0.859	0.867	0.870

Source: Data Processing Results with SmartPLS 3.2.9 (2023)

From Table 4.3, it can be seen that the correlation of the construct of port business entity management by PT Pelabuhan Cilegon Mandiri with its indicators is higher than the correlation of the indicator of management of port business entities by PT Pelabuhan Cilegon Mandiri with other constructs. Furthermore, the correlation of satisfaction with the indicators is higher than the correlation of satisfaction indicators with other constructs. Then the correlation of compensation with the indicators is higher than the correlation of compensation indicators with other constructs. And the correlation between ship service user loyalty indicators and the indicators is higher than the correlation between ship service user loyalty indicators and other constructs. Next, discriminant validity testing is carried out by looking at the AVE (Average Variance Extracted) value. According to Ghazali and Imam (2018), this measurement can be used to measure the component score reliability of latent variables and the results are more conservative compared to composite reliability (ρ_c). It is recommended that the AVE value be greater than 0.50. The following are the AVE (Average Variance Extracted) values in the table below:

Table 4.4. AVE (Average Variance Extraction) results from the Research Model

	Average Variance Extracted (AVE)
BUSINESS ENTITY PORT (X)	0.776
USER SATISFACTION SHIP SERVICES (Y)	0.755
USER LOYALTY SHIP SERVICES (Z)	0.699

Source: Data Processing Results with SmartPLS 3.2.9 (2023)

Based on the results of data processing with SmartPLS 3.2.9 in Table 4.4 above, it can be explained that in the management variables of port business entities by PT Pelabuhan Cilegon Mandiri, satisfaction, compensation and loyalty of ship service users, it can be seen that the AVE value of each variable has a value $> 0,50$, so the AVE value meets the discriminant validity testing standards.

2. Reliability Test

a. Composite Reliability and Cronbach's Alpha Test Results

Testing composite reliability and Cronbach's alpha aims to test the reliability of instruments in a research model. If all latent variables have composite reliability or Cronbach's alpha values, this means that the construct has good reliability or the questionnaire used as a tool in this research is reliable or consistent.

Table 4.5. Composite Reliability and Cronbach's Alpha Test Results

	Composite Reliability	Cronbach's Alpha	Information
BUSINESS ENTITY PORT (X)	0.969	0.964	Reliable
USER SATISFACTION SHIP SERVICES (Y)	0.965	0.959	Reliable
USER LOYALTY SHIP SERVICES (Z)	0.942	0.928	Reliable

Source: Data Processing Results with SmartPLS 3.2.9 (2023)

Based on Table 4.5, the composite reliability and Cronbach's alpha test results show satisfactory values, because all latent variables have reliable composite values and Cronbach's alpha > 0.70 . This states that all latent variables are said to be reliable.

4.1.2. Structural Model Evaluation (Inner Model)

This model aims to see what the relationship between latent variables is, namely testing the type and magnitude of influence of the independent latent variable on the dependent latent variable to provide answers to questions regarding the relationship between latent variables that were previously hypothesized. The testing steps for the structural model (inner model) are testing the R² value and testing predictive relevance (Q²).

1. Predictive Relevance Value Test Results(Q²)

Testing of Predictive Relevance (Q²) aims to evaluate the model. The Predictive Relevance (Q²) value is 0.02 indicating a weak model, 0.15 indicating a moderate model, and 0.35 indicating a strong model (Ghozali, 2015). The Q-square value for each endogenous variable in this study can be seen in the table below:

Table 4.6. Q² Value Test Results

Variable	Q Square Value
SHIP SERVICES USER SATISFACTION (Y)	0.683
SHIP SERVICE USER LOYALTY (Z)	0.648

Source: *Data Processing Results with SmartPLS 3.2.9 (2023)*

Based on Table 4.25, the predictive relevance value of the satisfaction variable is 0.683 and the loyalty variable of ship service users is 0.648, which concludes that the model has strong predictive relevance and shows that the structural model prepared to explain the satisfaction and loyalty of ship service users is proven to be good or relevant.

2. Coefficient of Determination Test / R Square (R²)

The coefficient of determination test (R²) aims to measure how far the model's ability to explain variations in the dependent variable. The coefficient of determination values are 0 and 1. A small R² value means that the ability of the dependent variables is very limited. The following are the results of the determination test and can be seen in the table below.

Table 4.7. Coefficient of Determination Test Results

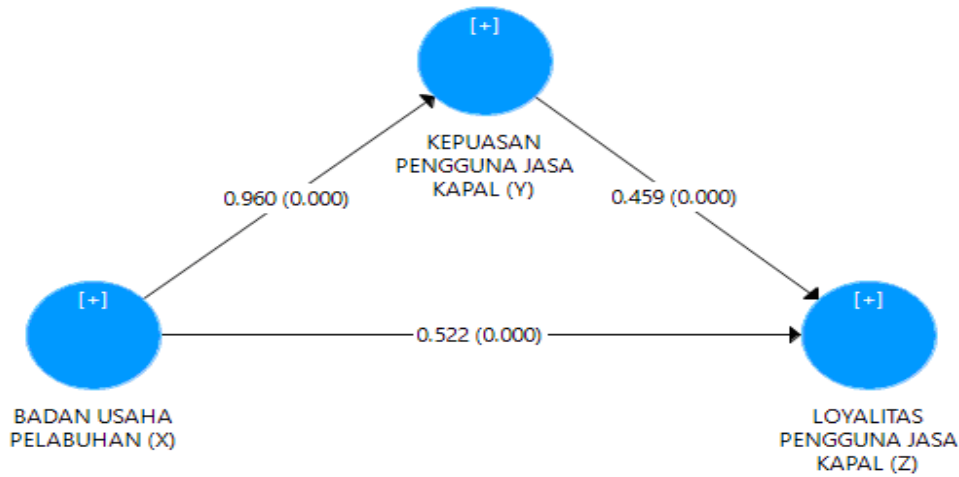
VARIABLES	R Square	R Square Adjusted
SHIP SERVICES USER SATISFACTION (Y)	0.921	0.920
SHIP SERVICE USER LOYALTY (Z)	0.944	0.943

Source: *Data Processing Results with SmartPLS 3.2.9 (2023)*

Based on Table 4.7, the relationship between constructs based on the R-square value can be explained that the satisfaction variable is 0.921. This shows that 92.1% of the satisfaction variable is influenced by the management of the port business entity by PT Pelabuhan Cilegon Mandiri and compensation, while the remaining 7.9% is influenced by other variables outside those studied. The relationship between constructs based on R-square for the ship service user loyalty variable is explained that the ship service user loyalty variable is 0.944. This shows that 94.4% of the variable loyalty of ship service users can be influenced by the management variables of port business entities by PT Pelabuhan Cilegon Mandiri, satisfaction and compensation, while the remaining 5.6% is influenced by other variables outside those studied.

3. Hypothesis testing

In this research, hypothesis testing was carried out by comparing the calculated t with the t table and the calculated P value. Hypothesis testing between constructs was carried out using the bootstrapping method with SmartPLS 3.2.9 software. Hypothesis testing in this research uses t-statistic values, so the p-value is <0.05 (5%) and the t-statistic value used is > 1.68. So the criterion for accepting or rejecting a hypothesis is the significant influence between the independent variable and the dependent variable. The following are the results of the research model as in Figure 4.3 and the results of hypothesis testing are shown in Table 4.8.



Source: Data Processing Results with SmartPLS 3.2.9 (2023)

Fig 4.3. Research Path Diagram

Table 4.8. Results of Path Coefficient, t-Statistics, and P-Value

Path	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Information
Direct Effect (Direct Effect)					
BUSINESS ENTITY PORT (X) -> SATISFACTION VESSEL SERVICE USERS (Y)	0.960	0.010	99,289	0,000	Positive Significant
BUSINESS ENTITY PORT (X) -> LOYALTY VESSEL SERVICE USERS (Z)	0.522	0.093	5,620	0,000	Positive Significant
SATISFACTION VESSEL SERVICE USERS (Y) -> LOYALTY VESSEL SERVICE USERS (Z)	0.459	0.094	4,897	0,000	Positive Significant
Indirect Effect					
BUSINESS ENTITY PORT (X) -> SATISFACTION USER SHIP SERVICES (Y) -> LOYALTY USER SHIP SERVICES (Z)	0.441	0.091	4,865	0,000	Positive Significant

Source: Data Processing Results with SmartPLS 3.2.9 (2023)

Based on the data presented in the table above, it can be seen that of the 4 (four) hypotheses proposed in this research, there are 4 (four) hypotheses proposed that can be accepted because there is a positive and significant influence, both direct and indirect, as indicated by the value t statistic > t table 1.68 and p-values < 0.05. The explanation of the proposed hypothesis will be explained as below:

1. The first hypothesis tests whether the management of port business entities by PT Pelabuhan Cilegon Mandiri has an effect on satisfaction. The test results show that the p-value for the management of port business entities by PT Pelabuhan Cilegon Mandiri is 0.000 and the t-statistic is 99.289. From these results, the t-statistic is significant because it is >1.68 with a p-value <0.05, so the first hypothesis is accepted. This proves that the management of port business entities by PT Pelabuhan Cilegon Mandiri has a positive and significant effect on satisfaction.

2. The second hypothesis: Management of port business entities by PT Pelabuhan Cilegon Mandiri influences the loyalty of ship service users. The test results show that the p-value of the management of port business entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users is 0.000 and the t-statistic is 5.620. From these results, the t-statistic is significant because it is >1.68 with a p-value <0.05 , so the third hypothesis is accepted. This proves that the management of port business entities by PT Pelabuhan Cilegon Mandiri has a positive and significant effect on the loyalty of ship service users.
3. The third hypothesis tests whether satisfaction influences the loyalty of ship service users. The test results show that the p-value of customer satisfaction with ship service user loyalty is 0.000 and the t-statistic is 4.897. From these results, the t-statistic is significant because it is >1.68 with a p-value <0.05 , so the fifth hypothesis is accepted. This proves that satisfaction has a positive and significant effect on the loyalty of ship service users.
4. The fourth hypothesis tests whether the management of port business entities by PT Pelabuhan Cilegon Mandiri influences the loyalty of ship service users through satisfaction. The test results show that the p-value is 0.000 and the t-statistic is 4.865. From these results, the t-statistic is significant because it is >1.68 with a p-value <0.05 , so the sixth hypothesis is accepted. This proves that the management of port business entities by PT Pelabuhan Cilegon Mandiri has a positive and significant effect on the loyalty of ship service users through satisfaction.

4.2. Discussion and Research Findings

Based on the loading factor results, it shows that the indicators for the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri have the largest loading factor value in statement X_9 of 0.913 "The quality and suitability of the infrastructure at the port". Meanwhile, the lowest indicator was at X_2 at 0.774 "Port's inability to reduce cargo waiting time". The indicator of satisfaction of ship service users which has the largest loading factor value is in the statement Y_4 of 0.781 "Readiness to reuse services from ship companies". Meanwhile, the lowest indicator is at Y_8 at 0.888 "The level of satisfaction you want to convey to the public regarding the ship company's services". The service user loyalty indicator that has the largest loading factor value is the statement Z_1 of 0.897 "I will recommend this port to other people". Meanwhile the lowest indicator is at Z_7 of 0.705 "I use this ship service repeatedly".

The analysis of hypothesis testing shows the following results:

Table 4.9. Summary of Research Hypothesis Results

	Research Hypothesis	Results
H1	There is an influence of the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the satisfaction of ship service users at Banten Port	<i>Positive and Significant</i>
H2	There is an influence of the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users at Banten Port	<i>Positive and Significant</i>
H3	There is an influence of customer satisfaction on the loyalty of ship service users at the Port of Banten	<i>Positive and Significant</i>
H4	Satisfaction of ship service users is able to mediate the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users at Banten Port	<i>Positive and Significant</i>

1. The influence of Port Business Entity Management by PT Pelabuhan Cilegon Mandiri on the satisfaction of ship service users at Banten Port

From the results of the SEMPLS analysis research, namely that hypothesis H1 is accepted, there is a positive and significant influence on the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the satisfaction of ship service users at Banten Port. Efficient management can improve the process of loading and unloading goods and speed of service, which in turn can increase the satisfaction of ship service users. Increasing operational efficiency can reduce ship waiting times and operational costs, providing added value for customers. Good management may include investment in port infrastructure and facilities, such as docks, storage warehouses, and parking areas. Adequate facilities can increase the efficiency of ship service users and provide a better experience. Management that focuses on customer service can increase interaction between ports and ship service users. Responsive service, good

communication, and handling complaints quickly can have a positive impact on customer satisfaction. Transparent and fair tariff policies can influence ship service users' perceptions of ports. Reasonable and controlled costs can increase port competitiveness and improve relationships with customers. Good management must ensure operational security and safety at the port. Compliance with safety standards can provide confidence to ship service users and increase their satisfaction.

2. The influence of Port Business Entity Management by PT Pelabuhan Cilegon Mandiri on the Loyalty of ship service users at Banten Port

From the results of the SEMPLS analysis research, namely hypothesis H2 is accepted, there is a positive and significant influence on the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users at Banten Port. The influence of the management of port business entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users at the Port of Banten can be reflected through several factors. Customer loyalty is not only influenced by operational efficiency but also by service quality, customer relationships, and other factors. Good service quality, such as fast, accurate and friendly service, can create a positive experience for ship service users. Services that meet or exceed customer expectations can increase loyalty because customers feel appreciated and recognized. Reliable and consistently available port infrastructure can increase the loyalty of ship service users. Uncertainty in port operations, such as technical problems or delays, can reduce customer confidence and negatively impact loyalty.

Openness regarding rates and costs can build customer trust. A fair and transparent tariff policy provides clarity to ship service users, which can contribute to maintaining loyalty. Easy and efficient business processes, including administration and licensing processes, can increase customer satisfaction and support loyalty. Ship service users may be more likely to remain loyal if they find that doing business at the Port of Banten is a smooth experience. Consistency in providing high quality service can form stable expectations for ship service users. Unexpected changes or reductions in service quality can affect customer perceptions and reduce loyalty. Ports' efforts to adopt sustainable and environmentally friendly practices can create a positive impact on customer perceptions. Ship service users who care about sustainability issues may be more inclined to remain loyal to ports that demonstrate a serious commitment to this aspect.

3. The influence of customer satisfaction on the loyalty of ship service users at the Port of Banten

From the results of the SEMPLS analysis research, hypothesis H3 is accepted, so there is a positive and significant influence of customer satisfaction on the loyalty of ship service users at the Port of Banten.

The influence of customer satisfaction on the loyalty of ship service users at the Port of Banten can be explained as a close and interrelated relationship. Customer satisfaction is a key factor that influences whether customers will continue to use the port's services or switch to another port. Customer satisfaction is often closely related to the quality of service received. Positive experiences in transactions with ports, such as friendly service, efficiency and timeliness, can increase customer satisfaction levels. Satisfied customers tend to have a positive perception of the port and are more likely to continue using the port's services in the future. Customer satisfaction can be a factor that forms loyalty. If customers are satisfied with the port's services, they may be more inclined to remain loyal and use the port's services repeatedly. Satisfaction creates an emotional bond between the customer and the port, which can be the basis for long-term loyalty.

Satisfied customers have the potential to provide positive recommendations to others. This can influence other people's decisions to use the same port services. Word of mouth or recommendations from satisfied customers can be a driver of loyalty, because suggestions from friends or business partners have a big influence. Satisfied customers may be more willing to remain loyal and positive in the face of changes or challenges that may occur at the port. Customer satisfaction can influence customer attitudes toward changes in tariffs, procedures, or port infrastructure. Effective communication and good relationships between ports and ship service users can increase satisfaction levels. Customers who feel heard and valued are more likely to maintain their loyalty to the port.

4. The influence of Port Business Entity Management by PT Pelabuhan Cilegon Mandiri on the Loyalty of ship service users through customer satisfaction at the Port of Banten

From the results of the SEMPLS analysis research, namely hypothesis H4 is accepted, there is an influence of the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the loyalty of ship service users through customer satisfaction at Banten Port. The management of port business entities by PT Pelabuhan Cilegon Mandiri can have a significant influence on the loyalty of ship service users through customer satisfaction mechanisms at the Port of Banten. Good management can increase the efficiency of port operations, such as the process of loading and unloading goods and handling ships. This efficiency can create a positive experience for ship service users, which in turn can increase their satisfaction. Good management can support the implementation of best practices in customer service, including quick responses to questions, effective complaint management, and good communication.

Superior customer service can create positive experiences and increase customer satisfaction. Good management can include investment in quality port infrastructure and facilities. Adequate facilities, such as docks, storage warehouses and parking areas, can provide added value and increase the satisfaction of ship service users. Fair and transparent tariff policies can help create trust between ports and ship service users. When ship service users feel that the rates applied are fair and transparent, this can increase their satisfaction with port services. Good management must ensure operational security and safety at the port. Ship service users will feel more satisfied and safe if the port implements high security standards, which in turn can support their loyalty. Effective management also includes good communication between the port and ship service users. Open and transparent communication can help manage the expectations of ship service users, thereby minimizing potential conflicts and increasing satisfaction.

V. CONCLUSIONS AND SUGGESTIONS

Based on hypothesis testing where the T-Statistics H1 value of 92.862 is greater than before, the following conclusions can be drawn:

1. Based on hypothesis testing where the T-Statistics H1 value of 99.289 is greater than the level or $99.289 > 1.68$ and the P-value is 0.000 smaller than the real level or $0.000 < 0.05$, this shows that the influence of the management of the Port Business Entity by PT Pelabuhan Cilegon Mandiri on the satisfaction of ship service users is significant and H3 is accepted, so there is a positive and significant influence on the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the satisfaction of ship service users at Banten Port.
2. Based on hypothesis testing where the T-Statistics H2 is 5.620 greater than the level or $5.620 > 1.68$ and the P-values H2 is 0.000 smaller than the real level or $0.000 < 0.05$, this shows that the influence of the management of the Port Business Entity by PT Cilegon Mandiri Port on the loyalty of ship service users is significant and H2 is accepted, so there is a positive and significant influence of the management of Port Business Entities by PT Cilegon Mandiri Port on the loyalty of ship service users at Banten Port.
3. Based on hypothesis testing where the T-Statistics H3 is 4.897 greater than the level or $4.897 > 1.68$ and the P-values H3 is 0.000 smaller than the real level or $0.000 < 0.05$, this shows that the influence of customer satisfaction on service user loyalty ship is significant and H3 is accepted, then there is a positive and significant influence of customer satisfaction on the loyalty of ship service users at the Port of Banten.
4. Based on hypothesis testing where the T-Statistics H4 is 4.865 greater than the level or $4.865 > 1.68$ and the P-values H4 is 0.000 smaller than the real level or $0.000 < 0.05$, this shows that the influence of the management of the Port Business Entity by PT Cilegon Mandiri Port on ship service user loyalty through customer satisfaction is significant and H4 is accepted, so there is an influence of Port Business Entity management by PT Cilegon Mandiri Port on ship service user loyalty through customer satisfaction at Banten Port
5. Results The R Square value for the ship service user satisfaction variable is 0.921. These results explain that the percentage of satisfaction of ship service users is 92.1%. Based on this, the results of the R2 calculation show that the value is strong. This means that the variable management of Port Business

Entities by PT Pelabuhan Cilegon Mandiri influences the satisfaction of ship service users at Banten Port by 92.1% and the remaining 7.9% is influenced by other variables.

6. The resulting R Square value for the ship service user loyalty variable is 0.944. These results explain that the percentage of loyalty from ship service users is 94.4%. Based on this, the results of the R² calculation show that the value is strong. This means that the variables of management of Port Business Entities by PT Pelabuhan Cilegon Mandiri and satisfaction of ship service users at Banten Port influence the loyalty of ship service users by 94.4% and the remaining 5.6% is influenced by other variables.

Management of Port Business Entities by PT Pelabuhan Cilegon Mandiri can have a significant influence on the loyalty of ship service users, especially when mediated by ship service user satisfaction. The following are several suggestions for optimizing the influence of the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri on the satisfaction and loyalty of ship service users at Banten Port:

1. The results of the loading factor for the management of Port Business Entities by PT Pelabuhan Cilegon Mandiri at the Port of Banten are low at , to optimize the cargo process and implement technology and information systems that can increase port operational efficiency.
2. The results of the loading factor for satisfaction of ship service users at Banten Port are low at Y_8 at 0.888 "The level of satisfaction you want to convey to the public regarding ship company services" Banten Port should identify areas where customers feel dissatisfied and try to fix the problem and communicate steps - corrective steps for the public to improve their perception of the ship company's services.
3. The results of the loyalty factor loading factor for ship service users at Banten Port are low at Z_7 at 0.705 "I use this ship service repeatedly" Banten Port should offer incentives or loyalty programs to encourage repeated use of ship services and build strong relationships with customers through open communication and responsive to their feedback.

The recommendations that can be given are:

1. Implement a policy of greater transparency in the management of port operations, including setting tariffs and key policies. Ensure that information regarding procedures, costs and the latest changes can be easily accessed by ship service users. Increase active communication with ship service users through various channels, including regular notifications, stakeholder meetings, and online platforms. This will help build trust and better understanding between ports and ship service users.
2. Focus on increasing speed and timeliness in port services, including loading and unloading processes and ship handling. Provide effective communication channels to resolve customer questions, complaints or requests quickly and efficiently. Continuous monitoring of operational processes and customer feedback will help identify areas for improvement.
3. Build strong relationships with ship service users by understanding their long-term needs and expectations. Provide incentive programs or additional benefits for ship service users who remain loyal and use port services consistently. This may include loyalty discounts, additional services, or rate policies that are favorable to loyal customers. This will encourage loyalty and help retain customers at the Port of Banten.

This recommendation can help the Port of Banten, especially PT Pelabuhan Cilegon Mandiri, to improve the quality of management, satisfaction of ship service users, and ultimately build and maintain customer loyalty. By focusing on transparency, responsiveness and sustainable relationships, ports can increase their competitiveness and provide added value for ship service users in the region

4. Based on the research results, it was found that R Square is influenced by other factors including regulations, competitiveness and so on. For future researchers to be able to research other factors to gain new knowledge. Furthermore, research related to the loyalty of ship service users can be carried out with subjects using other Port Business Entities such as Port Business Entities from abroad, etc. or can take subjects from all Port Business Entities in Indonesia with the aim of obtaining relevant research results. other.

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