SSRG International Journal of Civil Engineering
ISSN: 2348-8352/ https://doi.org/10.14445/23488352/IJCE-V13I1P101

Volume 13 Issue 1, 1-8, January 2026


*Original Article*

# Quality Management of Passenger Terminal Services (Case Study at Bitung Port)

Mappeabang[1], Ganding Sitepu[2], Misliah[3]

[1,2,3]*Transportation Study Program, Graduate School, Hasanuddin Universtiy, Makassar, Indonesia.*

[1]*Corresponding Author : mappeabang16@mail.com*

Received: 01 November 2025 Revised: 03 December 2025 Accepted: 02 January 2026 Published: 14 January 2026

***Abstract -*** *The Port of Bitung is one of 71 major ports managed by the Port of Indonesia Company. The purpose of this study is to analyze the quality of passenger terminal services at the Port of Bitung in order to improve customer satisfaction with the performance and expectations of stakeholders. The research methods used are IPA and SWOT analysis to assess port service performance. The findings of this study show that the level of performance conformity with passenger expectations is at 99% or <100%, which is categorised as very good. There is one service indicator with a conformity level that is still below average, namely the punctuality of ship guidance, which is a top priority for port improvement, guidance, and supervision, which is in quadrant A. The performance level of this indicator is not yet satisfactory according to passengers regarding the perception of Bitung terminal passengers on service quality, with an overall average level of conformity below 90%. There are three service indicators whose level of conformity is still below average, namely port security, adequate supporting facilities, and port building conditions. Based on the SWOT analysis results, there are several strategies recommended to improve the quality of passenger services. Optimization of the terminal system to improve service response times, improvement of infrastructure and adequate facilities for passenger comfort, and improvement of service efficiency and quality. Provision of information systems related to ship arrival and departure schedules, check-in processes, and ship waiting times.*

***Keywords -*** *Service quality, Passenger terminal, IPA, SWOT, Bitung Port.*

## 1. Introduction

Indonesia is a maritime country with 17,504 islands. This condition makes Indonesia highly dependent on sea transportation for island connectivity [1]. Ports and their passenger terminals are strategic maritime transportation hubs that influence the development and competitiveness of a region, whether it be a city, an area, or a country [2]. Ports are fundamental to regional economic development and global resource allocation [3].

Ports play an important role as infrastructure that supports global economic growth and maritime industrial activities, as well as being the foundation for sustainable development [4]. In light of these findings, maritime economic growth depends on the role of ports in the loading and unloading of goods and the embarkation and disembarkation of passengers, equipped with safety and security facilities and port support activities that are closely related to social and economic factors.

Ports play an important role in the economies of many countries and regions. Inconsistent port services will directly impact customer experience and reduce their satisfaction levels [5]. Service quality is a key factor in users' decisions to choose a port, making it a crucial element in port competition [6]. Improved services for consumers who are willing to pay additional fees, while ports enjoy greater economic benefits [7].

Indonesia has 71 major ports, one of which is the port of Bitung, located in North Sulawesi, which serves as a stopover for inter-city passenger ships. This is an important part of travel planning because passengers use it continuously to board and disembark from ships, requiring infrastructure that not all ports can provide [8]. The presence of the Port of Bitung is one of the important factors driving economic growth in North Sulawesi, and it has now been designated as a Special Economic Zone (SEZ) [9].

Basically, the services provided by ports are services for ships and services for cargo [10]. In order to fulfill the role of ports as connectors in the transportation and logistics system, ports must be able to serve ships and cargo (goods and people) as efficiently as possible [11].

For this reason, passenger terminals are needed to accommodate the transfer of passengers from passenger ships to other modes of transportation or vice versa. Transportation terminals play a vital role in ensuring the smooth functioning of the overall transportation system [12]. The main function of transportation terminals is to meet passenger needs by providing safe and comfortable services [13].

The Bitung Passenger Terminal is a sea transportation service with a capacity of 2,120 people and 1,040 passenger

seats, as well as air conditioning, toilets, and TV facilities. In carrying out its functions and duties in providing passenger terminal services, supporting facilities are needed to achieve optimal, effective, and efficient results and clear circulation.

In reality, the existing facilities are insufficient to facilitate the activities of those involved, as evidenced by the lack of comfortable and safe passenger waiting areas and poorly functioning air conditioning. The main obstacles faced include inadequate capacity, disorderly passenger belongings, lack of safety and comfort, minimal supporting facilities, and other sources of income due to the building's facade not reflecting an international-standard passenger terminal. The services at the Bitung Port passenger terminal consist of three types, namely passenger embarkation and disembarkation, port fees and services, and passenger terminal services [14].

For the sake of customer satisfaction at the Bitung passenger terminal, PT Pelabuhan Indonesia (Indonesian Port Company) accepts suggestions or feedback via SMS complaints, suggestion/complaint cards, customer service emails, and letters submitted to management. Over the past few years, PT Pelabuhan Indonesia's customer companies have submitted complaints regarding the security management system, which is still ineffective, delays and uncertainty in ship departure schedules, inadequate facilities for passengers, lack of maintenance, and other issues that still need to be addressed.

Customer satisfaction can be defined as an emotional response—in the form of satisfaction or disappointment-that arises when actual experiences are compared with previous expectations [15]. Satisfaction was identified as a mediating variable in the relationship between customer service and trust [16]. Customer satisfaction creates a sustainable and mutually beneficial relationship between the company and its customers [17]. Customer satisfaction is the driving force behind customer loyalty, which is characterized by the continuous use of a company's goods or services, thereby establishing a lasting relationship with the company [18]. Ignoring the impact of customer satisfaction on demand can result in failure to achieve expected profits [19].

The reputation or image of a port has a direct impact on customer satisfaction levels, which in turn influences their future behavior [20]. In general, service quality is understood as customers' perceptions and evaluations of an organization's service performance [21]. The improvement in quality includes improving services, adapting and transforming service standards, and making continuous internal improvements. Therefore, it is necessary for companies to understand and meet the desires and expectations of the community. By fulfilling customer desires, companies will gain added value from customers who are satisfied with the company. In addition, companies will benefit from the loyalty of customers who continue to trust the company. Customer satisfaction is the main foundation of a company's success, including in the maritime transportation sector. A deep understanding of customer desires and expectations is important to create a satisfying travel experience. By meeting customer expectations, companies not only gain added value but also build customer loyalty, which is a valuable asset in the business world. In this regard, it is necessary to analyze the influence of the quality of sea transportation services on increasing customer satisfaction at the Indonesian Port Company.

PT. Pelindo (Indonesian Port Company) must provide excellent service to users and realize quality public services [22]. User satisfaction is a priority for PT Pelindo as a state-owned enterprise that must provide excellent service to users of sea transportation services [23].

Several previous studies have found various studies related to performance and service assessment at the Port of Bitung, such as the study by [24], which examined ship traffic performance, cargo loading and unloading performance, facility utilization, and port support facilities, specifically container loading and unloading activities. Meanwhile, the research by [25] analyzed the influence of port facilities, service quality, and service performance on user satisfaction, especially service users at the Container Terminal.

The research by [26] analyzes the influence of service quality on customer satisfaction at the Bitung container terminal. Of the three studies, only those focused on container service performance and service, while passenger service studies have never been conducted at the Port of Bitung, which is one of the largest ports in North Sulawesi and a stopover for intercity passenger ships, and is one of the important factors driving the economic growth of the city of Bitung. Therefore, research on passenger service quality is also very much needed.

Based on the above description, this study aims to determine the relationship between "Quality Management of Passenger Terminal Services in Bitung and Customer Satisfaction Improvement at Indonesian Port Company".

## 2. Methods

The focus of assessment in this study is on passenger service quality variables at Bitung Port, with sub-variables consisting of facilities, services, waiting time, comfort, safety, satisfaction, procedures, service time, convenience, and staff behavior. This research is quantitative-qualitative in nature, where quantitative methods are used to assess the port's performance, while qualitative methods are used to identify strategies for improving passenger services.

Data collection methods include observation, questionnaires, and documentation using questionnaires given to passengers at Bitung Port. Questionnaires given to service users related to the importance of facilities, performance levels/aspects, and service satisfaction were measured using a 5-point Likert scale, as shown in Table 1.

**Table 1. Scale of importance and level of work**

| Answer | | Score |
|---|---|---|
| Very Important | Very Satisfied | 5 |
| Important | Satisfied | 4 |
| Neutral/Average | Neutral | 3 |
| Less Important | Somewhat Dissatisfied | 2 |
| Not Important | Dissatisfied | 1 |

The population in this study was passengers boarding and disembarking from ships at the Port of Bitung, so the population in the study can be said to be unknown. Because the population size was unknown, a closed questionnaire sample of 60 was taken. The sample was selected based on the age of the passengers, with the researcher determining the sample to be aged 25-40 years. The sampling technique used in this study was accidental sampling.

The analysis techniques used were Importance Performance Analysis (IPA) and SWOT analysis. IPA was conducted by measuring passengers' perceptions of the service quality of the Port of Indonesia Company Branch Bitung, using the IPA method. SWOT analysis was conducted to identify strategies for improving quality at the Port of Indonesia Company Branch Bitung.

# 3. Results and Discussion

### *3.1. Terminal Services at the Bitung Branch using*

One key aspect of maritime passenger traffic development is adequate maritime services. Overall service quality is considered one of the important determining factors that influence port choice and port users' intention to return [27-30]. Therefore, ports need to improve service quality. Considering that service quality is a relative measure of suitability. Conformance quality is a measure of the extent to which a service is able to meet established quality requirements or specifications [31, 32]; Port performance can be measured based on Permenhub No. PM 24 of 2021. The service performance indicators in this study refer to public service standards and regulations of the Director General of Sea Transportation, adjusted to the IPA indicators. The level of suitability in IPA is the ratio between performance Perception (Xi) and customer Expectations (Yi) of a service attribute. The level of perception of how customers perceive the importance of an attribute (e.g., service quality) compared to how well the attribute performs in meeting their expectations. Expectation level refers to customer expectations or desires regarding a product or service. Overall customer satisfaction scores at the Bitung Branch Port are shown in Table 2.

**Table 2. IPA conformity results**

| Indicators | Attributes | Perception level (Xi) | Expectation level (Yi) | Suitability level |
|---|---|---|---|---|
| Facilities | P1 | 274 | 267 | 103% |
| | P2 | 249 | 243 | 102% |
| | P3 | 231 | 226 | 102% |
| | P4 | 258 | 254 | 102% |
| | P5 | 223 | 258 | 86% |
| | P6 | 234 | 263 | 88% |
| Services | P7 | 248 | 240 | 103% |
| | P8 | 201 | 276 | 72% |
| | P9 | 220 | 270 | 81% |
| Waiting time | P10 | 212 | 268 | 79% |
| | P11 | 208 | 255 | 81% |
| Comfort | P12 | 261 | 268 | 97% |
| | P13 | 232 | 255 | 91% |
| | P14 | 228 | 270 | 84% |
| Security | P15 | 221 | 251 | 88% |
| | P16 | 240 | 248 | 97% |
| Satisfaction | P17 | 244 | 266 | 92% |
| | P18 | 229 | 235 | 97% |
| | P19 | 195 | 256 | 76% |
| | P20 | 205 | 240 | 85% |
| Service Procedures and Hours | P21 | 252 | 249 | 101% |
| | P22 | 246 | 247 | 99% |
| Convenience | P23 | 209 | 249 | 83% |
| | P24 | 242 | 248 | 97% |
| | P25 | 229 | 245 | 93% |
| Officer Behavior | P26 | 229 | 257 | 89% |
| | P27 | 231 | 250 | 92% |
| Average level of suitability | | | | 91% |

Table 2 indicates that the average service quality compliance rate of 91% is in the excellent category. There are 12 performance attributes whose conformity levels are still below the overall average conformity level, namely facility completeness (86%), spacious and secure parking (88%), speed and efficiency in the check-in process (72%), information provided to passengers (81%), ship waiting time (79%), approach time (81%), noise level (84%), surveillance systems, access doors, and patrols (88%), information on ship arrival and departure schedules (76%), access to main and supporting facilities, such as toilets, prayer rooms, beverage and food vendors (85%), passenger boarding and disembarking facilities (83%), and the polite and friendly attitude of officers (89%).

To determine the priority of service indicators, a Cartesian diagram was created. The Cartesian diagram was created based on the average perception and expectation levels. Table 3 indicates the average perception and expectation levels.

**Table 3. IPA attribute ratings**

| Indicators | Attributes | Perception Level (Xi) | Expectation Level (Yi) |
|---|---|---|---|
| Facilities | P1 | 4,57 | 4,45 |
| | P2 | 4,15 | 4,05 |
| | P3 | 3,85 | 3,77 |
| | P4 | 4,30 | 4,23 |
| | P5 | 3,72 | 4,30 |
| | P6 | 3,90 | 4,38 |
| Services | P7 | 4,13 | 4,00 |
| | P8 | 3,35 | 4,60 |
| | P9 | 3,67 | 4,50 |
| Waiting time | P10 | 3,53 | 4,47 |
| | P11 | 3,47 | 4,25 |
| Comfort | P12 | 4,35 | 4,47 |
| | P13 | 3,87 | 4,25 |
| | P14 | 3,80 | 4,50 |
| Security | P15 | 3,68 | 4,18 |
| | P16 | 4,00 | 4,13 |
| Satisfaction | P17 | 4,07 | 4,43 |
| | P18 | 3,82 | 3,92 |
| | P19 | 3,25 | 4,27 |
| | P20 | 3,42 | 4,00 |
| Service Procedures and Hours | P21 | 4,20 | 4,15 |
| | P22 | 4,10 | 4,12 |
| Convenience | P23 | 3,48 | 4,15 |
| | P24 | 4,03 | 4,13 |
| | P25 | 3,82 | 4,08 |
| Officer Behavior | P26 | 3,82 | 4,28 |
| | P27 | 3,85 | 4,17 |
| Total | | 104,20 | 114,23 |
| Average | | 3,86 | 4,23 |

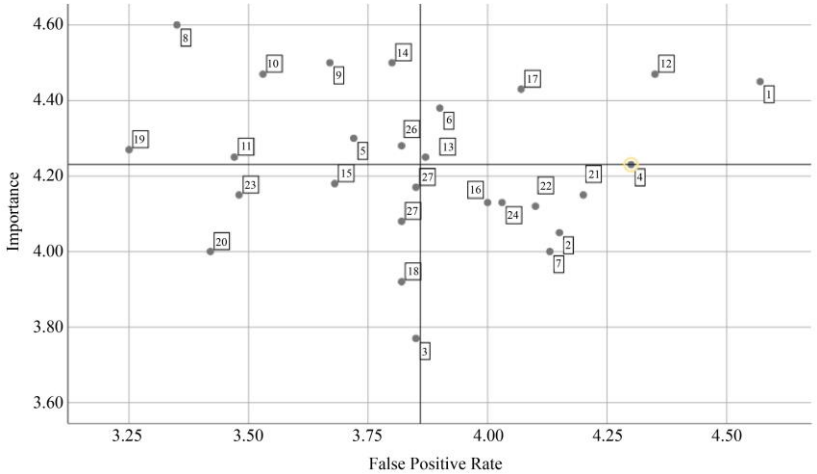


**Fig. 1 IPA service quality map**

Based on the IPA diagram above, an average score of 3.84 was obtained on the x-axis and an average score of 4.20 on the Y-axis. The X-axis and Y-axis are ordinates in a Cartesian diagram. The average performance level X and importance level Y will be the limits that determine the position of the quadrant in the Cartesian diagram, as shown in Figure 1.

Based on the Cartesian diagram above (Figure 1), the priority for improvement is the attributes in quadrant A, which are considered important by passengers, but whose performance levels are not yet satisfactory. Indicators included in quadrant A are the completeness of facilities, speed and efficiency in the check-in process, information provided to passengers, ship waiting time, ship approach time, noise levels, information on ship arrival and departure schedules, and the polite and friendly attitude of officers.

The indicators in quadrant B already have satisfactory performance levels in line with expectations and levels of importance, and performance is being maintained. Indicators in quadrant B include spacious and secure parking, cleanliness, lighting, air circulation/temperature in the waiting room, and speed of response from counter staff.

Attributes in quadrant C are considered less important to passengers, and their performance levels are rated as adequate. Attributes in quadrant C include adequate waiting room capacity, surveillance systems, access doors and patrols, baggage services, access to main and supporting facilities (such as toilets, prayer rooms, food and beverage vendors), passenger boarding and disembarking facilities, ease of access and clarity of information regarding ship schedules, travel disruptions, and connecting transportation services, and not discriminating against passengers based on social status.

Attributes in quadrant D are fairly modern equipment and facilities, sufficient lounge areas, accurate, consistent, and timely delivery of promised services, secure luggage and vehicle storage, passenger service procedures, queue times at counters, ease of access to port services and facilities, as in Table 4.

Based on the analysis results, the performance of the Bitung branch port in terms of the average suitability value of all attributes is 91%, which is in the excellent category. In the Cartesian diagram analysis, the port performance attributes are in quadrant A, where the attributes in this quadrant are priority indicators but have a very low level of satisfaction.

Therefore, the author recommends improvements to these problematic attributes, namely the completeness of facilities, speed and efficiency in the check-in process, information provided to passengers, ship waiting time, ship approach time, noise levels, information on ship arrival and departure schedules, and the polite and friendly attitude of officers.

**Table 4. IPA quadrant results**

| Attributes | Perception Level (Xi) |
|---|---|
| **Quadrant A** | |
| P5 | 3,72 |
| P8 | 3,35 |
| P9 | 3,67 |
| P10 | 3,53 |
| P11 | 3,47 |
| P14 | 3,80 |
| P19 | 3,25 |
| P26 | 3,82 |
| Quadrant B | |
| P1 | 4,57 |
| P6 | 3,90 |
| P12 | 4,35 |
| P13 | 3,87 |
| P17 | 4,07 |
| Quadrant C | |
| P3 | 3,85 |
| P15 | 3,68 |
| P18 | 3,82 |
| P20 | 3,42 |
| P23 | 3,48 |
| P25 | 3,82 |
| P27 | 3,85 |
| Quadrant D | |
| P2 | 4,15 |
| P4 | 4,30 |
| P7 | 4,13 |
| P16 | 4,00 |
| P21 | 4,20 |
| P22 | 4,10 |
| P24 | 4,03 |

### *3.2. Strategy for Improving Passenger Service Quality*

Service is an activity offered by one party to another that is intangible and does not result in ownership [33]. Customer satisfaction is a very important aspect for the sustainability and competitiveness of a company in the futur. Passengers always demand reliable port facilities and services to ensure their satisfaction with sea transportation. Therefore, it is necessary to find strategies that influence service quality.

To develop strategies to improve the quality of the Port of Indonesia Bitung Branch, a SWOT analysis was used, where data were obtained from the performance dimensions of the port and the quality of passenger terminal services at the Bitung Branch. The improvement in the quality of Bitung passenger services is illustrated through the SWOT analysis matrix in Table 5.

**Table 5. Passenger service SWOT matrix**

<table>
<tr><th colspan="3">Internal Factors</th></tr>
<tr><td colspan="2">Strengths (S)<br>a) Cleanliness and tidiness of the waiting room<br>b) Friendliness of port staff<br>c) Comfortable seating in the waiting room<br>d) Speed of response from counter staff</td><td>Weakness (W)<br>a) Information on ship arrival and departure schedules<br>b) Ship travel time from mooring (approach time)<br>c) No gangway available from the terminal to the ship</td></tr>
<tr><th colspan="3">Faktor Eksternal</th></tr>
<tr><td>Opportunities (O)<br>a) Terminal information system<br>b) Infrastructure improvement</td><td>Strategi SO<br>a) Planning terminal system optimization to improve service response speed<br>b) Planning infrastructure improvements for passenger comfort</td><td>Strategi WO<br>a) Developing a terminal information system that supports information on ship arrival and departure schedules and the check-in process<br>b) Providing a ramp to make it easier for passengers to carry their luggage onto the ship</td></tr>
<tr><td>Threats (T)<br>a) Many passengers complained about the lack of boarding bridges<br>b) Passenger capacity during the Eid al-Fitr and Christmas seasons exceeded capacity</td><td>Strategi ST<br>a) Port management needs to consider adding boarding bridge facilities<br>b) Adding passenger seats can increase capacity, especially during the Eid al-Fitr and Christmas seasons</td><td>Strategi WT<br>a) Port management improves inadequate facilities and innovates services that are not yet optimal.<br>b) Port management provides transparent information on ship waiting times to avoid a surge of passengers queuing in the waiting room.</td></tr>
</table>

Based on the SWOT matrix above, the following strategies for improving service quality at the Port of Indonesia Bitung Branch were identified:

1) Plan terminal system optimization to help improve service response speed
2) Plan infrastructure improvements for passenger comfort
3) Develop a terminal information system that supports information on ship arrival and departure schedules and the check-in process.
4) Provide more adequate facilities for passenger comfort and improve service efficiency and quality.
5) Port management needs to consider adding boarding bridge facilities.
6) Adding passenger seats can increase capacity, especially during the Eid and Christmas seasons.
7) Port management should improve inadequate facilities and innovate services that are not yet optimal.
8) Port management provides transparent information on ship waiting times to avoid surges in passengers queuing in the waiting room.

## 4. Conclusion

Overall, the average service compliance rate was recorded at below 91%. One aspect that remains weak is the timeliness of ship guidance, which is therefore a key focus for improvement. The results of mapping using a Cartesian diagram show that the port guidance and supervision indicator (P5) is in quadrant A, which means that it is important to users, but its performance has not met expectations.

Passenger assessments of services at Bitung Terminal also showed an average suitability rating of less than 90%. Three dimensions that stood out as weaknesses were port security, availability of supporting facilities, and the physical condition of the terminal building.

The Cartesian diagram findings confirm that ship schedule information (P7) is also a priority for improvement, as passengers rate its performance as low compared to its level of importance.

To improve service quality, the proposed strategies include: (a) improving document service procedures and systems to make them simpler and more efficient, (b) providing parking areas and secure vehicle storage, (c) improving waiting room facilities such as air conditioning, WiFi, free drinks, and information boards, (d) improving the responsiveness of officers in serving passengers, (e) optimizing the ticketing system to be more effective, and (f) providing publicly accessible ship schedule information.

## References


[1] Robert Verhaeghe, Ronald A. Halim, and Lóránt Tavasszy, *Chapter 6 - Optimizing the Efficiency of the Future Maritime Transport Network of Indonesia*, Freight Transport Modeling in Emerging Countries, pp. 109-134, 2021. [CrossRef] [Google Scholar] [Publisher Link]

[2] Srecko Krile, and Nikolai Maiorov, "Infrastructure Changes of the Sea Passenger Port based on a Digital Transport Model," *Transport Problems*, vol. 16, no. 4, pp. 207-216, 2021. [Google Scholar]

[3] Jiasen Sun, and Ruizeng Zhao, "Analysis of Environmental Performance and Interactivity of Ports and Regions," *Ocean and Coastal Management*, vol. 239, 2023. [CrossRef] [Google Scholar] [Publisher Link]

[4] Natalia Viana Diniz et al., "A Bibliometric Analysis of Sustainable Development Goals in the Maritime Industry and Port Sector," *Regional Studies in Marine Science*, vol. 69, 2024. [CrossRef] [Google Scholar] [Publisher Link]

[5] Gi Tae Yeo, Vinh V. Thai, and Sae Yeon Roh, "An Analysis of Port Service Quality and Customer Satisfaction: The Case of Korean Container Ports," *The Asian Journal of Shipping and Logistics*, vol. 31, no. 4, pp. 437-447, 2015. [CrossRef] [Google Scholar] [Publisher Link]

[6] Shanhua Wu, and Zhongzhen Yang, "Impact of Port Integration on Port Service Quality in the Context of Shipping Alliance," *Transport Economics and Management*, vol. 2, pp. 331-347, 2024. [CrossRef] [Google Scholar] [Publisher Link]

[7] Jihong Chen, Tingfang Li, and Huida Zhao, "Evaluating Service Upgrade in Ports: The Implication of Consumer Experience in the New Maritime Silk Road," *Ocean and Coastal Management*, vol. 261, 2025. [CrossRef] [Google Scholar] [Publisher Link]

[8] Renato L.C. Alves, and Tiago A. Santos, "Cruise Ship Itinerary Design Considering Port Attractiveness for Passengers," *Research in Transportation Business and Management*, vol. 43, pp. 1-13, 2022. [CrossRef] [Google Scholar] [Publisher Link]

[9] Presidential Regulation No. 26/2012 on the Masterplan for the Development of the National Logistics System, Jakarta: State Secretariat of the Republic of Indonesia, Government of Indonesia, 2012. [Online]. Available: https://berkas.dpr.go.id/perpustakaan/sipinter/files/sipinter-147-863-20200703230919.pdf

[10] Ni Luh Made Ayu Mirayani Pradnyadari, I Wayan Gede Darma Yoga, and Julia Maria Granadeiro Goncalves, "Passenger Service Evaluation (Case Study: Dili Port, Timor Leste)," *Reinforcement Review in Civil Engineering Studies and Management*, vol. 1, no. 1, pp. 11-19, 2022. [CrossRef] [Google Scholar] [Publisher Link]

[11] Irman Irman, "The Influence of Sea Transportation Service Quality on Customer Satisfaction in the Loading and Unloading Services of PT. Pelindo IV, Makassar Branch," *Journal on Education*, vol. 5, no. 4, pp. 11983-11989, 2023. [CrossRef] [Google Scholar] [Publisher Link]

[12] Nihal Berktas, and Konstantinos G. Zografos, "Generic Model for Capacity Allocation on Transportation Terminals," *Transportation Research Part E: Logistics and Transportation Review*, vol. 196, 2025. [CrossRef] [Google Scholar] [Publisher Link]

[13] Mircea Roşca et al., "Solutions for Improving Transit through Intermodal Passenger Terminals," *Procedia Manufacturing*, vol. 46, pp. 225-232, 2020. [CrossRef] [Google Scholar] [Publisher Link]

[14] Passenger Terminal Services, Port of Bitung Retrieved, 2025. [Online]. Available: https://portofbitung.home.blog/penumpang/

[15] Rona Ayudia Purnandika, and Hana Septiana, "The Impact of Service Quality on Customer Satisfaction of Public Transportation Users in Jakarta," *Scientific Journal of Economic Management and Accounting*, vol. 1, no. 2, pp. 25-32, 2023. [Google Scholar]

[16] Abel Monfort, Belén López-Vázquez, and Ana Sebastián-Morillas, "Building Trust in Sustainable Brands: Revisiting Perceived Value, Satisfaction, Customer Service, and Brand Image," *Sustainable Technology and Entrepreneurship*, vol. 4, no. 3, pp. 1-9, 2025. [CrossRef] [Google Scholar] [Publisher Link]

[17] Annika Ravald, and Christian Grönroos, "The Value Concept and Relationship Marketing," *European Journal of Marketing*, vol. 30, no. 2, pp. 19-30, 1996. [CrossRef] [Google Scholar] [Publisher Link]

[18] Ajaz Akbar Mir et al., "Green Banking Practices and Customer Satisfaction-Way to Green Sustainability," *Innovation and Green Development*, vol. 4, no. 2, pp. 1-14, 2025. [CrossRef] [Google Scholar] [Publisher Link]

[19] Yuxin Zhang et al., "Mathematical Modeling and Optimization of Multi-Period Fourth-Party Logistics Network Design Problems with Customer Satisfaction-Sensitive Demand," *Expert Systems with Applications*, vol. 278, 2025. [CrossRef] [Google Scholar] [Publisher Link]

[20] Silvia Sanz Blas, and Elena Carvajal-Trujillo, "Cruise Passengers' Experiences in a Mediterranean Port of Call. The Case Study of Valencia," *Ocean and Coastal Management*, vol. 102, pp. 307-316, 2014. [CrossRef] [Google Scholar] [Publisher Link]

[21] Valarie A. Zeithaml, "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence," *Journal of Marketing*, vol. 52, no. 3, pp. 2-22, 1988. [CrossRef] [Google Scholar] [Publisher Link]

[22] Ernani Hadiyati, "Service Quality and Performance of Public Sector: Study on Immigration Office in Indonesia," *International Journal of Marketing Studies*, vol. 6, no. 6, pp. 104-117, 2014. [CrossRef] [Google Scholar] [Publisher Link]

[23] Anfas Anfas, and Zainuddin Zainuddin, "Implementation of SWOT in Educational Institutions to Increase Gross Enrollment Rates," *Journal of Organization and Management*, vol. 14, no. 1, pp. 82-93, 2018. [CrossRef] [Google Scholar] [Publisher Link]

[24] Cherryl Clinda Rumambi, Theo K. Sendouw, and Mecky RE Manoppo, "Evaluation of Bitung Port Operational Performance," *Techno Journal*, vol. 14, no. 66, pp. 1-11, 2016. [CrossRef] [Google Scholar] [Publisher Link]

[25] Syafri Syafri, Ahmad Firman, and Badaruddin Badaruddin, "The Effect of Port Facilities, Service Quality and Service Performance on user Satisfaction at PT Pelindo Terminal Petikemas Bitung," *Ezenza Journal (EJ)*, vol. 2, no. 2, pp. 168-182, 2023. [Google Scholar] [Publisher Link]

[26] Eunike AM Warong, "*The Effect of Service Quality on Customer Satisfaction at PT. Pelabuhan Indonesia IV (Persero) Bitung Container Terminal*," Manado State Polytechnic, 2015. [Google Scholar] [Publisher Link]

[27] Jose L. Tongzon, and Lavina Sawant, "Port Choice in a Competitive Environment: From the Shipping Lines' Perspective," *Applied Economics*, vol. 39, no. 4, pp. 477-492, 2007. [CrossRef] [Google Scholar] [Publisher Link]

[28] Simme Veldman, Lorena Garcia-Alonso, and José Ángel Vallejo-Pinto, "Determinants of Container Port Choice in Spain," *Maritime Policy and Management*, vol. 38, no. 5, pp. 509-522, 2011. [CrossRef] [Google Scholar] [Publisher Link]

[29] J.F. Baños-Pino, and B. Tovar, "Cruise Passengers' Perception of Port Attributes and their Influence on Revisiting and Recommending. Evidence from the Canary Islands," *Research in Transportation Business and Management*, vol. 60, pp. 1-17, 2025. [CrossRef] [Google Scholar] [Publisher Link]

[30] Claudia Caballini et al., "Maritime Passenger Transport in the Ligurian-Tyrrhenian Basin of Italy: Some Considerations Regarding their Centrality," *Transportation Research Procedia*, vol. 90, pp. 935-942, 2025. [CrossRef] [Google Scholar] [Publisher Link]

[31] Fandy Tjiptono, *Service Management: Achieving Excellent Service*, 4th ed., Andi Publisher, 2022. [Google Scholar]

[32] ISO 9000:2015 - Quality Management Systems - Fundamentals and Vocabulary, International Organization for Standardization, 2015. [Online]. Available: https://www.iso.org/standard/45481.html

[33] Philip Kotler, *Marketing Management: Analysis, Planning, Implementation and Control*, 9th ed., Prentice-Hall, New Jersey, 2007. [Google Scholar] [Publisher Link]