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IDENTIFICATION OF FACTORS AND RECOMMENDATIONS FOR IMPROVING PASSENGER TERMINAL SERVICE PERFORMANCE AT BANYUWANGI AIRPORT

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Abstrak
Banyuwangi Airport's passenger terminal is critical to regional tourism and economic growth, yet service performance gaps persist. While prior studies (Fadillah, 2019; Mansur, 2020) evaluated specific aspects like terminal capacity and comfort, a holistic assessment was lacking. This study identifies key factors influencing service performance and proposes targeted improvements using an integrated Analytical Hierarchy Process (AHP) approach, aligning with regulatory standards and passenger expectations. A mixed-methods design was employed, combining structured questionnaires (97 passengers) and AHP-weighted analysis to prioritize improvement areas across three variables: departure/arrival facilities (Variable A), comfort (Variable B), and value-added services (Variable C). Results show high satisfaction with waiting rooms (24.0% weight) and toilets (16.3%), but critical gaps in circulation areas (17.6%), baggage handling (9.6%), and airline facilities (8.2%). Recommendations include redesigning passenger flow, automating baggage systems, and enhancing digital infrastructure (e.g., real-time tracking apps). The study provides a novel, actionable framework for Banyuwangi Airport to elevate service quality, comply with national regulations, and strengthen its role as a tourism hub. Future research should explore AI-driven solutions and longitudinal impact assessments.

Keywords: Service Performance, Passenger Terminal, Influence Factors, Improvement Recommendations, Analysis of Hierarchical Process (AHP)

INTRODUCTION

Banyuwangi Airport is one of the strategic air transportation facilities in East Java. As the main entrance to tourist areas such as Ijen Crater and Baluran National Park, the airport plays a significant role in supporting the regional tourism sector. With the increase in the number of domestic and international tourists, the quality of service at the passenger terminal is an important aspect that must be continuously improved to meet the expectations of service users (Sugiyono, 2017; Juniawan, 2018).

The global aviation industry plays a major role in improving people's mobility, trade flows and economic growth. In Indonesia, the aviation sector has become the backbone of regional connectivity and tourism, as seen from the increasing demand for air travel every year (Setiani, 2015). Banyuwangi Airport, which was designed with an environmentally friendly concept, also faces the challenge of ensuring passenger terminal services remain relevant and of high quality amidst the surge in passengers (Angkasa Pura, 2020).

Airport passenger terminals, in accordance with their main functions, provide a variety of services such as check-in, waiting areas, and security services. According to Horonjeff (1993), a well-designed and managed terminal can create a positive experience for passengers, increase user loyalty, and support the image of a tourist destination. Previous research shows that facilities such as waiting rooms, restrooms,

and information services are important elements that affect passenger satisfaction (Saaty, 1990; Hardiman, 2018).

Along with the development of tourism in Banyuwangi, the government and airport management continue to invest in terminal infrastructure development. However, challenges in managing capacity, operational efficiency, and service quality remain. Based on Juniawan's research (2018), aspects such as passenger circulation governance, baggage services, and check-in process speed are prioritized for improvement (Marleno et al., 2019).

The Analytical Hierarchy Process (AHP) method has been widely used to evaluate the quality of terminal services at various airports. This method allows identifying the factors that have the most influence on service performance, and helps prioritize improvements systematically (Goepel, 2013; Sandhyavitri & Taufik, 2005). A study at Banyuwangi Airport using AHP found that the attributes of waiting room comfort, check-in service efficiency, and security need to be improved to meet user expectations (Hardiman, 2018).

In an effort to support the sustainable growth of the tourism sector, improving the quality of service at passenger terminals is imperative. The government through the Minister of Transportation Regulation Number 41 of 2023 has set terminal service standards, which include aspects of comfort, accessibility, security, and information accuracy (Ministry of Transportation RI, 2023). This standard aims to ensure that airport terminals are able to provide an optimal experience for users of air transportation services.

Against this background, this study aims to identify factors that influence the performance of passenger terminal services at Banyuwangi Airport and provide concrete recommendations for service quality improvement. This approach is expected to make a significant contribution in supporting local and national tourism competitiveness (Perangin Angin, 2001).

Passenger terminal services at airports have an important role in supporting the comfort, safety, and satisfaction of air transportation service users. Banyuwangi Airport, as one of the strategic transportation hubs in Indonesia, has great potential to support local and national tourism competitiveness. However, challenges related to terminal service performance require special attention to ensure optimal service (Oetomo et al., 2017). This study aims to identify factors that influence the performance of passenger terminal services at Banyuwangi Airport and provide concrete recommendations for service quality improvement. With an integrated approach through the Level of Service (LOS), Importance-Performance Analysis (IPA), and Analytical Hierarchy Process (AHP) methods, this research explores important aspects that affect service, such as terminal capacity, comfort facilities, and service responsiveness. The results of this study are expected to make a significant contribution in formulating service improvement strategies that are able to meet the expectations of service users and support the development of the tourism sector in Indonesia.

Previous studies have evaluated passenger terminal services at airports, with Fadillah (2019) using the LOS method to assess Banyuwangi Airport's capacity (finding excellent performance), Mansur (2020) applying IPA to identify priority improvements in comfort and value-added facilities, and Welman (2023) combining SERVQUAL and AHP at Hang Nadim Airport to reveal service gaps (Fadillah, 2019; Mansur, 2020; Welman, 2023). Building on this foundation, the current study innovates by integrating AHP, IPA, and SERVQUAL for a comprehensive evaluation of Banyuwangi Airport, addressing its

unique role as a tourism gateway while introducing novel focus areas like circulation efficiency, airline facility upgrades, and digital transformation (e.g., AI-driven crowd management), while also ensuring alignment with Indonesia's Minister of Transportation Regulation No. 41 (2023) - aspects not collectively addressed in prior research.

METHOD

This research was conducted using a systematic approach, beginning with problem identification and concluding with the preparation of a final report. The research design follows a structured flowchart that outlines key stages, including problem identification, literature review, problem formulation, data collection, data analysis, and the preparation of recommendations. This step-by-step process ensures that the research objectives are systematically addressed, providing a clear framework for evaluating the service quality of the Banyuwangi Airport Passenger Terminal.

The subjects of this study are passengers at Banyuwangi Airport, specifically those arriving at the terminal. These passengers represent a diverse group whose feedback and perceptions are critical in evaluating the performance of terminal services. The sampling method used in this research is accidental sampling, where respondents are selected based on convenience and their relevance to the study criteria. This technique allows for the efficient collection of data while ensuring that the sample reflects the actual users of the terminal facilities.

Using the Margin of Error formula, a sample size of 97 respondents was determined. This number ensures a reliable representation of the airport's passenger population while maintaining a manageable scope for analysis. The selected respondents provided insights into their experiences with various aspects of terminal services, which were then analyzed to identify key areas for improvement.

The research was conducted at the Banyuwangi Airport Passenger Terminal, situated in Blimbingsari District, Banyuwangi Regency, East Java. The terminal serves as a vital gateway for both domestic and international passengers, making it an ideal location for evaluating service quality in the context of air transportation.

The research spanned a total of two months, divided into two distinct phases. The first month was dedicated to data collection, which involved distributing questionnaires to passengers and observing terminal operations. The second month focused on data analysis and report preparation, including the application of the Analytical Hierarchy Process (AHP) method and the synthesis of recommendations based on the findings. This timeline allowed for a thorough examination of the service quality at the terminal while ensuring timely completion of the research objectives.

The study utilized a combination of qualitative and quantitative methods to achieve its objectives. Data collection was conducted through structured questionnaires, which were designed to capture passenger feedback on various service attributes, such as waiting room facilities, baggage handling, and check-in efficiency. Observations of terminal operations were also conducted to provide additional context and support the findings.

The data analysis employed the Analytical Hierarchy Process (AHP), a decision-making tool that helps prioritize improvement areas by assigning weights to various service attributes based on their importance. This method provided a systematic way to evaluate passenger feedback and identify the most critical aspects of terminal services requiring attention. By integrating AHP with descriptive analysis, the research was able to generate actionable insights that address both passenger needs and regulatory

standards. The process involves creating a pairwise comparison matrix to determine the weight of each criterion, as illustrated in Table 1.

Table 1. AHP Comparison Scale

Tiers Interests	Definition	Description
1	Equally Important	Both elements have the same influence
3	Somewhat more important one other top	Experience and judgment are highly impartial one with an important partner whoelements compare
5	Important enough	Experiences and decisions indicate a preference for one activity over another
7	Very important	Experience and judgment show a strong preference for one activity over another
9	Absolutely more important	One element is absolutely more favorable than important with its counterpart, at the highest confidence level.
2,4,6,8	Value center between two decision values	When compromise is needed
Tiers of Interests	**Definition**	**Description**
	adjacent	
Respiro kal	Opposite	If element i has one of the numbers of a comparison scale of 1 to 9 has been established by Saaty. When compared to element j, j has its opposite when compared to element i

The data was processed using AHPcalc software, an Excel-based application designed to facilitate hierarchical analysis of processes. The application allows users to process data, perform pairwise comparisons, and display prioritization results with automatically calculated consistency ratios. This process ensures that the data generated is reliable and relevant to the research objectives.

With this approach, the research can produce recommendations that can be implemented by Banyuwangi Airport management to improve passenger terminal services.

RESULTS AND DISCUSSION

Factors Affecting the Performance of Passenger Terminal Services

Based on the results of the analysis using the Analytic Hierarchy Process (AHP) method, it was found that the performance of passenger terminal services at Banyuwangi Airport is influenced by three main variables, namely services in facilities used in the process of departure and arrival of passengers (Variable A), services in facilities that provide comfort (Variable B), and services in facilities that provide added value (Variable C).

In Variable A, the departure lounge subfacility received the highest weight of 24.0%, indicating the highest satisfaction from respondents, followed by check-in facilities (21.5%) and baggage services (19.36%). In contrast, the circulation area (17.6%) received the lowest weight, reflecting significant room for improvement in this facility.

For Variable B, toilet facilities ranked first with a weight of 16.3%, indicating the importance of cleanliness and comfort of these facilities to users. Facilities for users with

special needs and general cleanliness received weights of 14.4% and 14.3% respectively. However, ease of luggage transportation has the lowest weight (9.6%), indicating the need for special attention to this aspect.

Variable C shows that self check-in counter facilities have the highest weight (16.2%), followed by drinking water facilities (15.9%) and places of worship (13.5%). Airline facilities recorded the lowest weight of 8.2%, reflecting the need for development in this area. These results show that aspects of service convenience and efficiency strongly influence passenger satisfaction.

Potential Improvements to Improve Service Quality

The analysis also identified several potential improvements to improve the quality of passenger terminal services at Banyuwangi Airport. In Variable A, it is necessary to increase the circulation area to reduce congestion and provide a more comfortable space for passengers. On the other hand, in Variable B, it is necessary to improve the ease of transporting luggage, including optimizing porter services or adding automatic baggage facilities. Toilet facilities that are already good need to be kept clean so that they remain a service priority.

For Variable C, the development of airline facilities such as lounges or additional services can increase the added value felt by passengers. In addition, improving accessibility to internet/wifi and charging station facilities can meet the needs of modern passengers who are highly dependent on technology.

By implementing these improvement recommendations, Banyuwangi Airport can better meet the expectations of air transportation service users, while increasing competitiveness with other airports in the region. These results support the development objectives of the strategic area of Banyuwangi Airport to become an environmentally sound center for economic growth based on tourism, trade and services.

Discusion

Based on the analysis using the Analytical Hierarchy Process (AHP) method, it was found that the performance of passenger terminal services at Banyuwangi Airport is influenced by three main variables: services related to departure and arrival facilities (Variable A), services related to comfort facilities (Variable B), and services related to value-added facilities (Variable C). Each variable contains specific elements that significantly affect passenger satisfaction.

In Variable A, the departure lounge sub-facility received the highest weight of 24.0%, indicating that this facility provides the highest level of satisfaction for respondents. This reflects the success of airport management in providing a comfortable and functional waiting area. However, the circulation area, with the lowest weight of 17.6%, indicates a need to improve the efficiency of passenger movement in this area. Additionally, baggage handling facilities also received a significant weight (19.36%), highlighting the importance of enhancing the speed and accuracy of baggage handling processes.

In Variable B, toilet facilities received the highest weight of 16.3%, reflecting the importance of cleanliness and comfort for users. Facilities for passengers with special needs and overall cleanliness also received high weights, at 14.4% and 14.3%, respectively, indicating that these aspects have been well-managed. However, the ease of baggage transportation had the lowest weight of 9.6%, signaling the need for greater attention in this area, such as adding porters or automatic baggage handling systems.

Meanwhile, in Variable C, self-check-in facilities received the highest weight of 16.2%, demonstrating the effectiveness of this service in providing convenience for passengers. Drinking water facilities (15.9%) and places of worship (13.5%) also received significant attention from passengers. However, airline facilities recorded the lowest weight of 8.2%, highlighting the need for developing additional services provided by airlines, such as lounges or dedicated information centers.

Overall, the results of this study show that aspects of comfort, efficiency, and sustainability of facilities play a critical role in determining passenger satisfaction. The circulation area, baggage handling services, and airline facilities are aspects that require special attention for improvement. By implementing the recommended improvements, such as optimizing the circulation area, enhancing baggage transportation facilities, and developing airline services, Banyuwangi Airport can meet the expectations of air transportation users while increasing its regional competitiveness.

These findings support the importance of continuous improvement in managing airport terminal facilities, not only to comply with the regulatory standards set in Minister of Transportation Regulation No. 41 of 2023 but also to strengthen Banyuwangi Airport's role as a strategic gateway for tourism and economic development in East Java.

CONCLUSION

Research on Banyuwangi Airport’s passenger terminal services reveals generally good satisfaction levels, with waiting rooms and toilet facilities scoring highest, while circulation areas, baggage services, and airline facilities need improvement. Proposed enhancements include optimizing passenger flow with better signage and traffic management, upgrading baggage handling with automation and real-time tracking, and improving airline facilities through dedicated service areas and self-service kiosks. Digital upgrades like enhanced Wi-Fi, charging stations, and a mobile app are also recommended to meet modern traveler expectations. Future research should explore digital transformation’s impact (e.g., AI-driven crowd management, baggage tracking), conduct benchmarking with other airports, analyze passenger demographics for tailored services, and perform longitudinal studies to assess long-term improvements. These measures aim to elevate service quality, align with global standards, and boost the airport’s role in regional tourism and economic growth.

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