



PERFORMANCE EVALUATION OF RIVER TRANSPORTATION SERVICES AND INTEGRATION AT AMPERA PIER, PALEMBANG CITY

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Abstract

Regional Arrangement 16 ilir through acceleration program (quick wins) It is hoped that it can improve connectivity between modes of transportation, thereby increasing interest in using mass transportation. Service quality is one measure of success in guaranteeing satisfaction to customers. Fulfillment of minimum service standards includes aspects of safety, security, convenience, comfort and equality as well as performance indicators of transportation integration in urban areas to determine better handling strategies. The purpose of this study is to analyze the performance of river transportation services and Ampera Pier mode integration services in existing conditions and the need or priority scale for improving river transportation services and mode integration. This research method uses Importance Performance Analysis (IPA) and Potential Gain Customer Value (PGCV) simultaneously to get better results in improving river transportation services. The mode integration service uses cross tabulation to see the relationship between the two variables. The results of the IPA calculation show that the average river transportation service for performance is 2.47 and the expectation is 3.47, there is a difference or gap of -1.01 with a priority scale based on the largest PGCV index of 7.11 is E1, namely "Available facilities for people with disabilities. disability" as the main priority for improving services by river transport service providers. While the results of the cross tabulation of waiting time and walking distance of service users choose public transportation as the mode of integration at Ampera Pier.

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Keywords Service Performance, IPA, PGVC, Integration

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Introduction

Palembang city is one of the metropolitan cities in Indonesia and has a position as the capital of South Sumatra Province. The dynamics and high activity of the city of Palembang triggers the very rapid development of the city, both the physical development of the city and the activities of the population. The development of

Palembang City from the past until now is related to the Musi River. The Province of South Sumatra has been set for the arrangement of river transportation in 16 Ilir Palembang City in order to realize safe river transportation services through the arrangement of the 16 Ilir River Port of Palembang City. In terms of safety, accident data obtained for the last 5 years can be seen



in 2019 and above, there have been fewer accidents since the quickwins program was carried out, even until 2022 there has been no accident at the Port of Region 16 Ilir, Palembang City. Adrin (2021) through his research on the use of water transportation by service users at Pier 16 Ilir Palembang where the results are used as a tourist attraction, a means of crossing, a place for trading, a means for traveling, means for going home and means for transporting goods on the grounds that water transportation is more economical, water transportation is more practical, and access to land transportation is limited. As mandated in the Regulation of the Minister of Transportation Number 61 of 2021 concerning the Implementation of River and Lake Transportation in measuring services, it is adjusted to minimum service standards which include aspects of safety, security, convenience, comfort and equality, the implementation of which is carried out by inspectors of minimum service standards who have specified competencies. by the Director General. In terms of service, Sastika (2017) stated that the ketek boat as a tourist transportation on the Musi River, Palembang City is categorized as bad from the service side and also not feasible from the technical side. and limited land transportation access. As mandated in the Regulation of the Minister of Transportation Number 61 of 2021 concerning the Implementation of River and Lake Transportation in measuring services, it is adjusted to minimum service standards which include aspects of safety, security, convenience, comfort and equality, the implementation of which is carried out by inspectors of minimum service standards who have specified competencies. by the Director General. In terms of service, Sastika (2017) stated that the ketek boat as a tourist transportation on the Musi River, Palembang City is categorized as bad from the service side and also not feasible from the technical side and limited land transportation access. In addition to transportation services, the Sungai 16 Ilir Port has integration facilities served by Bus Rapid Transit (BRT), which is currently

switching services to the monpera bus stop due to the dummy service with the Ampera LRT Station. The performance of mode integration connectivity at the 16 Ilir River Port still meets the standards set by the Directorate General, but it is necessary to add special access for pedestrians that are short, shady and safe so that the benefits will be felt by service users (Amanda, 2020). In this area, all passengers, including people with disabilities, still have difficulty switching modes quickly, easily and safely and do not yet have ticket payment facilities (ticketing), namely one payment access for multimodal in the form of a smartcard (Wiratman, 2020), so that the quality of service becomes one measure of success in guaranteeing satisfaction to customers. From the description above, the authors are interested in evaluating service performance and mode integration at Ampera Pier in Palembang City to analyze service performance and river transport integration as well as improvements to prioritize service needs and integration at Ampera Pier.

Method

Research methods in general can be interpreted as a scientific way to obtain data with certain purposes and uses. Sugiyono (2013:3) states that the scientific method means that the activity is based on scientific characteristics, namely rational, empirical, and systematic. Rational means that research activities are carried out in ways that make sense, so that they are affordable by human reasoning. Empirical means that the methods used can be observed by the human senses, so that other people can observe and know the methods used. Systematic means that the process used in the research uses certain logical steps. Based on the opinion above, it can be concluded that the data obtained As stated by Nazir (1985:51) that the research design is closely related to the research method, it can even be said that the two cannot be separated from each other. This study is a quantitative study because it seeks to explain and analyze the level of river and lake transportation services and integration



services at Ampera Pier, Palembang City. Data collection method is a tool used to obtain the data needed in a study. The method used is interview or interview and crossing the questionnaire with a measurement scale using Likert. The population in this study includes service users at Ampera Pier, Palembang City. The sampling method used is the purposive sampling method. The calculation formula for determining the sample size with the Slovin technique obtained a sample of 100 people. The analytical method used is Importance Performance Analysis (IPA) and Potential Gain Customer Value (PGCV) simultaneously to get better results in improving river transportation services. The mode integration service uses cross tabulation to see the relationship between the two variables.

Results and Discussion

Respondents in this study were passengers at Ampera Pier. Recapitulation of results from filling out survey forms using Microsoft Excel and SPSS Ver.20. It was found

that the research respondents were female with the age of 25-34 years working as private employees with an income of 1.5-3 million and the purpose of the trip was to work. Tabulation of data from the results of distributing questionnaires to ship service users at Ampera Pier was carried out to find out service users' responses to services and service expectations at Ampera Pier. Based on the Regulation of the Minister of Transportation Number 62 of 2021 with 5 (five) aspects as indicators, namely aspects of safety, security, comfort, convenience/affordability and equality with the elaboration of 25 (twenty five) questions in it. The measurement scale used is the Likert scale. Based on this scale, there are 4 intervals, namely very appropriate with 4 points, according to 3 points, less suitable with 2 points and not suitable with 1 points. The average river transportation service results for performance is 2.47 and expectations are 3.47 there is a difference or gap of -1.01 can be seen in Table 1.1

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Table 1.1 River Transport Services

Attribute		Performance	Hope	gap
Safety	A1	2.69	3.85	-1.16
	A2	3.85	3.87	-0.02
	A3	3.85	3.88	-0.03
	A4	2.05	3.08	-1.03
	A5	2.62	3.69	-1.07
	A6	2.67	3.49	-0.82
	A7	2.22	3.58	-1.36
	A8	2.68	3.63	-0.95
	A9	2.67	3.64	-0.97
		<i>mean</i>	2.81	3.63
Security	B1	2.76	3.7	-0.94
	B2	2.69	3.64	-0.95
	<i>mean</i>	2.73	3.67	-0.95
Convenience	C1	2.78	3.76	-0.98
	C2	2.75	3.72	-0.97
	<i>mean</i>	2.77	3.74	-0.98
Convenience/ Affordability	D1	2.04	3.09	-1.05
	D2	2.02	3.03	-1.01
	D3	2.03	3.03	-1.00
	D4	2.03	3.03	-1.00
	D5	1.99	3.07	-1.08
	D6	2.54	3.52	-0.98



Attribute		Performance	Hope	gap
	D7	2.04	3.52	-1.48
	D8	1.97	3.02	-1.05
	<i>mean</i>	2.08	3.16	-1.08
Equality	E1	1.98	3.52	-1.54
	E2	1.93	3.03	-1.10
	E3	1.94	3.03	-1.09
	E4	1.94	3.07	-1.13
	<i>mean</i>	1.95	3.16	-1.22
<i>mean</i>		2.47	3.47	-1.01

Mode integration at Ampera Pier is obtained by frequency service users using river transportation less than 3 times a month and choosing advanced transportation, namely online transportation with a willingness to wait for further transportation for 10 minutes and the ability to walk as far as 500 meters, for advanced transportation fares, service users feel even because they prefer online transportation rather than using available mass transportation. Validation and reliability test results using Microsoft Excel and SPSS Ver.20 According to the provisions to find r tables from df (N-2, 0.05) where n is the number of samples then obtained r tables (100-2, 0.05) = 0.1966, the following validation test results from the calculation results obtained that the r-count results for

each question item were declared "valid" and "reliable". From the results of the reliability test calculations carried out in this study, it was found that Cronbach's Alpha was 0.880 for Performance and 0.883 for Expectations. The results of the IPA questionnaire in Table 1.1 from the mapping results obtained that the total average for performance compared to the average expectation was greater (2.47 for performance and 3.47 for expectations), meaning that there was still a gap of -1.01, which could be interpreted as that it is still far from the expectations of service users and still needs improvement to achieve the expectations desired by river transportation service users at Ampera Pier. IPA analysis using SPSS Ver software. 20 can be seen in Figure 1.1.



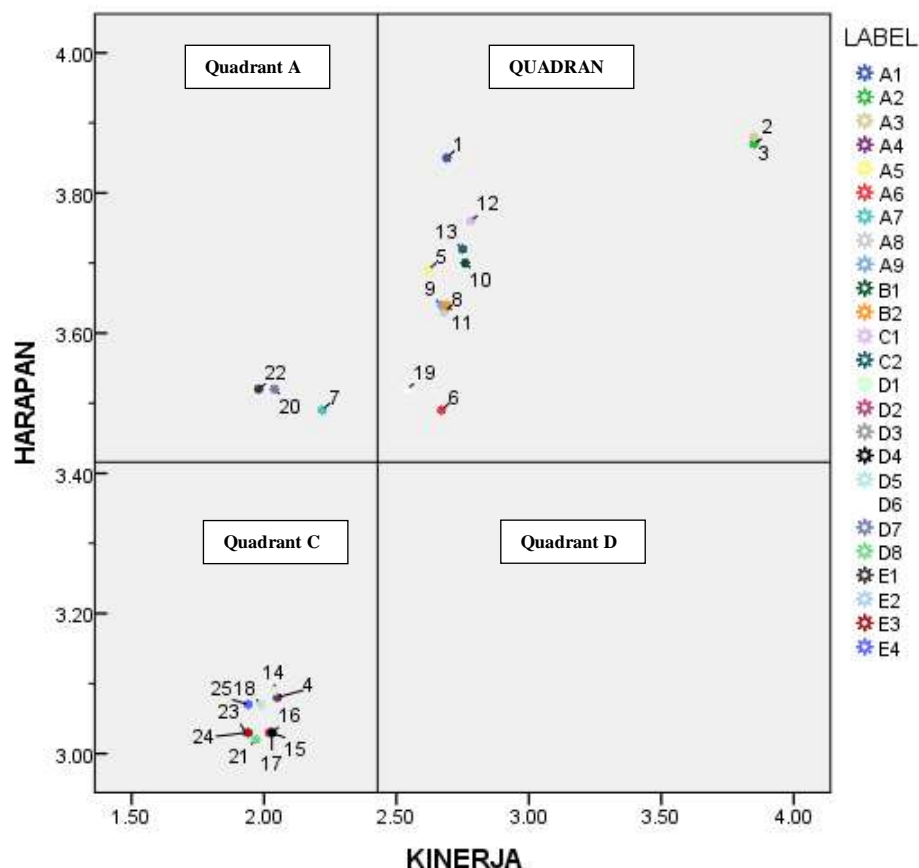


Figure 1.1 Mapping IPA

From Figure 1.1 it can be interpreted as follows:

1) Quadrant A, which shows factors or attributes that are considered important by service users but are not implemented properly by service providers. The variables included in quadrant A are Communication radio is available, Advanced transportation information is available, Facilities for people with disabilities are available

2) Quadrant B Shows factors or attributes that are considered important and satisfactory by service users that have been carried out properly by service providers. The variables included in this B quadrant are There are light fire extinguishers (APAR), There are safety clothes (life jackets), Life buoys are available, First Aid boxes are available in Accidents (P3K), Navigation lights are available, There is information on safety facilities in the form of stickers installed on the ship, There is information on health facilities in the form of

stickers installed on the ship, There are stickers containing telephone numbers and/or SMS complaints that are affixed to places that are easily seen, There is a light source on the ship to provide lighting for service users, There are trash boxes on board, There are boards information on smoking bans on board, availability of mode transfer facilities or integration stops

3) Quadrant C Indicates factors or attributes that are considered less important by service users and are not implemented properly by service providers. The variables included in this C quadrant are Evacuation route instructions are available, travel time information is available, travel distance information is available, travel destination information is available, information is available on travel conditions, travel disruption information is available, ticketing integration is available with other transportation, facilities are available for elderly people, and facilities are available for children. children and facilities available for



pregnant women

4) Quadrant D

Indicates factors or attributes that are considered less important by service users but are carried out excessively by service providers. There are no variables included in quadrant D.

The PGCV index is used to determine the priority scale for service indicators that must be improved and improved. The

indicator with the largest PGCV index value is E1, namely "Facilities are available for persons with disabilities" with a PGCV score of 7.11. So that the E1 indicator ranks first as a top priority for improving services by river transport service providers. While the indicator with the smallest PGCV index value is A2, namely "Available life jackets" can be seen in Table 1.2.

Table 1.2 Calculation of PGCV . Index Value

ATTRIBUTE		ACV	UDCV	PGCV	PRIORITY
SAFETY	A1	10.36	15,40	5.04	16
	A2	14.90	15.48	0.58	25
	A3	14.94	15.52	0.58	24
	A4	6.31	12.32	6.01	10
	A5	9.67	14.76	5.09	15
	A6	9.32	13.96	4.64	21
	A7	7.95	14.32	6.37	3
	A8	9.73	14.52	4.79	18
	A9	9.72	14.56	4.84	17
SECURITY	B1	10.21	14.80	4.59	22
	B2	9.79	14.56	4.77	19
CONVENIENCE	C1	10.45	15.04	4.59	23
	C2	10.23	14.88	4.65	20
EASY/AFFORDABILITY	D1	6.30	12.36	6.06	9
	D2	6.12	12,12	6.00	11
	D3	6.15	12,12	5.97	12
	D4	6.15	12,12	5.97	13
	D5	6.11	12.28	6.17	7
	D6	8.94	14.08	5.14	14
	D7	7.18	14.08	6.90	2
	D8	5.95	12.08	6.13	8
EQUALITY	E1	6.97	14.08	7.11	1
	E2	5.85	12,12	6.27	5
	E3	5.88	12,12	6.24	6
	E4	5.96	12.28	6.32	4

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Measuring the performance of mode integration at Ampera Pier is evaluated in terms of waiting time and walking distance. In this study, the waiting time and walking distance of the South Sumatra LRT and City Transportation because other modes (becak/ojek and online transportation) are available at any time while for BRT (Teman Bus) which is now supporting transportation for the South Sumatra LRT so it does not serve

routes to Ampera Pier. . The results of the crosstab for the factors analyzed for continued transportation used with the affected factor is the respondent's perception of the waiting time for connecting transportation. The most popular waiting time for advanced transportation is online transportation and service users can wait for 10 minutes. When viewed from the standard of service, the average waiting time is 5 to 10



minutes, so the waiting time that meets is city transportation, while for the South Sumatra LRT the waiting time of 18 minutes has not met the wishes of service users but has met the standard maximum waiting time of 10 to 20 minutes. . The walking distance of passengers to reach city transportation is 150 meters for the walking distance desired by the community, indicating that the walking distance that is able to reach is 500 meters, so the current walking distance has met the wishes of the community and the maximum standard of urban areas. The walking distance from the Ampera Pier to the South Sumatra LRT Ampera Integrated Station is 350 meters for the walking distance desired by the community in Table 4.29 is 500 meters,

Conclusions and recommendations

Based on the results of the analysis and discussion of the level of service and the integration of river transportation at Ampera Pier, the following conclusions are obtained:

- a. River transportation services were analyzed using IPA and PGCV index to obtain a priority scale for improving river transportation services based on the results of distributing questionnaires to 100 service users at Ampera Pier who were sampled with 25 questions that were validated and reliable for analysis. Characteristics of respondents with female gender, age 25-34 years, private employee occupation, income 1.5 – 3 million, the purpose of the trip is work. The results of the IPA calculation show that the average river transportation service for performance is 2.47 and the expectation is 3.47, there is a difference or gap of -1.01. The priority scale based on the largest PGCV index is E1 which is "Availability of facilities for persons with disabilities" with a PGCV value of 7, 11 so that this E1 indicator ranks first as the main priority for improving services by river transport service providers. While the indicator with the smallest PGCV index value is A2, namely "Available life jackets".

- b. River transportation integration services at Ampera Pier based on the results of the questionnaire, service users prefer advanced transportation, namely online transportation. The results of the measurement of waiting time and walking distance measured are the walking distance to the South Sumatra LRT station and City Transportation because other modes (becak/ojek and online transportation) are available at any time, while for BRT (Bus Friends) which is now supporting transportation for the South Sumatra LRT so it is not available. serving the route to the Ampera Pier because it has been served by the South Sumatra LRT Ampera integrated station. In terms of waiting time the community wants is 10 minutes, while the ability of the community to walk to the next transportation as far as 500 meters for now the distance to the bus stop/station for service users is still considered close.

Based on the conclusions from the results of the study, some suggestions can be made as follows:

- a. Service providers and regulators to be able to make improvements in accordance with the order of priority scale as the results of the analysis of this research and the implementation of the implementation of minimum service standards in accordance with established regulations.
- b. The need for optimizing the modal integration service at Ampera Pier in accordance with mass transportation regulations and also by utilizing the integration stop facility in front of the Ampera Pier which is currently no longer operating.
- c. The need for research on the design of pedestrians that are short, comfortable and safe to improve mode integration services, especially to get to the South Sumatra LRT station.

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