

**Study on the Existence of the Shadow Terminal on the Pasir Hayam Terminal Service****Deden Irawan<sup>1</sup>, Sri Hendarto<sup>2</sup>, Didin Kusdian<sup>3</sup>**

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dedenirawan93@gmail.com<sup>1</sup>, hendartosri@gmail.com<sup>2</sup>, rdidin@usbypkp.ac.id<sup>3</sup>**Keywords**

Shadow Terminal, Pasir Hayam Terminal, Comfort and security

**Abstract**

Many people are interested in using the shadow terminal area on Jalan Raya Cibeber as a place to wait for public transportation and an interaction point between modes and routes. The purpose of this study is to evaluate the existence of shadow terminals around Pasir Hayam Terminal, focusing on the factors that influence passenger preferences in choosing shadow terminals compared to official terminals. This research method uses a quantitative approach, where Importance Performance Analysis (IPA) is used to evaluate public transportation users' satisfaction with the performance of shadow terminals and main terminals. In addition, the SWOT Analysis Method is used as a tool to help structure the problem, especially in analyzing the strategic environment, which consists of two aspects, namely the internal and external environment. The results of calculations and analysis using the IPA method show that comfort and convenience are the main factors that influence passenger preferences in choosing the Shadow Terminal. Another significant factor is the availability of clean and complete dining and toilet facilities. Through SWOT analysis, Pasir Hayam Terminal is in quadrant 2 which indicates a diversification strategy. In this strategy, the focus will be on optimizing the strengths of the terminal, improving existing weaknesses, taking advantage of open opportunities, and overcoming threats that may be faced. In addition, this strategy includes efforts to increase the advantages of Pasir Hayam Terminal over Terminal Bayangan and utilize the potential of Terminal Bayangan as a strength.

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E-mail: [dedenirawan93@gmail.com](mailto:dedenirawan93@gmail.com)**INTRODUCTION**

Pasir Hayam Terminal or more popularly known as Jebrod Terminal is one of the main terminals in the Cianjur area. It is located in Sirnagalih Village, Cilaku District, Cianjur Regency, West Java Province (Apriyanti, Ramdani, Kresnawati, & Putri, 2024). The terminal has a strategic position as an important transportation hub in the region, which aims to facilitate the transfer of passengers between different modes of public transportation (Yatskiv & Budilovich, 2017).

Despite its strategic importance, Pasir Hayam Terminal has not been operating effectively, as evidenced by its low utilization rate. The majority of public transport users seem to have little interest in using the terminal services as a place to change modes (Walker, 2024). This low utilization suggests that the terminal is not fulfilling its potential role in the transport network (Rodrigue, 2020).

There are several factors that may contribute to this problem. One possible reason is the lack of awareness or perception of the benefits of terminals among the public (Kash & Hidalgo, 2014). There may also be issues related to connectivity and integration of transportation modes that discourage users from using terminals for transfers (Allard & Moura, 2016). In addition, operational inefficiencies or perceived inconveniences in using the terminal can be a deterrent to potential users.

The function of Pasir Hayam Terminal is not yet optimal due to its low utilization rate. In fact, this terminal is equipped with adequate main and supporting facilities as the main and supporting requirements for the existence of a type C passenger terminal (Czermański et al., 2021). These facilities include waiting rooms, ticket counters, restrooms, and even commercial spaces designed to enhance the user experience. Terminal infrastructure is designed to accommodate a large number of passengers and provide the necessary services to ensure smooth and efficient transfers.

Many people are very interested in using the Jebrod shadow terminal area as a place to wait for public transportation and as a point of interaction between modes and routes. The relationship between users and public transport operators is essential for the creation of shadow terminals (Heinrichs, Goletz, & Lenz, 2017). However, the Jebrod shadow terminal also experienced problems that affected the Cibeber highway. Usually there is a buildup of public transportation that is disproportionate to the number of people using it at a certain time (Vuchic, 2017). This shadow terminal is the choice of the public or public transport users because it is considered simpler and more profitable in changing modes and routes (Daraio et al., 2016).

The existence of this shadow terminal is often complained about because it causes traffic jams, the traffic jams that occur are very significant where this road section is used as a pick-up/drop-off place for passengers by public transport operators, resulting in quite a large reduction in traffic (Sultana, 2015). on the highway, causing traffic jams (Pandit & Sharma, 2022). With the shadow terminal on the Cibeber highway, small kiosks and motorbike taxis have appeared around the shadow terminal, disrupting road access, resulting in traffic jams (Shahan Ahmed & Shah, 2021).

The purpose of this study is to evaluate the existence of shadow terminals around Pasir Hayam Terminal, focusing on the factors that influence passengers' preferences in choosing shadow terminals over official terminals. This research also aims to identify the strengths and weaknesses of Pasir Hayam Terminal as well as the opportunities and threats it faces, in order to formulate a diversification strategy that can increase the attractiveness and effectiveness of the official terminal.

The novelty of this study lies in its approach that combines Importance Performance Analysis (IPA) and SWOT analysis to evaluate and compare the performance of shadow terminals with official terminals. This study also provides an in-depth insight into passenger behavior and the factors that influence their decision in choosing a shadow terminal, which has not been widely discussed in previous literature. In addition, this study offers concrete strategic solutions to improve the service quality and competitiveness of Pasir Hayam Terminal, which can serve as a reference for terminal managers in other areas facing similar problems.

## **RESEARCH METHODS**

Quantitative research methods, especially those applied in this research quantitative approach, are considered as an integral part of a series of systematic investigations of certain phenomena that involve collecting data that will later be measured using statistical techniques. In essence, this inferential research uses a quantitative approach and formulates its conclusions based on the probability of rejecting an accurate hypothesis. The significance of differences between groups or correlations between variables studied is determined through quantitative methods.

## **RESULTS AND DISCUSSION**

In order to obtain the main data used as material for this research, a survey was conducted by distributing questionnaires directly to respondents who were public transport users at Bayangan Terminal and Pasir Hayam Terminal (Abenzoza, Cats, & Susilo, 2017). This survey was divided into two different locations, namely at Bayangan Terminal and Pasir Hayam Official Terminal. Analysis of the existence of this shadow terminal will be carried out using the IPA method and the SWOT method (Doğantan, Stević, & Karamaşa, 2022) .

The results of the survey regarding the existence of the shadow terminal can be found in the following table.

**Table 1 Survey Details**

No	Survey Details	Information
1	Location of survey data collection	1. Shadow Terminal 2. Pasir Hayam Terminal
2	Intended respondent	Public transport passengers who use services at shadow terminals and official terminals.
3	Number of samples	30 Respondents at Shadow Terminal 30 Respondents at Pasir Hayam Terminal
4	Data collection time	Sunday 07.00 – 18.00 WIB Monday 07.00 – 18.00 WIB Friday 07.00 – 18.00 WIB
5	Questionnaire	There are 3 variables X1 = Physical form X2 = Reliability X3 = Security

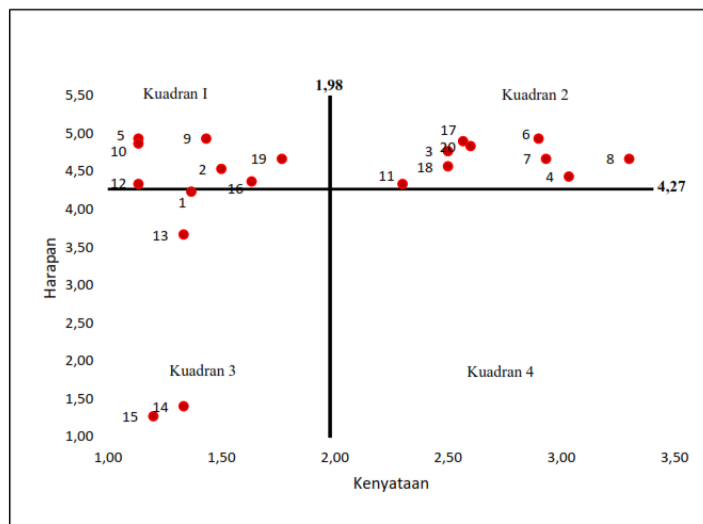
Source: Analysis, 2024

**Table 2 Shadow Terminal Satisfaction Level**

No	Indicator	Average Reality Attributes per Item	Average Expected Attributes per Item	GAP (Reality-Expectation)
(1)	(2)	(3)	(4)	(5 = 3 - 4)
1	TK1.1	1.37	4.23	-2.87
2	TK1.2	1.50	4.53	-3.03
3	TK1.3	2.50	4.77	-2.27
4	TK1.4	3.03	4.43	-1.40
5	TK1.5	1.13	4.93	-3.80
6	TK2.1	2.90	4.93	-2.03
7	TK2.2	2.93	4.67	-1.73
8	TK2.3	3.30	4.67	-1.37
9	TK2.4	1.43	4.93	-3.50
10	TK2.5	1.13	4.87	-3.73
11	TK2.6	2.30	4.33	-2.03
12	TK2.7	1.13	4.33	-3.20
13	TK2.8	1.33	3.67	-2.33
14	TK2.9	1.33	1.40	-0.07
15	TK2.10	1.20	1.27	-0.07
16	TK3.1	1.63	4.37	-2.73
17	TK3.2	2.57	4.90	-2.33
18	TK3.3	2.50	4.57	-2.07
19	TK3.4	1.77	4.67	-2.90
20	TK3.5	2.60	4.83	-2.23
	Amount	39.60	85.30	

Source; Analysis, 2024

Looking at the table above, it can be concluded that public transport users are dissatisfied with the performance of the shadow terminal.



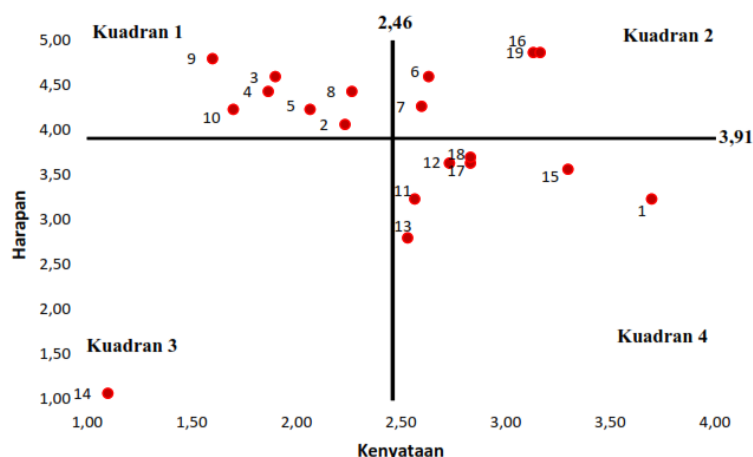
**Figure 1 Shadow Terminal Cartesian Diagram**

**Table 3 Satisfaction Level at Pasir Hayam Terminal**

No	Indicator	Average Reality Attributes per Item	Average Expected Attributes per Item	GAP (Reality-Expectation)
(1)	(2)	(3)	(4)	(5 = 3 - 4)
1	TK1.1	3.70	3.23	0.47
2	TK1.2	2.23	4.07	-1.83
3	TK1.3	1.90	4.60	-2.70
4	TK1.4	1.87	4.43	-2.57
5	TK1.5	2.07	4.23	-2.17
6	TK2.1	2.63	4.60	-1.97
7	TK2.2	2.60	4.27	-1.67
8	TK2.3	2.27	4.43	-2.17
9	TK2.4	1.60	4.80	-3.20
10	TK2.5	1.70	4.23	-2.53
11	TK2.6	2.57	3.23	-0.67
12	TK2.7	2.73	3.63	-0.90
13	TK2.8	2.53	2.80	-0.27
14	TK2.10	1.10	1.07	0.03
15	TK3.1	3.30	3.57	-0.27
16	TK3.2	3.13	4.87	-1.73
17	TK3.3	2.83	3.63	-0.80
18	TK3.4	2.83	3.70	-0.87
19	TK3.5	3.17	4.87	-1.70
	<b>Total</b>	<b>46.77</b>	<b>74.27</b>	

Source; Analysis, 2024

Looking at the table above, it can be concluded that public transport users are dissatisfied with the performance of the shadow terminal.



**Figure 2 Cartesian diagram of Pasir Hayam Terminal**

**INTERNAL FACTOR EVALUATION (IFE)  
INTERNAL**

**Table 4 Strength (Strength)**

No	Description	Amount	Weight	Ratings	Score B x R
1	The condition of the arrival and departure routes for public transport is still good	111.00	0.08	3.70	0.29
2	Prospective passengers still find it easy to obtain public transportation	79.00	0.06	2.63	0.15
3	Passengers still feel helped when using public transportation	78.00	0.06	2.60	0.14
4	Public transport drivers are more responsive and alert in helping passengers	77.00	0.05	2.57	0.14
5	There are officers arranging and directing vehicles at the main terminal	82.00	0.06	2.73	0.16
6	There are special officers who collect fees	76.00	0.05	2.53	0.14
7	Using the main terminal, traffic flow conditions around are not disturbed	99.00	0.07	3.30	0.23
8	Passengers feel safe from criminal acts at a higher rate	94.00	0.07	3.13	0.21
9	Inside the main terminal, transport drivers are friendlier and more polite to prospective passengers	85.00	0.06	2.83	0.17
10	Inside the main terminal, Transportation Agency officers are friendlier and more polite to prospective passengers	85.00	0.06	2.83	0.17
11	Passengers are more comfortable when getting on and off public transportation	95.00	0.07	3.17	0.21
<b>Total Strength (Strength)</b>		<b>961.00</b>	<b>0.68</b>		<b>2.02</b>

**Table 5 Weaknesses**

No	Description	Amount	Weight	Ratings	Score B x R
1	Passenger waiting room facilities in the main terminal are not well maintained	67.00	0.05	2.23	0.11
2	The cleanliness of toilets and prayer rooms in the main terminal is poorly maintained	57.00	0.04	1.90	0.08
3	The condition of trading facilities and restaurants is inadequate and incomplete	56.00	0.04	1.87	0.07
4	Complementary road buildings and information signs are poorly maintained	62.00	0.04	2.07	0.09

No	Description	Amount	Weight	Ratings	Score B x R
5	passengers feel that using the main terminal is less practical	68.00	0.05	2.27	0.11
6	The regularity of transport arrival and departure schedules is unclear	48.00	0.03	1.60	0.05
7	the placement of information boards regarding transport routes and schedules is not visible to passengers	51.00	0.04	1.70	0.06
8	Public transport users do not agree with holding regular race activities at the terminal	33.00	0.02	1.10	0.03
	<b>Number of Weaknesses</b>	<b>442.00</b>	<b>0.32</b>		<b>0.60</b>
	<b>Number of IFEs</b>	<b>1,403.00</b>	<b>1.00</b>		
	<b>Difference (Strength - Weaknesses)</b>				<b>1.42</b>

Source: Analysis, 2024

So the value for the internal factors of the Pasir Hayam terminal is 1.42 and is then entered into the SWOT quadrant.

### EXTERNAL FACTOR EVALUATION (EFE) EXTERNAL

**Table 6 Opportunities**

No	Description	Amount	Weight	Ratings	Score B x R
1	Unavailability of arrival and departure routes	41.00	0.04	1.37	0.05
2	It does not have waiting room facilities for prospective passengers	45.00	0.04	1.50	0.06
3	Road equipment and information signs	34.00	0.03	1.13	0.03
4	There is no clarity on the arrival and departure schedule of transport	43.00	0.04	1.43	0.05
5	Information boards regarding transportation routes and schedules are not available	34.00	0.03	1.13	0.03
6	in managing and directing vehicles replaced by brokers	34.00	0.03	1.13	0.03
7	There are no Dishub officers collecting fees	40.00	0.03	1.33	0.05
8	Public transport drivers use the services of passenger brokers	40.00	0.03	1.33	0.05
9	Traffic flow conditions are disrupted due to parking of buses and public transportation	49.00	0.04	1.63	0.07
10	Control is often carried out by Transportation Agency officers and the Police	53.00	0.05	1.77	0.08
	<b>Number of Opportunities</b>	<b>413.00</b>	<b>0.36</b>		<b>0.50</b>

**Table 7 Threats**

No	Description	Amount	Weight	Rating s	Score B x R
1	The cleanliness of toilets and prayer rooms is well maintained	75.00	0.07	2.50	0.16
2	Complete trading facilities, shops and restaurants	91.00	0.08	3.03	0.24
3	passengers find it easy to get public transportation	87.00	0.08	2.90	0.22
4	Passengers feel helped when using public transportation	88.00	0.08	2.93	0.22

No	Description	Amount	Weight	Ratings	Score B x R
5	The use of shadow terminals is more practical	99.00	0.09	3.30	0.28
6	Public transport drivers are responsive and alert in helping passengers	69.00	0.06	2.30	0.14
7	passengers feel safe from criminal acts	77.00	0.07	2.57	0.17
8	Public transport drivers are friendly and polite to prospective passengers	75.00	0.07	2.50	0.16
9	passengers feel comfortable when getting on and off public transportation	78.00	0.07	2.60	0.18
	<b>Number of Threats (Threats)</b>	<b>739.00</b>	<b>0.64</b>		<b>1.78</b>
	<b>Number of EFE</b>	<b>1,152.00</b>	<b>1.00</b>		
	<b>Differences (Opportunities - Threats)</b>				<b>-1.27</b>

Source: Analysis, 2024

So the value for the external factor of the shadow terminal is -1.27 and is then entered into the SWOT quadrant.

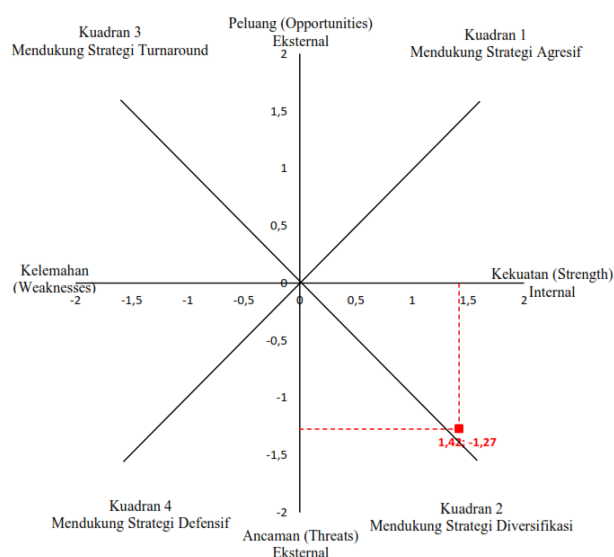


Figure 3 SWOT diagram

## CONCLUSION

From the results of calculations using both analytical methods, namely the Natural Science Method and the SWOT Method, as well as the results of field observations in the two locations that are the focus of the research, the following conclusions can be drawn: Based on the results of calculations and analysis using the Natural Science method, comfort and convenience are the main factors that guide passenger preferences in selecting shadow terminals. Apart from that, another significant consideration is the availability of clean and complete dining and toilet facilities. Factors that influence public transport users' choice of shadow terminals include: ease of getting public transport, availability of trade facilities, shops and restaurants, readiness, friendliness and politeness of public transport drivers, as well as clean and clean toilets and prayer rooms. well maintained.

Based on the results of the analysis using the IPA method, factors that need to be improved or improved so that public transport users no longer use shadow terminals are: increasing the regularity of transport departure schedules, increasing the availability of information boards related to transport routes and schedules, improving the condition of toilets and prayer rooms, improving facilities trade, shops and restaurants, improving road equipment and information signs, as well as improving the physical condition of passenger waiting areas. Based on the SWOT analysis, Pasir Hayam Terminal is classified in quadrant

2, which shows a diversification strategy. This strategy includes optimizing the strengths of the Pasir Hayam Terminal, improving existing weaknesses, exploiting open opportunities, and overcoming threats that may be faced. This strategy also includes overcoming the weaknesses of the Shadow Terminal as well as utilizing threats that the Shadow Terminal may face as strengths.

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