

"EVALUATION OF THE DHARMASRAYA-PADANG ROUTE TARIFFS ON TPN TRAVEL USING THE COST OF GOODS SOLD (COGS), ABILITY TO PAY (ATP), AND WILLINGNESS TO PAY (WTP) METHODS"

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Abstract

With the increase in fuel prices impacting the fare rates of Total Persada Nusantara (TPN) travel service on the Dharmasraya-Padang route, the fare has risen from IDR 100,000 to IDR 120,000. This change has led to a decrease in public interest in using this transportation service in Dharmasraya Regency. Therefore, an evaluation of the travel fare for this route is necessary to determine whether the TPN fare is appropriate or if a reduction is needed. This evaluation will be based on the fare derived from the calculation of Cost of Goods Sold (COGS), as well as using the Ability To Pay (ATP) and Willingness To Pay (WTP) methods to assess the extent of users' ability and willingness to pay for the travel fare. The results of the calculations show that the fare derived from the Cost of Goods Sold (COGS) is IDR 91,472, the average fare based on Ability To Pay (ATP) is IDR 1,598,985, and the average fare based on Willingness To Pay (WTP) is IDR 115,660.

Keywords: Fare, Cost of Goods Sold (COGS), Ability To Pay (ATP), Willingness To Pay (WTP)

Introduction

Padang City, as the capital of West Sumatra Province, is a center for education, government, and trade, experiencing population growth and an increasing economic growth rate. As a hub for education, government, and trade, supporting infrastructure is required to facilitate the distribution and movement of travel. Public transportation is one of the essential services needed by the residents of West Sumatra Province.

Dharmasraya Regency, one of the regencies in West Sumatra Province, is experiencing an improvement in the living standards of its people, both materially and spiritually, through ongoing regional development. This success has fostered growth in all areas of life, including the mobility of people and the distribution of goods. However, the transportation system in Dharmasraya Regency has not seen many changes, which has slightly impacted the social and economic development of the community.

Many people are shifting from travel services to intercity bus services due to the lower bus fares, despite the narrower seats. For example, the fare for Total Persada Nusantara (TPN) travel services on the Dharmasraya – Padang route is IDR 120,000 per person, while the intercity bus fare is IDR 75,000. The large number of TPN travel vehicles parked for long periods before getting passengers indicates a lack of interest among the public in using travel services.

Evaluating transportation fares requires appropriate handling and policies, as they must cover the expenses incurred during travel to prevent transportation companies from experiencing losses, especially with the rise in Fuel Prices. The image below shows the number of passengers and Total Persada Nusantara (TPN) travel fleet on the Dharmasraya – Padang route operating over seven days. The data is taken from January to December 2023:

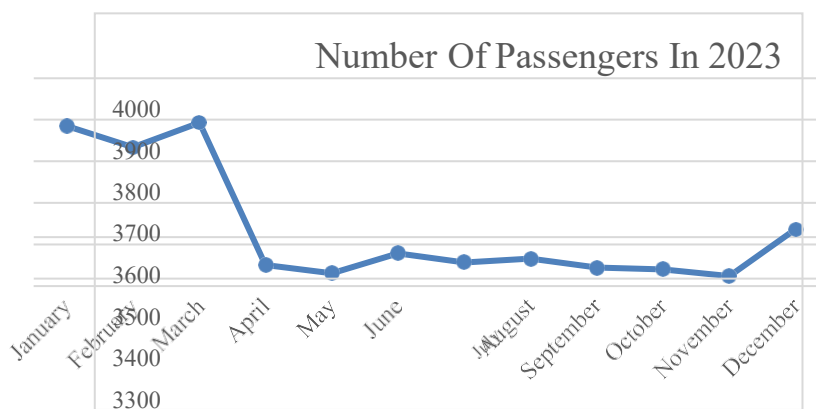


Figure 1 Passenger Count Observation Diagram for 2023
(Source: Total Persada Nusantara Dharmasraya Pool, 2024)

Based on the image above, there is a noticeable lack of interest among the public in using Total Persada Nusantara (TPN) travel services. The number of passengers and TPN travel fleet on the Dharmasraya – Padang route operating over seven days from January to December 2023 indicates a lack of public interest in this transportation service. Interviews with transportation managers and travel service users revealed that high fares are one of the reasons for the low interest in using travel services.

This research approach includes the Cost of Goods Sold (COGS), Ability to Pay (ATP), and Willingness to Pay (WTP) methods to evaluate and establish appropriate fares for TPN travel on the Dharmasraya – Padang route. It is hoped that the results of this evaluation will provide a precise solution for fare determination, thereby increasing public interest in using TPN travel services in the future. This study also offers new value in transportation fare analysis through the combination of COGS, ATP, and WTP methods, which has not been widely applied in the context of travel fare evaluation in Indonesia.

Therefore, the author intends to evaluate the fares for Total Persada Nusantara (TPN) travel on the Dharmasraya – Padang route. This evaluation is expected to provide solutions for determining the fares for the Dharmasraya – Padang travel route, with the aim of increasing

public interest in using this transportation service in the future. This study aims to determine the appropriate fare for Total Persada Nusantara (TPN) travel on the Dharmasraya – Padang route and to evaluate the fares for this route.

Research Method

1. research framework

The research framework is an important concept that systematically connects and explains the related variables, allowing the research steps to be well understood. This study focuses on evaluating the fares for travel services from Dharmasraya to Padang, which have increased due to rising fuel prices. This has led to a decrease in the number of travel service users and a shift to buses that are perceived as cheaper, despite having less well-maintained facilities. The fare evaluation is conducted using the Cost of Goods Sold (COGS), Ability to Pay (ATP), and Willingness to Pay (WTP) methods.

2. Research Procedures

a. Field Study

Observation at Total Persada Nusantara (TPN) Travel to understand activities and identify challenges. Relevant data was collected through interviews and observations.

b. Problem Identification

Observations and interviews identified the main issues: the high fares of TPN travel and the need for fare evaluation on the Dharmasraya-Padang route.

c. Research Objectives

Evaluate appropriate fares for TPN travel to increase the number of users and the productivity of the fleet

d. Data Collection

i. Primary Data

Primary data refers to data collected directly related to the research object. Primary data is obtained through field observations, interviews, and distributing questionnaires to transportation service users. The primary data needed includes:

Table 1 Primary Data Collection

Primary Data	Source
Maintenance costs incurred for the Fleet	Interview
Number of fleet vehicles used	Interview
Current travel fares	Interview
Owned assets	Interview
Data related to the ability and willingness of transportation service users to pay fares.	Questionnaire with transportation service users

ii. Secondary Data

Secondary data refers to data or information available within the company, such as files, documents, reports, and archives.

e. Data Processing

At this stage, the author processes the data obtained from TPN Travel according to the methods used, namely the Cost of Goods Sold (COGS) method, which involves calculating fixed costs and variable costs, followed by the Ability to Pay (ATP) and Willingness to Pay (WTP) methods. From these results, the author can determine the appropriate fare to be set for the Dharmasraya – Padang route. The steps are as follows:

1. "After data collection is completed, the next step is data processing. The data from the transportation service is processed using the COGS (Cost of Goods Sold) method.
2. "Calculations are performed by determining the number of trips per year on the Dharmasraya-Padang route.
3. "After summing the number of trips per year, the total number of passengers per year is calculated, and the annual commission earned by the driver is determined.
4. "Next, fixed costs are calculated, including the value of assets, employee salaries, insurance, vehicle rental costs, and fuel costs for the year.
5. "Then, variable costs are calculated, including maintenance costs, internet expenses, electricity costs, and the driver's commission per year.
6. "After that, the net fare is calculated by summing the previous calculations.
7. "Once the net fare is obtained, it is followed by calculations using the Ability to Pay (ATP) and Willingness to Pay (WTP) methods with data obtained from the questionnaire. Validity and reliability tests are also conducted in this method.
8. "Finally, an evaluation is performed for the fares set by Total Persada Nusantara Travel."

Results and Discussion

1. Total Persada Nusantara (TPN) Travel Fare

With the increase in fuel prices in 2022, transportation service fares have also risen. For example, the price of one type of fuel commonly used by TPN Travel, Pertalite, increased from Rp 7,650.00 to Rp 10,000.00. Consequently, the net fare for TPN Travel on the Dharmasraya – Padang route after the increase in fuel prices is as follows.

Table 2 Net Fare for Total Persada Nusantara Travel on the Dharmasraya-Padang Route

Operational Cost Data	
Number of passengers per year	43641
Number of employees	16
Direct Costs	
a. Fix Cost	
• Annual Asset	Rp 19.700.000
• Depreciation	Rp 3.152.000
• Employee Salaries	Rp 396.000.000
• Insurance Costs	Rp 28.800.000
Road Allowance	Rp 2.100.000.000
Car Rental	Rp 756.000.000
Office Rent	Rp 20.000.000
	Rp 3.323.652.000
b. Variable Cost	
• Maintenance, Repair, and Supply Costs	Rp 140.000.000
• Internet Costs	Rp 7.200.000
• Electricity Overhead Expenses	Rp 7.200.000
Driver's Commission	Rp 87.282.000
	Rp 241.682.000
Indirect Costs	
a.Fixed Cost	
• Annual Allowance	Rp 24.000.000
	Rp 24.000.000
b.Variable Cost	
• Office Equipment Cost	Rp 7.000.000
	Rp 7.000.000
TOTAL	Rp 3.596.334.000
Fare per Trip	Rp 82.407
VAT 11%	Rp 9.065
Net Fare	Rp 91.472

Source: Processed by the researcher, 2024

From the calculation of the cost of goods sold in the table above, it is known that the fare per trip after the increase in fuel prices is Rp 82,407.00. Adding 11% Value-Added Tax (VAT) results in a net fare of Rp 91,472.00 per trip per person. Therefore, based on the current TPN travel fare for the Dharmasraya-Padang route, which is Rp 120,000.00, and the net fare calculated by the researcher at Rp 91,472.00, there is a fare difference of Rp 28,528.00 between the prevailing fare and the net fare calculation performed by the researcher.

2. Ability To Pay (ATP) dan Willingness To Pay (WTP)

From the obtained questionnaires, the average results of the calculations corresponding to the willingness and ability of transportation service users to pay for TPN travel services can be seen in the following table.

Table 3 Comparison of ATP and WTP

ATP	WTP
Rp 1.598.985,00	RP 115.660,00

Source: Processed by the researcher, 2024.

Based on the table above, the average Ability to Pay (ATP) rate among respondents is Rp 1,598,985.00, with a maximum rate of Rp 18,750,000.00 and a minimum rate of Rp 50,000.00. Meanwhile, the average Willingness to Pay (WTP) rate among respondents is Rp 115,660.00, with a maximum rate of Rp 120,000.00 and a minimum rate of Rp 105,000.00. The calculations for ATP and WTP show that the average ATP rate is higher than the average WTP rate, indicating that respondents' ability to pay for transportation services is greater than their willingness to pay for those services.

3. Rates Based on Ability to Pay (ATP) and Willingness to Pay (WTP) Compared to Base Rates and Applicable Rates

From the calculations conducted by the researcher, the rates that align with the Ability to Pay (ATP) and Willingness to Pay (WTP) of users of the TPN travel service were determined. These rates were then compared with the base rates and the current applicable rates to assess whether the existing rates should be adjusted based on the users' ability and willingness to pay for the TPN travel service on the Dharmasraya-Padang route. This information can be seen in the following table.

Table 4 Comparison of ATP Rates, WTP Rates, Base Rates, and Applicable Rates

ATP Rates	WTP Rates	TPN Base Rates
Rp 1.598.985,00	Rp 115.660,00	Rp 91.472,00

Source: Processed by the researcher, 2024

From the table above, it can be observed that the average ATP rate (Rp 1,598,985.00) is higher than the average WTP rate (Rp 115,660.00), and the average WTP rate (Rp 115,660.00) is greater than the base rate calculated by the researcher (Rp 91,472.00). Therefore, it can be concluded that the respondents' willingness and ability to pay are higher than the base rate obtained.

4. Respondents' Expectations Analysis

From the data analysis of respondents' expectations conducted by the researcher, the ranking of service levels that users of the TPN travel service hope to see improved is presented in the following table.

Table 5 Services Expected to Be Improved

No.	Simbol	Service Attributes	Skor
1	R1	Prompt and responsive actions by TPN in the event of delays in picking up service users	376
2	RE4	Timeliness in providing services	377
3	T1	Adequate luggage space in TPN travel vehicles	385

Source: Processed by the researcher, 2024

Based on the table, it can be seen that there are three service attributes most expected to be improved according to the responses from transport service users. Among these, the attribute "Prompt and responsive actions by TPN in the event of delays in picking up users" is the most highly anticipated for improvement. This feedback can serve as valuable input for Total Persada Nusantara to enhance their service quality.

Conclusion

Based on the data collected, processed, and analyzed by the researcher, the following conclusions can be drawn:

1. Travel Fare Setting: Based on the cost of sales calculations, the net fare for TPN travel on the Dharmasraya-Padang route is Rp 91,472.00. This fare is Rp 28,528.00 lower than the current rate of Rp 120,000.00.
2. Fare Evaluation and Strategy: The average fare desired by users is Rp 115,660.00, which is only slightly different (Rp 4,340.00) from the current fare. With the calculated fare of Rp 91,472.00, TPN could offer a 4% discount (Rp 4,800.00), rounded to Rp 5,000.00, making the weekday fare Rp 115,000.00 while keeping the weekend fare at Rp 120,000.00. This strategy is expected to enhance the appeal and increase the number of users of the travel service.

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Citation methods are written according to the Turabian style, using reference management applications such as Mendeley, Zotero, Endnote, etc. The references are listed in alphabetical order by the authors' last names, with formatting examples (for books and journals) provided in the bibliography.

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