



# Comparative Analysis Of Expedition Service Tariff Calculation Using Full Costing And Variable Costing Approaches (Case Study at PT. Pulau Indah Maju Palembang)

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## Abstract

This research has purpose to know how the calculation of tariffs for public goods transportation services with the company method and compared with full costing and variable costing approaches at PT. Pulau Indah Maju Palembang. This research was conducted using a comparative descriptive analysis technique that compares 3 methods in calculating freight forwarding rates, namely the company method, the full costing method, and the variable costing method. The data collection method used to obtain data and information that supports and complements each other regarding the calculation of freight forwarding rates is an interview with the main director of PT. Pulau Indah Maju, Observations, and documentation. The results of the research are for colt diesel trucks, the company's method is more profitable than the full costing and variable costing approach, for the ankle truck the company's method is more profitable than the full costing and variable costing approach, and for tronton trucks, the variable costing approach is more profitable than the company's method and the full costing approach. From the data analysis that has been carried out, the following conclusions can be drawn: there is no significant difference in the steps for determining the rate of delivery of goods. The absence of such a difference lies in the basis for determining tariffs.

## INTRODUCTION

Since the Covid-19 outbreak that has hit the whole world, including Indonesia, the community's economy has been unstable. This has also caused many companies to experience losses and even bankruptcy so that many workers have been laid off or laid off. This causes a

reduction in people's purchasing power. So that it has an impact on public goods transportation service companies or (expeditions) and causes reduced cargo.

Freight forwarding companies have a very important role in the process of buying and selling goods and as a means of connecting between producers and consumers. If trading companies and manufacturing companies are companies that produce goods. Then the freight transportation service company will become a bridge connecting producers and consumers. So that service companies and trading companies are closely tied to each other Trading companies and manufacturing companies need transportation companies to deliver production goods to consumers in various regions, while freight transportation service companies need cargo to keep the company running and make a profit.

There are many general freight transportation service companies in Palembang city. One of them is PT Indah Maju Island or commonly abbreviated as PIM. PT Indah Maju Island Palembang is engaged in land transportation services, namely general freight forwarding services and distribution of goods or according to the sender's mail from the sender to the recipient. PT Indah Maju Island can send goods from Sumatra to Java, and vice versa. Some routes include Palembang - Jakarta, Palembang - Surabaya, Lampung - Surabaya, Surabaya - Palembang, Jakarta - Palembang, Probolinggo - Palembang, Serang- Palembang, and Surabaya - Palembang.

The variety of routes offered by PT Pulau Indah Maju, causes variations in freight rates. Determination of the selling price of transportation services (tariffs) is determined by company policy based on various considerations, several factors that are considered by the company in determining tariffs are the distance traveled, the existence of loading and unloading costs, and the type of vehicle used.

A very necessary consideration is the determination of the selling price (tariff), because the selling price of a good or service is one of the determinants of market demand, and the selling price is closely related to competition. Under normal circumstances, the selling price must be able to cover all costs incurred to produce goods or services. In addition, the selling price (tariff) must be able to generate an adequate profit.

Pricing is one of the management decisions. The life or death of the company in the long run depends on this pricing decision. In the long run, the selling price must be sufficient to cover all normal costs and profits for the company to survive. If the desired costs and profits cannot be covered by the selling price, then investors will look for more profitable opportunities in other companies.

According to Mulyadi (2015: 78) selling price or tariff is the amount charged by a business unit to consumers for goods or services sold or delivered. According to Warpani (2012: 149), tariffs are the price of transportation services that must be paid by service users, either through the mechanism of lease agreements, bargaining, or government regulations. The price of transportation services is determined following the tariff system, applies in general and there are no other provisions that bind the transportation company and the owner of the goods or passengers except what has been regulated in the tariff book.

Pricing is a critical decision that supports the operations of both profit and non-profit organizations. Price is the only element of the marketing mix that provides revenue for the organization and can determine how far the quality of service is assessed by consumers and the process of building a company's image.

## **LITERATURE REVIEW**

### **Definition Of Cost Accounting**

Cost accounting has an important role for company management in order to have an understanding in determining the cost of goods or products produced. This can improve and maintain product quality which indirectly ensures the smooth receipt of revenue from sales.

Information regarding the determination of the cost of a product is presented in a cost of production report.

From the above understanding, it can be concluded that cost accounting is a source of information about the costs incurred to produce a product and the cost of sales which is a medium for providing cost information for the company, where this information is the basis for planning and decision making by management and outside the company, especially in allocating economic resources in the company so that its efforts are able to generate the desired profit with the investment made.

### **Cost Concept**

Cost is the sacrifice of economic resources to obtain goods or services that are expected to provide benefits now or in the future (Siregar, 2014: 23). Cost is also defined as a sacrifice of economic resources measured in units of money, which has occurred, is occurring or is likely to occur for a specific purpose (Mulyadi, 2015: 8). The concept of cost is the most important concept in management accounting and cost accounting.

The purpose of obtaining cost information is used for planning, control and decision-making processes. Another purpose why we have to understand the concept and definition of cost is because there are several terms that resemble costs in the context of cost, there are also expenses and losses, both of which are also sacrifices of economic resources, but for clarity it is sorted out again that expenses are part of cost while losses are sacrifices of resources but do not generate income or do not achieve the goals that the organization or company wants to achieve.

### **Cost Classification**

In cost accounting, costs are classified into several types. Generally, the classification of costs is determined on the basis of the objectives to be achieved by the classification, because in cost accounting the concept of "different costs for different purposes" is known.

### **Definition Of Selling Price**

The definition of price is connected to many things, but it all starts with simple things that are not understood by the community. This means that many do not understand the meaning of price, even though the concept is quite easy to define in general terms. Some interrelated concepts in economic theory are price and value (utility).

According to Marius Angipora (2012, 268) that "Value is a quantitative measure of the weight of a product that can be exchanged for other products. Meanwhile, the benefits of the attributes of an item that have the ability to satisfy desires". In addition, according to Danang Sunyoto (2013: 179) that "Price is the value stated in currency or other monetary medium as a medium of exchange".

In economics, the notion of price has a relationship with the notions of value and utility. Value is a measure of the amount given by a product when the product is exchanged for another product. Meanwhile, usefulness is an attribute of an item that provides a certain level of satisfaction to consumers. Price which is the value expressed in one currency or medium of exchange, for a particular product.

## **METHODS**

### **Descriptive Technique**

This technique is a presentation of data from the results of research on elements related to determining expedition service rates using the Full Costing and Variable Costing approaches. With this technique can answer the first problem. The steps taken are:

1. Describe how the calculation of expedition service rates.
2. Identify what costs are elements in the calculation of tariffs.

3. Identify the separation between production costs and non-production costs carried out by PT Pulau Indah Maju Palembang, and what components support it.
4. Describe how much profit is expected by the company.
5. Describe how much the tariff at PT. Pulau Indah Maju Palembang based on the expected profit.
6. Describe what methods are used as a determinant of expedition service rates at PT. Pulau Indah Maju Palembang.

By describing the data above, researchers can find out how the calculation of expedition service rates at PT Pulau Indah Maju Palembang.

### **Comparative Analysis Technique**

The word "comparison" in English comparison is a comparison. The meaning of the word shows that in this study the researcher intends to compare the calculation method by comparing different theories, namely the Full Costing and Variable Costing approaches, whether the theory produces the same results or there is a difference, and if there is a difference, which theory is better.

According to Ulber Silalahi (2009: 35) states that comparative research is research that compares two or more symptoms. Comparative research can be descriptive-comparative or correlation-comparative. Descriptive comparative compares the same variables for different samples. Descriptive comparisons can also be used to compare different variables for the same sample. Correlational comparisons can also be with different variables in relation to the same variable.

According to Sulisty-Basuki (2006: 114) causal-comparative studies, specifically structured to determine the relationship that exists between several factors, variables or dimensions with the aim of explaining the relationship or interdependence.

## **RESULTS**

Shipping companies are one of the means of supporting industrial and information development. With so many companies, the existence of shipping services is very important in order to increase industrial development in Indonesia. As a fairly important means in the industrial world, shipping companies must know their potential, so that they can compete and maintain their existence. Determination of shipping rates is one of the most important things that affect the success or failure of a shipping business.

To determine the amount of shipping rates, a basis is needed that can consider the determination of shipping rates. Pricing that is done correctly and appropriately can provide profits in accordance with the expected target. As stated in Chapter III, the forms of data analysis used are descriptive techniques and comparative analysis techniques. Descriptive techniques are used to present data that has been obtained from PT Pulau Indah Maju and comparative analysis techniques are used to compare research results with the theory used by researchers. In this study the authors limit the calculation of tariffs only on the Palembang - Jakarta route.

### **Data Description**

A shipping company is one of the businesses engaged in services. The most important thing that is emphasized in service companies is service. PT Indah Maju Island (PT PIM) as one of the service companies located in Palembang City also emphasizes the service aspect.

As a company engaged in the service sector, PT Indah Maju Island has a goal to make a profit. To achieve this goal, PT Indah Maju Island must approach consumers, so that they are interested in the services offered. So that the services offered can attract the attention of consumers, PT Indah Maju Island needs to pay attention to factors that can influence consumer

attractiveness. These factors include the timeliness of delivery, the safety of the goods being sent, and the cost of competition. This is expected to make consumers interested in using PT Indah Maju Island's shipping services.

In determining the amount of shipping rates, PT Indah Maju Island uses the following steps:

1. View delivery mileage
2. Looking at the weight of the goods
3. Considering access to loading and unloading places
4. Determining the basic price
5. Determine the tariff

This shipping rate is generated from the costs that burden and the profit expected by the company. The costs used for determining and calculating rates are calculated based on the weight of the goods and the distance traveled. The costs that burden each shipment are:

1. Solar

The cost of diesel fuel is the cost incurred by the company to buy diesel fuel so that the transportation truck can run smoothly. The costs incurred by the company depend on the route of the transportation trip. The current diesel price is Rp. 5,150/liter.

2. Ferry Ticket Cost

The cost of ferry tickets is the cost incurred by the company when the transportation truck route must cross the island. The cost of ferry tickets for colt diesel trucks is Rp. 400,000, crank Rp. 750,000, and tronton Rp. 1,150,000.

3. Ampera Money

Ampera fees are costs that must be incurred by the company when the transportation truck is at the transportation and unloading site. Ampera fee stands for "Mandate for People's Suffering" which is paid to porters, and is also a parking fee for transportation trucks. The ampera fee for colt diesel trucks is Rp. 300,000, crank trucks Rp. 350,000, and tronton trucks Rp. 600,000.

4. Toll Money

Toll fees are costs that must be incurred by the company to pay tolls. Because by using tolls, transportation trucks will arrive faster than not using tolls. The toll fee for colt diesel trucks is Rp. 384,000, crank Rp. 578,000, and tronton Rp. 928,000.

5. Driver Wages

Driver wage costs are costs that must be incurred by the company to pay driver wages according to the route he takes. The cost of driver wages for the Palembang - Jakarta route for colt diesel trucks is Rp. 400,000, ankle driver wages are Rp. 600,000, and tronton driver wages are Rp. 900,000.

### **Determination Of Expedition Service Tariffs Using The Company Method**

Determining expedition service rates is important for the company. Tariff determination must be calculated carefully by considering various aspects. Tariff calculations at PT Pulau Indah Maju Palembang are usually determined by the commissioner and the managing director. The commissioner of PT Indah Maju Island is Mr. Ogtih Kuniman, and the president director is Mr. Albert Gani.

The tariff determination system is calculated by the managing director first, then the tariff is submitted to the commissioner, if the commissioner agrees then the tariff is discussed with consumers. If the consumer agrees, the company will make a letter of agreement with the consumer. The method of determining tariffs carried out by PT Pulau Indah Maju is as follows:

**Table 1 Tariff Determination Method By PT Indah Maju Island**

Rute	Costs Incurred	Colt Diesel 1 ltr : 4 km	Engkel 1 ltr : 3 km	Tronton 1ltr : 2 km
PLG – JKT 500 km	Solar	Rp. 643.750	Rp. 849.750	Rp. 1.287.500
	Toll Money	Rp. 384.000	Rp. 578.000	Rp. 928.000
	Ferry Ticket Money	Rp. 400.000	Rp. 750.000	Rp. 1.150.000
	Ampera Money	Rp. 300.000	Rp. 350.000	Rp. 600.000
	Total	Rp. 1.727.750	Rp. 2.527.750	Rp. 3.965.500
	Total Rounding	Rp. 1.800.000	Rp. 2.600.000	Rp. 4.000.000
	Profit Sharing Wages	Rp. 400.000	Rp. 600.000	Rp. 900.000
	<b>Total Cost</b>	<b>Rp. 2.200.000</b>	<b>Rp. 3.200.000</b>	<b>Rp. 4.900.000</b>

Source : PT. Pulau Indah Maju, 2024

Based on the data provided by PT Indah Maju Island, it can be concluded that the costs incurred by the company for transportation on the Palembang - Jakarta route vary depending on the type of transport truck.

Based on interviews conducted by the author with the managing director of PT Indah Maju Island, the method of determining and calculating PT Indah Maju Island is only done manually. The calculation method for expedition service rates is as follows:

### Tonnage Of Cargo

$$\text{Selling Price} = \text{Cost Incurred} + 100\%$$

Description:

Payload Tonnage: Minimum truck tonnage

### The Method Of Determining The Fare For Diesel Colt Trucks Using The Company's Method

The total cost incurred by the company for a colt diesel truck on the Palembang - Jakarta route is: Rp. 2,200,000. The calculation method is as follows:

$$\text{Selling price} = \frac{\text{Cost Incurred} + 100\%}{\text{Load Tonnage}}$$

$$\text{Selling Price} = \frac{\text{Rp. 2,200,000} + 100\%}{12,000 \text{ kg}}$$

$$\text{Selling Price} = \frac{\text{Rp. 4,400,000}}{12,000 \text{ kg}}$$

$$\text{Selling Price} = \text{Rp. 366.6 /kg}$$

$$\text{Rounded up to} = \text{Rp. 370 /kg}$$

### The method of determining the ankle truck fare using the company's method

The total cost incurred by the company for the Palembang - Jakarta route is: Rp. 3,200,000. The calculation method is as follows:

$$\begin{aligned} \text{Selling price} &= \frac{\text{Cost Incurred} + 100\%}{\text{Load Tonnage}} \\ \text{Selling Price} &= \frac{\text{Rp. 3,200,000} + 100\%}{20,000 \text{ kg}} \\ \text{Selling Price} &= \frac{\text{Rp. 6,400,000}}{20,000 \text{ kg}} \\ \text{Selling price} &= \text{Rp. 320 /kg} \end{aligned}$$

### The Method Of Determining Tronton Truck Rates Using The Company Method

The total cost incurred by the company for tronton trucks on the Palembang - Jakarta route is: Rp. 4,900,000. The calculation method is as follows:

$$\begin{aligned} \text{Selling price} &= \frac{\text{Cost Incurred} + 100\%}{\text{Load Tonnage}} \\ \text{Selling Price} &= \frac{\text{Rp. 4,900,000} + 100\%}{35,000 \text{ kg}} \\ \text{Selling Price} &= \frac{\text{Rp. 9,800,000}}{35,000 \text{ kg}} \\ \text{Selling Price} &= \text{Rp. 280 /kg} \end{aligned}$$

### Expedition Service Tariff Of PT Indah Maju Island Palembang - Jakarta Route

Based on the company's method, it can be seen that the expedition service tariff for the Palembang - Jakarta route is as follows:

**Table 2 Rates For Shipping Goods On The Palembang - Jakarta Route**

No	Truck Type	Tonnage Delivery	Rate
1.	Colt Diesel	12.000 Kg	Rp.370 /kg
2.	Engkel	22.000 Kg	Rp. 320 /kg
3.	Tronton	40.000 Kg	Rp. 280 /kg

Source : PT. Pulau Indah Maju, 2024

### Determination Of Expedition Service Rates Using The Full Costing Approach

#### Classification Of Production Costs And Non-Production Costs

The main basis in determining shipping rates with the Full Costing approach is determining prices that must be able to cover all full costs, where the full cost is the sum of production costs with non-production costs and expected profits. For this reason, it is necessary to group costs.

Cost grouping is a process of classifying all cost elements into more specific groups so that they function as explanatory information. The grouping of costs carried out is the grouping of production costs and non-production costs. The cost classification is as follows:

#### 1. Production Costs

Production costs are costs incurred in the company's production process. These costs include raw materials, factory overhead and direct labor costs. These three cost elements are very influential on the production activities carried out by the company. The costs that constitute production costs at PT. Pulau Indah Maju are:

##### a. Driver Wage Cost

Driver wage costs are costs that must be incurred by the company to pay driver wages according to the route he takes.

## b. Solar Cost

The cost of diesel fuel is the cost incurred by the company to buy diesel fuel so that the transportation truck can run smoothly. The costs incurred by the company depend on the route of the transportation trip. The current diesel price is Rp. 5,150/liter.

## c. Toll Cost

Toll costs are costs that must be incurred by the company to pay tolls. Because by using tolls, the transportation truck will arrive faster than not using tolls.

## d. Ferry Cost

Ferry costs are costs incurred by the company when the route of the transportation truck must cross the island.

## e. Ampera Cost

Ampera costs are costs that must be incurred by the company when the transportation truck is at the transportation and unloading site. Ampera cost stands for "Mandate for People's Suffering" which is paid to porters, and is also the cost of parking the transport truck.

### Non-Production Costs

Non-production costs are costs that are not directly related to the company's main activities where non-production costs will increase when the company's activities increase, but will not decrease much when the company's activities decrease.

## a. Depreciation Costs

Depreciation is the reduction in value of an asset due to age or duration of use. Depreciation is widely used in an accounting context, one of which is to calculate the age of an asset. The longer an asset ages or the more intensely it is used, normally the quality and quantity of the asset's work will decrease. This reduction in function is referred to as depreciation expense.

## b. Administrative Costs

Administrative and general costs are costs incurred to carry out business activities. For example, telephone, electricity, water, supplies, equipment, office stationery and so on.

Based on the data that has been obtained, the following will present the components of production costs and non-production costs in the form of a table as follows:

**Table 3 Production Costs And Non-Production Costs Of Colt Diesel Trucks**

Cost Type	Production Cost (IDR)	Non-production Cost (IDR)
Driver Wage Cost	Rp. 400.000	
Solar Cost	Rp. 643.750	
Toll Fee	Rp. 384.000	
Ferry Fee	Rp. 400.000	
Ampera Fee	Rp. 300.000	
Depreciation Cost		Rp. 750.000
Administration Fee		Rp. 250.000
Total	Rp. 2.127.750	Rp. 1.000.000

Source : Data Processed, 2024



**Table 4 Production Costs And Non-Production Costs Of Engkel Trucks**

Cost Type	Production Cost (IDR)	Non-production Cost (IDR)
Driver Wage Cost	Rp. 600.000	
Solar Cost	Rp. 849.750	
Toll Fee	Rp. 578.000	
Ferry Fee	Rp. 750.000	
Ampera Fee	Rp. 350.000	
Depreciation Cost		Rp. 1.037.000
Administration Fee		Rp. 50.000
Total	Rp. 3.127.750	Rp. 1.287.000

Source : Data Processed, 2024

**Table 5 Production Costs And Non-Production Costs Of Tronton Trucks**

Cost Type	Production Cost (IDR)	Non-production Cost (IDR)
Driver Wage Cost	Rp. 900.000	
Solar Cost	Rp. 1.287.500	
Toll Fee	Rp. 928.000	
Ferry Fee	Rp. 1.150.000	
Ampera Fee	Rp. 600.000	
Depreciation Cost		Rp. 2.222.222
Administration Fee		Rp. 250.000
Total	Rp. 4.865.500	Rp. 2.472.222

Source : Data Processed, 2024

### Calculating Depreciation Costs

To calculate the depreciation cost of colt diesel, crank, and tronton trucks, it will be calculated using the straight-line method without the residual value of the depreciation expense remaining constant and simple throughout the economic life of the asset.

### Depreciation Cost Of Colt Diesel Truck

$$\text{Cost} + \text{Economic Life} = \text{Depreciation}$$

The acquisition price is Rp. 360,000,000

Economic Life 10 years

Depreciation = Rp. 360,000,000 : 10 years

Depreciation = Rp. 36,000,000 / year

Depreciation = Rp. 36,000,000 : 12 months

Depreciation = Rp. 3,000,000 /month

Depreciation = Rp. 3,000,000 : 4 routes

Depreciation = Rp. 750,000 / route

In one month the colt diesel truck can carry loads on 4 routes. Therefore, depreciation costs are calculated per route. So the depreciation value of a colt diesel truck in one route is: Rp. 750,000.

### Depreciation Cost of Engkel Truck

$$\text{Cost} + \text{Economic Life} = \text{Depreciation}$$

The acquisition price is Rp. 560,000,000  
 Economic Life 15 years  
 Depreciation = Rp. 560,000,000 : 15 years  
 Depreciation = Rp. 37,333,333 / year  
 Depreciation = Rp. 37,333,333 : 12 months  
 Depreciation = Rp. 3,111,111 /month  
 Depreciation = Rp. 3,111,111 : 3 routes  
 Depreciation = Rp. 1,037,037 /route

In one month an ankle truck can carry loads on 3 routes. Therefore, depreciation costs are calculated per route. So the depreciation value of an ankle truck in one route is: Rp. 1,037,037.

### Tronton Truck Depreciation Cost

$$\text{Cost Of Production} + \text{Economic Life} = \text{Depreciation}$$

The acquisition price is Rp. 1,200,000,000  
 Economic Life 15 years  
 Depreciation = Rp. 1,200,000,000 : 15 years  
 Depreciation = Rp. 80,000,000 / year  
 Depreciation = Rp. 80,000,000 : 12 months  
 Depreciation = Rp. 6,666,666 /month  
 Depreciation = Rp. 6,666,666 : 3 routes  
 Depreciation = Rp. 2,222,222 / route

In one month the tronton truck can carry loads on 3 routes. Therefore, depreciation costs are calculated per route. So the depreciation value of a tronton truck in one route is: Rp. 2,222,222.

### Full Costing Approach Formula

$$\text{Selling Price} = \text{Production Cost} + \text{Non-Production Cost} + \text{Expected Profit}$$

Based on Table 3 Table 4, and Table 5, the total production costs and non-production costs of colt diesel, crank, and tronton trucks for the Palembang - Jakarta route can be calculated. To obtain the full cost, the cost calculation will be presented in.

**Table 6 Total Production Costs And Non-Production Costs**

Truck Type	Production Cost	Non-Production	Cost Full
Colt Diesel	Rp. 2.127.750	Rp. 1.000.000	Rp. 3.127.750
Engkel	Rp. 3.127.750	Rp. 1.287.000	Rp. 4.414.750
Tronton	Rp. 4.865.500	Rp. 2.472.222	Rp. 7.337.722

Source : Data Processed, 2024

After knowing the total production costs, non-production costs, and full costs, then calculate the % mark up. To calculate the %mark up, the formula is used:

$$\% \text{Mark Up} = \frac{\text{Non-Production Cost} + \text{Expected Profit}}{\text{Production Cost}} \times 100\%$$

The amount of profit expected by PT Indah Maju Island is 25% of full cost. The following will present the expected profit after calculating the full cost.

**Table 7 Expected Profit Of PT Indah Maju Island**

Truck Type	Cost Full	Expected Profit
Colt Diesel	Rp. 3.127.750	Rp. 781.937
Engkel	Rp. 4.414.750	Rp. 1.103.687
Tronton	Rp. 7.337.722	Rp. 1.834.430

Source : Data Processed, 2024

Based on the table above, the % mark up for each transportation truck on the Palembang - Jakarta route is as follows:

1. Colt Diesel

$$\% \text{ Mark Up} = \frac{\text{Rp. 1.000.000} + \text{Rp. 781.937}}{\text{Rp. 2.127.750}} \times 100\%$$

$$\% \text{ Mark Up} = 83,74\%$$

2. Engkel

$$\% \text{ Mark Up} = \frac{\text{Rp. 1.287.000} + \text{Rp. 1.103.687}}{\text{Rp. 3.127.750}} \times 100\%$$

$$\% \text{ Mark Up} = 76,43\%$$

3. Tronton

$$\% \text{ Mark Up} = \frac{\text{Rp. 2.472.222} + \text{Rp. 1.834.430}}{\text{Rp. 4.865.500}} \times 100\%$$

$$\% \text{ Mark Up} = 88,51\%$$

After obtaining the % mark up, the following will present the mark up for each shipment, where the mark up is the multiplication of the production cost by the % mark up.

**Tabel 8 Mark Up**

Jenis Truk	Production Cost (a)	% Mark Up (b)	Mark Up (c = a x b)
Colt Diesel	Rp. 2.127.750	83,74%	Rp. 1.781.777
Engkel	Rp. 3.127.750	76,43%	Rp. 2.390.539
Tronton	Rp. 4.865.500	88,51%	Rp. 4.306.454

Source : Data Processed, 2024

After the % mark up is obtained, the shipping rate is calculated using the formula:

$$\text{Shipping Rate} = \text{Production Cost} + \text{Mark Up}$$

**Table 9 Determination of Expedition Service Rates Using the Full Costing Method**

Truck Type	Tonase Minimum (a)	Production Cost (a)	Mark Up (c)	Minimum Rate (d = b + c)	Rate (e=d : a ) ( Kg )
Colt Diesel	12.000 kg	Rp. 2.127.750	Rp. 1.781.777	Rp. 3.909.527	Rp. 325
Engkel	20.000 kg	Rp. 3.127.750	Rp. 2.390.539	Rp. 5.518.289	Rp. 275
Tronton	35.000 kg	Rp. 4.865.500	Rp. 4.306.454	Rp. 9.171.954	Rp. 262

Source : Data Processed, 2024

## DISCUSSION

### Classification Of Variable Costs And Fixed Costs

The main basis in determining shipping rates with the Variable Costing approach is the determination of prices that must be able to cover all full costs, where the full cost is the sum of variable costs with fixed costs and expected profits. For this reason, it is necessary to group costs. Cost grouping is a process of classifying all cost elements into more specific groups so that they function as explanatory information. The grouping of costs carried out is the grouping of production costs and non-production costs. The cost classification is as follows:

#### Variable Cost

Variable costs are company costs that can change proportionally depending on the production issued. Variable costs can increase or decrease depending on the company's production volume. Variable costs will increase when production increases and decrease when production also decreases, unlike fixed costs which are independent of the production process.

The costs that constitute variable costs at PT Indah Maju Island are:

a. Solar

The cost of diesel is the cost incurred by the company to buy diesel so that the transportation truck can run smoothly. The costs incurred by the company depend on the route of the transportation trip. The current diesel price is Rp. 5,150/liter.

b. Ferry Ticket Cost

The cost of ferry tickets is the cost incurred by the company when the transportation truck route must cross the island. The cost of ferry tickets for colt diesel trucks is Rp. 400,000, crank Rp. 750,000, and tronton Rp. 1,150,000.

c. Toll Costs

Toll fees are the costs that companies have to pay for tolls. Because by using tolls, transportation trucks will arrive faster than not using tolls. The toll fee for colt diesel trucks is Rp. 384,000, crank Rp. 578,000, and tronton Rp. 928,000.

## d. Ampera Cost

Ampera costs are costs that must be incurred by the company when the transportation truck is at the transportation and unloading site. Ampera cost stands for "Mandate for People's Suffering" which is paid to porters, and is also the cost of parking the transportation truck.

## e. Driver Wage Costs

Driver wage costs are costs that must be incurred by the company to pay driver wages according to the route he takes.

Based on the data that has been obtained, the following will present the components of production costs and non-production costs in the form of a table as follows:

**Table 10 Variable Costs And Fixed Costs Of Colt Diesel Trucks**

Type of Cost	Variable Cost (IDR)	Fixed Cost (IDR)
Solar Cost	Rp. 643.750	
Ferry Ticket Cost	Rp. 400.000	
Toll Fee	Rp. 384.000	
Ampera Fee	Rp. 300.000	
Driver's Wage Cost	Rp. 400.000	
Incidental Costs	Rp. 300.000	
Service Fee	Rp. 200.000	
Depreciation Fee		Rp. 750.000
Vehicle registration fee		Rp. 74.354
Kir fee		Rp. 16.666
Total	Rp. 2.627.750	Rp. 841.020

Source : Data Processed, 2024

**Table 11 Variable Costs And Fixed Costs Of Engkel Trucks**

Type of Cost	Variable Cost (IDR)	Fixed Cost (IDR)
Solar Cost	Rp. 849.750	
Ferry Ticket Cost	Rp. 750.000	
Toll Fee	Rp. 578.000	
Ampera Fee	Rp. 350.000	
Driver's Wage Cost	Rp. 600.000	
Incidental Costs	Rp. 300.000	
Service Fee	Rp. 400.000	
Depreciation Fee		Rp. 1.037.000
Vehicle registration fee		Rp. 115.027
Kir fee		Rp. 22.222
Total	Rp. 3.827.750	Rp. 1.174.249

Source : Data Processed, 2024

**Table 12 Variable And Fixed Costs Of Tronton Trucks**

Type of Cost	Variable Cost (IDR)	Fixed Cost (IDR)
Solar Cost	Rp. 1.287.500	
Ferry Ticket Cost	Rp. 1.150.000	
Toll Fee	Rp. 928.000	
Ampera Fee	Rp. 600.000	
Driver's Wage Cost	Rp. 900.000	
Incidental Costs	Rp. 300.000	
Service Fee	Rp. 500.000	
Depreciation Fee		Rp. 2.222.222
Vehicle registration fee		Rp. 128.027
Kir fee		Rp. 22.222
Total	Rp. 5.665.500	Rp. 2.372.471

Source : Data Processed, 2024

To calculate the cost of truck registration tax is as follows:

1. Colt Diesel

Taxes STNK = Rp. 3.569.000 : 12 month

Taxes STNK = Rp. 297.416 / month

Taxes STNK = Rp. 297.416 : 4 rute

Taxes STNK = Rp. 74.354 /rute

2. Engkel

Taxes STNK = Rp. 4.141.000 : 12 month

Taxes STNK = Rp. 345.083 / month

Taxes STNK = Rp. 345.083 : 3 rute

Taxes STNK = Rp. 115.027 /rute

3. Tronton

Taxes STNK = Rp. 4.609.000 : 12 month

Taxes STNK = Rp. 384.083 / month

Taxes STNK = Rp. 384.083 : 3 rute

Taxes STNK = Rp. 128.027 /rute

The cost of driving colt diesel, crank, and tronton trucks is the same at Rp. 400,000 per 6 months. To calculate the kir truck is as follows:

1. Colt Diesel

cost Kir = Rp. 400.000 : 6 month

cost Kir = Rp. 66.666 / month

cost Kir = Rp. 66.666 / 4 rute

cost Kir = Rp. 16.666 /rute

## 2.Engkel

cost Kir = Rp. 400.000 : 6 month  
cost Kir = Rp. 66.666 / month  
cost Kir = Rp. 66.666 / 3 rute  
cost Kir = Rp. 22.222 /rute

## 3.Tronton

cost Kir = Rp. 400.000 : 6 month  
cost Kir = Rp. 66.666 / month n  
cost Kir = Rp. 66.666 / 3 rute  
cost Kir = Rp. 22.222 /rute

## CONCLUSION

From the data analysis that has been conducted, the following conclusions can be drawn: There is no significant difference in the steps of determining freight rates. The absence of these differences lies in the basis for determining the tariff. The Full Costing and Variable Costing approaches place costs as the basis for determining rates, while PT Pulau Indah Maju in determining rates considers the distance of shipments and the weight or size of shipments which indirectly also shows consideration of costs with the assumption that the longer the distance or the larger and heavier the goods sent, the higher the costs required.

## SUGGESTION

Based on the research conducted and referring to the results of data analysis, the authors propose the following suggestions; seeing the development achieved by PT Pulau Indah Maju Palembang to date, the steps for determining the delivery of goods can be maintained. However, it is better if PT Pulau Indah Maju Palembang also considers the Full costing and Variable Costing approaches.

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