

COMPARISON OF TRANSPORTATION COSTS BETWEEN INTERNAL AND EXTERNAL VEHICLES A CASE STUDY OF TOUCH BOUGAINVILLEA, TALAD, KRATHUM BAEN, SAMUTSAKHON

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ABSTRACT

A study on the comparison of transportation costs between internal and external transport vehicles. A case study of Suan Touch Fueng Fa, Talat Subdistrict, Krathum Baen District Samut Sakhon Province whose objectives are To study the comparison of transportation costs between in-house transport vehicles and out-of-house transport vehicles and to decide on the choice of transportation services between corporate vehicles and external transport vehicles.

This research is a qualitative research. The tools used for data collection are interviews and the use of ABC (Activity-based costing) theory of the activity-based costing system. (Activity-Based Costing) or the ABC system is a tool for Manage work in the manner of Value-Based Management which connects management Enterprise level sign Carry out daily tasks taking into account the responsibilities of each departments throughout the business In a cross-functional perspective, the organization's activities are viewed as a whole (Integrated View). He understands all cost behaviors that occur within the organization, so he knows what are the factors that Increase or decrease the cost of activities by identifying the activities of the cost organization.

From the results of this research study, it was found that in transporting 10,000 bougainvillea trees by a 6-wheeled external transport vehicle, it would be more cost-effective than using a 4-wheeled internal and external transport vehicle due to the factors that The important thing is the lower cost and other factors that make the car Transportation outside the organization in the type of 6-wheeled vehicles is more cost-effective in terms of faster time. Due to the amount of 10,000 plants per order, the use of a 4-wheeled transport vehicle requires a total of 4 transport trips in order to transport the goods in full. But the 6-wheeled external transport vehicle has only one trip, which can save both time and fuel costs. Labor, maintenance and car insurance As a result, the transportation cost is cheaper and the quality is more consistent with the research of Suthida Kasetkarun (2009). logistics service The results of the study revealed that the factors affecting the decision to choose an outsourcing service provider were the quality of services. and the price factor that is more cost-effective than using a transport vehicle within the organization

Keywords: Comparison of transportation costs

INTRODUCTION

Nowadays, location is an important and necessary aspect of controlling various control areas. Or any office organization must have a place together and be a part. Gardens are one of the important historical places in such places. It will focus on the outside or outdoors in areas that reveal boundaries or are small and can change the size of the space of that place. The main element of gardening is trees. Because trees are important in many ways, besides decorating the place, they also help to create good air for that area as well. Nowadays, we

often encounter activities that promote tree planting. One important reason is that trees will help increase oxygen, which is the main natural gas that living things need, as well as help reduce various environmental problems. such as global warming, etc., causing trees to fall into the demand of many groups of people or organizations. Touch Bougainvillea is a business that started with a small area behind the house. After 4-5 years, it began to expand the cultivation area and have more space to sell products. The tree transport business includes plants such as purple wood, white purple wood, colored wood, Japanese banyan tree, glass tree, bougainvillea tree, pandanus tree, golden urai tree, squid tentacle tree, donya tree, red tea tree, Philippine bamboo, needle tree, dwarf oleander tree, and dwarf banyan tree. The garden has an area of 10 rai. Located at Soi Sukhumvit, Talat Subdistrict, Krathum Baen District. Samut Sakhon Province One tall pickup truck (2.5 meters) can transport 750 plants in an 11-inch pot at a time. Black bags can hold 2,000-3,000 small plants at a time. The bags can carry 150 Ratchaburi jars. Due to the large size of the garden, there is a need to hire more labor and deliver more products. Because customers know more Business expansion therefore has increased costs. From the value of cultivation Labor costs to maintain products and fuel costs are constantly changing. Due to the tree transportation business There is a problem with planning and managing the transportation of trees. Because there is only 1 vehicle used for transportation, the number is not sufficient for the transportation cycle. The researcher therefore saw that the study of the transportation problems of goods was not timely because there was only 1 vehicle. A vehicle that can be used to transport goods. This is not sufficient for the number of products that our business needs to deliver according to the product list each day. As a result, our business has to hire Hired vehicles are added to manage the transportation of goods. This causes businesses to have increased costs from constantly fluctuating oil costs and increased labor costs. In the case that the business does not have enough transport vehicles to carry the estimated amount of trees that the customer orders, it causes the customer to be dissatisfied with the delayed delivery time. And there may be too many products included, causing damage to the products, causing customers to be unimpressed. There may be parts that may cause the opportunity to lose customers or speak in a bad light to the business. This is very detrimental and may cause new customers who come in to lose confidence in product delivery, which is a very severe impact on the business. In terms of transportation costs of the business, it causes time lost in transporting goods if the destination for sending goods is not on the same route, resulting in fuel costs. and labor costs without reason, therefore it is necessary to find a solution to this problem and has seen a way to use the business of hiring outside transportation vehicles as an option that meets the needs and is the most cost-effective.

From the study, hiring external transportation vehicles (Out Source) has both advantages and disadvantages. The advantage is to help reduce the burden of expenses and be able to control transportation costs to be lower. and results in increasing the capacity of transportation It also increases efficiency for other parts of the business because employees have the opportunity to reach their full potential. The disadvantage is Performance of businesses that are outsourced transportation vehicles. There is often a change of staff members frequently, which may cause a lack of skills and expertise to continue operations. of the employer, including feelings of obligation or responsibility for the business of the employees who hire them and there is a conflict gap in working together between the employees of the outsourced transport contractor (Out Source) and the business, consistent with the research of Matniya Saechua (2015). The results of the study found that Most businesses choose to hire full-time employees for their own business for cost reasons. Performance and reliability because You can control your own expenses and can manage them. It's easy to work efficiently. and consistent with the research of Mr. Chatchaphon Thongtheppairojan (2014). The research results found that Transporting goods using business

vehicles is more cost-effective than external vehicles. While the research of Suthida Kasetkarun (2009) studied the factors in selecting external service providers. Logistics service by frozen food operators The results of the study found that At present, 68.28 percent have chosen to use external service providers, and in the future it is found that 94.48 percent will choose to use them, increasing percentages. 26.20 As for the factors affecting the decision to use an external service provider, it is the quality factor of service provision. and price factors.

For this reason, the research team is interested in studying the comparison between business transport vehicles and hiring external transport vehicles (Out Source) in order to compare and analyze the cost effectiveness between business transport vehicles and hiring external transport vehicles. (Out Source)

OBJECTIVE

1) To study the comparison of transportation costs between business transportation vehicles and hiring external transportation vehicles (Out Source).

2) In order to make a choice in selecting transportation services between business transportation vehicles and hiring external transportation vehicles (Out Source).

RESEARCH METHODOLOGY

In this study, the main informants consisted of 1 operator of Taj Bougainvillea Park, 1 4-wheel vehicle type, 2 operators of transportation vehicles outside the organization, 1 4-wheel vehicle type, and 1 6-wheel vehicle type. Transporting 10,000 bougainvillea trees, pot size 6 inches, from Touch Bougainvillea Garden, Talat Subdistrict, Krathum Baen District. Samut Sakhon Province to Khlong 15, place name Uthai Phan Mai, Ban Na Subdistrict, Bang Pla Kot District Nakhon Nayok Province.

The research tools Open-ended interviews with information on costs of fuel, labor, fuel, materials, and maintenance. A case study of Suan Touch Fueang Fa, Talat Subdistrict, Krathum Baen District. Samut Sakhon Province. By conducting a structured interview about transportation costs in 2 parts: 1. General information of the interview respondents. 2. Basic information about Touch Bougainvillea Garden. The research team has studied the theory of ABC: Activity Based Costing to compare the cost of transportation between transportation vehicles within the organization and transportation vehicles outside the organization. The researcher collected Information from all interviews obtained Take it to proceed with the next research process.

RESULTS

Results of the study from comparing transportation costs between transportation vehicles within the organization and transportation vehicles outside the organization. From the study, it was found that preliminary data shows that Suan Touch Bougainvillea sells plants such as Bougainvillea, Thongurai, and Ink, which has details of the number of tree shipments each time customers order and annual tree sales in 2021 as shown in the following table.

Table 1 The table shows sales of each type of plant from Touch Bougainvillea Garden in 2021.

No.	list	Quantity (ton per year)	price (baht per ton)	price (baht per year)	Delivery	quantity (ton at a time)
1	Potted Bougainvillea 6 inches	360,000	11	3,960,000	Uthai Panmai Nakhon Nayok	10,000
2	Potted Bougainvillea 11 inches	19,200	30	576,000	Uthai Panmai Nakhon Nayok	800
3	Thongurai	8,400	30	525,000	Sanam Luang Bangkok	700
4	Squid tentacles	4,200	30	126,000	Din Daeng Police Department Bangkok	700

From the table of tree sales of Touch Bougainvillea Garden in 2021, the study found that Sales of tree types Bougainvillea in a 6-inch pot is the #1 best seller in Touch Garden's Bougainvillea. With each order amounting to 10,000 plants per time and total sales amounting to 360,000 at the beginning of the year, the total value is 3,960,000 baht per year From Touch Bougainvillea Garden Samut Sakhon Province Go to Uthaiphanmai Nakhon Nayok Province. Therefore, the research team compared transportation costs between transportation vehicles within the organization and transportation vehicles outside the organization. Transporting Bougainvillea plants in 6-inch pots from Touch Bougainvillea Garden. Samut Sakhon Province to Uthai Phan Mai Nakhon Nayok Province By applying ABC (Activity-Based Costing) theory to process and analyze data. To achieve the research objectives The details of processing and analyzing transportation cost data are as follows:

Table 2: The table shows the types, number of cars and loads both within the organization and outside the organization.

Car type	Quantity (cars)	Load weight (tons)
within the organization 4 wheels	1	1.5
Total	1	
Outside the organization 4 wheels	1	1.5
6 wheels	1	4
Total	2	

From the table, it can be seen that there is 1 4-wheeled vehicle within the organization and 1 4-wheeled vehicle and 1 6-wheeled vehicle outside the organization.

Table 3: Compare transportation costs between transportation vehicles within the organization and transportation vehicles outside the organization.

details	Transportation vehicles within the organization (4 wheels)	Transport vehicles outside the organization (4 wheels)	Transport vehicles outside the organization (6 wheels)
1. Type of vehicle used for transportation	High stall pickup truck (4 wheels)	High stall pickup truck (4 wheels)	6 wheel truck
2. Cost			
- Fuel costs	800 baht/trip 3,200 baht/4 trips	800 baht/trip 3,200 baht/4 trips	1,500 baht/trip
- Labor costs	1,938 baht/trip 7,752 baht/4 trips	1,500 baht/trip 6,000 baht/4 trips	7,600 baht/trip
-Maintenance costs	320 baht/trip 1,280 baht/4 trips	320 baht/trip 1,280 baht/4 trips	600 baht/trip
-Car insurance cost	12,000/year (1st floor) 333 baht/4 trips	18,000/year (1st floor) 500 baht/4 trips	45,000/year (1st floor) 1,200 baht/4 trips
3. How long does it take to transport trees	12 hours	12 hours	4 hours
4. Number of trips in each transport	10,000 tons / 4 trips	10,000 tons / 4 trips	10,000 tons / 1 trips
5. Includes all transportation costs.	12,565 baht /order 1 time	10,980 baht /order 1 time	10,900 baht /order 1 time

From the table, it can be seen that the cost of transportation vehicles both inside and outside the organization in one order must transport trees. Bougainvillea type, 10,000 trees, which using a 4-wheel transport vehicle requires the use of 4 trips per trip, taking approximately 12 hours, but using a 6-wheel transport vehicle, only 1 trip per trip is required. It took about 4 hours to transport. with the total cost of transportation of transport vehicles within the organization and transport vehicles outside the organization 4-wheeled transportation vehicles as follows: Transportation costs of transportation vehicles within the organization equal to 12,565 baht per 1 order and transportation costs of transportation vehicles outside the organization equal to 10,980 baht per 1 order. and transportation costs of transport vehicles outside the organization A 6-wheeled transport vehicle has a transportation cost of 10,900 baht per order.

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