

PROFIT PLANNING MODEL USING THE COST-VOLUME- PROFIT ANALYSIS APPROACH (CASE STUDY IN CV TRANSTREK INDONESIA BATU MALANG)

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ABSTRACT

CV. Transtrek Indonesia is a company engaged in human resources development services especially Outwardboud Training. The company realizes that there are potential markets for outwardboud activities which can be targeted for business opportunity. This study aimed to help the company management to design the sales and profit targets using cost-volume-profit analysis for profit planning model.

This study is a qualitative study using case study and the data was collected using direct observation, interview and document, especially referring to Cost-Volume-Profit Analysis of the 2015. The results indicated that in order to determine profit planning, company was able to perform Cost-Volume-Profit analysis by simulating the sales level related to the price changes, sales volumes, variable cost, as well as fixed cost to obtain target profit.

Keywords: Profit Planning Model, Cost-Volume-Profit Analysis Approach

INTRODUCTION

Nowadays the activities in the service sector in Human Resource Development, especially in Outwardboud Training showed a lot of improvement. Outwardboud Traning is actually a series of activities that can be useful to form individual characters through the training for the corporate employees and other enthusiasts. Outwardboud becomes one of the interesting products seriously considered in the service business. Each business certainly has own advantages in triggering the competition. Competition and price are the factors of competitions. With the variation of price offered, the companies pay less attention to the optimal profit. The company concerned only the income without considering to expenditures, due to the poor plan. Planning is one important factor in carrying out all the activities of the company. Hence, company planning will be able to facilitate management tasks to achieve goals to determine the profit. Obtaining optimal profit, management should be able to make various efforts, including: determining sales price, increasing sales volume and efficiencing costs. These steps cannot be separately taken because of the close relationship of costs, sales volume and sales price. The sales price possibly affects the sales volume, where it will affect the production volume (cost) which is resulted in the profit.

According to Verawati (2004) CVP analysis indicated the profitable or unprofitable sales extent as well as became an important part in profit planning, as it is used to assist managers in designing profit planning calculations and sales budgets accurately. Patni (2015) argued that CVP analysis was an analysis of cost evolution models pointing out the relation of cost,

production volume and profit as well as a foresight of managerial control. The method includes a set of problem solving based on understanding the characteristics of the company costs evolution models.

CVP analysis has several advantages, as providing a variety of useful information to analyze the factors affecting the expected profit planning (Hartanto, 2004). Profit planning is a target profit considered to the expected sales and costs the following year in the long periods (Pelawiten, 2014). Kirlioglu and Baral (2012) stated that proper profit planning, correctly decided, depends on realistic costs. Koraag and Ilat (2016) argued that CVP analysis helps to understand the mutual relation of cost, sales volume, and profit. By conducting CVP analysis, management possibly obtain the minimum level of sales information in order to avoid the loss.

CV. Transtrek Indonesia is a company engaged in human resources development services especially in Outwardboud Training, the company viwed the big potential market for outwardboud activities. Outwardboud Training organized by CV. Transtek Indonesia is divided into various programs, namely: Outwardboud Team Building, Outwardboud & Rafting, Outwardboud Team Building + Rafting and OB Team Building Program + Rafting + War Game and Tailor made Program.

In order to obtain target profit, the company is focused on the results and not considered to the operational loads which are impacted on the profit obtained, so management had difficulty in formulating policies related to sales and profit planning. The problem of the study was whether the conventional approach using cost-volume-profit analysis was an appropriate model for profit planning. The study aimed to help the company's management to design the level of sales and target profit using cost-volume-profit analysis model.

LITERATURE REVIEW

Profit Planning

Profit planning is the foresight to decide the action that should be done in order to achieve certain goals (Hansen & Mowen, 2005). According to William and Usry (2006) profit planning was accurate calculated work plan where the financial implications were expressed in form of projected income, balance, cash and work for the long and short terms. This aspect is related to the plan in sales of various loads thoroughly and the plan will be developed in detail and integrated into a comprehensive entity.

A profit planning is possibly to be obtained when the management successfully runs the company as measured by the total profit. Therefore, the profit planning is a management plan covering all operation phases in the future to achieve company goals divided into short and long term plans. Profit planning is useful as a guideline in running the company's operational activities, although the preparation is difficult because of influence of the factors out of management control which is difficult to predict, including the changes of consumer behavior, information technology, social behavior, competitor strength, demography and politics. According to Carter & Usry (2009), profit planning is useful for (1) providing disciplined approach to identify and resolve problems, (2) providing direction at all levels of management, (3) improving coordination, (4) acquiring ideas and cooperation of all levels of management, and (5) evaluating actual performance as well as improving capabilities of each individual related to efficient work planning.

Target Profit Procedure

According to Tunggal (2014), there are three target profit procedures applied in company management:

- a. A priori
- b. A posteriori
- c. Prematic

Cost-Volume-Profit Analysis

The cost-volume-profit analysis (CVP) analysis is a useful to design the profit planning and decision making, since it emphasizes the cost linking, quantity sold, and price (Hansen & Mowen, 2005). The CVP analysis is a common instrument used to provide information for management to decide the policy, for examples setting the sales prices, selecting mixed sales, and analyzing changes of variable cost and fixed cost to company's profitability Simamora, 2002).

Sipayung (2008) argued that cost-volume-profit analysis is a very useful to help management carrying out its functions, as well as to help understanding the relationship among cost, volume, and profit organization by focusing the relationship of 5 elements of product price, sales volume or activity level, variable costs, total fixed costs, and product mixed sales. In decision-making related to profit planning using cost-volume-profit analysis, the cost is classified according to the behavior of fixed costs, variable costs and semi-variable costs. In order to make accurate decision-making, the semi-variable cost should be separated into fixed costs and variable costs (Satriani et al., 2015).

CVP Analysis Concept

Several concepts in cost-volume-profit (CVP) analysis related to profit planning are described as:

a. Contribution Margin

Contribution margin is the balance of sales subtracted variable cost which is used to cover all fixed costs and becomes the profit (Garrison *et al.*, 2008).

Contribution margin (IDR) = Sales – Variable costs

b. Breakeven Point

Breakeven point is sales level where the profit is zero (Garrison *et al.*, 2008), formulated as:

$$\text{Breakeven point (IDR)} = \frac{\text{Fixed cost}}{\text{Contribution Margin Ratio}}$$

c. Target Profit Analysis

Target profit analysis is used to determine the amount of minimum sales that should be obtained to determine the targeted profit, formulated as:

Sales (unit) = (fixed cost + Target profit)/Contribution Margin per unit, or;

Sales (IDR) = (fixed cost + Target profit)/Contribution Margin Ratio (Garrison *et al.*, 2008).

d. Margin of Safety

Margin of safety is difference between sales planning and breakeven, formulated as:

Margin of safety = sales – breakeven point (Simamora, 2002)

$$\text{Margin of Safety Ratio} = \frac{\text{Margin of Safety Ratio}}{\text{Total sales}} \times 100\%$$

e. Leverage Operation

According to Samryn (2012) leverage operation is used to understanding how the profit changes, if there is sales increase or sales decrease, formulated as:

$$\text{Degree of Operating Leverage} = \frac{\text{Contribution Margin}}{\text{Net profit}}$$

CVP Assumption

Assumptions in CVP analysis according to Hansen & Mowen (2005) are:

- a. The analysis assumes the function of linear incomes and costs.
- b. The analysis assumes that price, total fixed costs, and variable costs per unit are identified accurately and constantly along with the range of relevant.
- c. The analysis assumes that what is produced can be sold.
- d. In multi-product analysis, the mixed sales presumably known.
- e. Sales price and cost are presumably determined.

Whether the assumptions which underlie the CVP analysis according to Simamora (2002) are:

- All costs are classified as variable costs or fixed costs, furthermore the mixed costs are sorted into variable and fixed variable elements. The function of the total costs is linear in the relevant range of normal business activities.
- The function of the income is linear in the relevant range; sales price per unit is considered constant in the range of production volume. The income changed is linear to the change in product unit sales; and the average sales price per product unit is constant.
- The product analysis or the various product mixed sales analysis is constant in the relevant range. If the product has different sales prices and costs, the changes in mixed sales will affect the results of cost-volume-profit analysis.
- There is only one cost driver: product unit volume or sales (IDR).
- In the manufacturing company, the inventory levels at the beginning and the end of the period are same, It implies that the unit numbers produced during the period are equal to the units sold.

CVP Main Element

According to Samryn (2012), the main elements in cost-volume-profit are:

- a. Product sale price
- b. Sales volume or activity level
- c. Variable costs per unit
- d. Total fixed costs
- e. Composition and product combination are sold

Relation between Profit Planning and CVP Analysis

Cost-volume-profit (CVP) analysis is managerial planning equipment which provides information to the manager relating to operational level, costs, income level through breakeven point of profit planning. These challenges require management to maximize one of its roles, namely sales planning and profit planning (Two et al, 2015). Practically, the challenge faced by most corporate managers is how to assess and to control the key variables in order to determine the company performance from profit planning. The study conducted by Kipesha (2016) showed that the company initially experienced some failures, but it was able to improve the performance related to sales volume, cost control and profit planning using cost-volume-profit model. Challenges often faced by small firms are managers unable to judge and control the company and lack of financial statement knowledge needed to perform cost-volume-profit analysis. A manager should be able to assess and control the key variables of company performance. According to Carter & Usry (2009) preparing a profit plan related to the use of cost-volume-profit model, management should be able to understand and to combine all factors

affecting the profit level. One of the concepts used to arrange the profit planning is Cost-volume-profit analysis.

Thinking Framework

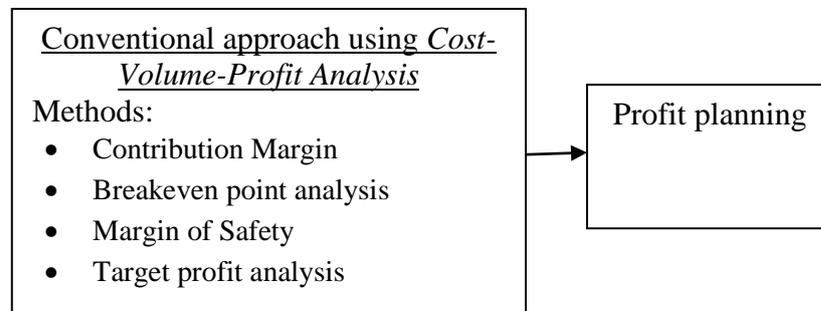


Figure 1. Thinking Framework

RESEARCH METHODS

This study was qualitative study using case study approach which was study using problem characteristics with the current situation and the environment interaction as the background (Indriantoro dan Supomo, 2013). The subject of the study was CV. Transtrek Indonesia, Batu Malang. Data collection technique was literary study using observation, interviews, and documents which were related to the *cost-volume-profit* analysis in 2015.

RESULT AND DISCUSSION

Volume and Total Sales

The volume dan total sales of CV. Transtrek Indonesia in 2015 for *Outwardboud Team Building + Rafting+WarGame* activites were seen in table 1

Table 1. Total Sales

No	Outwardboud Activities	Volume	Selling Price (IDR)	Total Sales (IDR)
1	<i>O.TeamBuilding+Rafting+War Game</i>	32	990,000.00/team	31,680,000.00
2	<i>O.Team Building + Rafting</i>	100	950,000.00/team	95,000,000.00
3	<i>O.Team Building + Rafting</i>	125	900,000.00/team	112,500,000.00
4	<i>O.Team Building + Rafting</i>	24	850,000.00/team	20,400,000.00
5	<i>O.Team Building + Rafting</i>	40	400,000.00/orang	16,000,000.00
6	<i>Rafting</i>	96	200,000.00/orang	19,200,000.00
	Total			294,780,000.00

Cost Classification

Cost classification is performed based on cost behaviors which are fixed cost and variable cost. The cost classification data was seen in table 2.

Table 2. Cost Classification

Accounts	Variable Cost (IDR)	Fixed Cost (IDR)	Note
1. Electricity, water, and telephone cost	6.035.300	420.000	Fixed Expenses
2. Salary		47.150.000	
3. Administration and others		14.285.700	
4. Transportation	1.070.000		Tol and parking of <i>OTBR</i>
5. Rent Car		12.000.000	
6. Depreciation of fixed assets		4.000.000	Equipment Depreciation
7. Fuels	8.585.000		<i>OTBR activities</i>
8. Human Resource Development		15.000.000	Hiring Experts
9. Marketing Cost	7.250.000		Advertisement, Brochures
10. Training Equipment	39.325.000		Indoor & outdoor equipment
11. Trainer Fees	30.100.000		Trainers and instructors
12. Freelance Marketer	12.950.000		Salesmen fees
13. Task Force Fee	24.300.000		Fasilitator
14. Training Administration Fee	40.870.000		Hotel and meal for trainees
15. Other expenses	1.961.000		
Total	172.446.300	92.855.700	

Contribution Margin

Contribution Margin is the balance of sales subtracted variable cost which is used to cover all fixed costs and becomes the profit (Garrison *et al.*, 2008).

Contribution margin (IDR) = Sales – Variable cost

Table 3. Contribution Margin

Note	Total (IDR)	Percentage (%)
Selling	294,478,000.00	100
Variable Cost	(172,446,300.00)	(58.5)
Contribution Margin	122,333,700.00	41.5
Fixed cost	(92,855,700.00)	
Net profit	29,478,000.00	

After calculating the contribution margin, the income statement was prepared using contribution margin form as seen in table 3. It showed 41.5% meaning the company was able to cover all fixed costs. The bigger the contribution margin is, the more possibilities company covers the fixed cost to obtain profit.

Breakeven Point Analysis

Breakeven point is the sales where the profit is zero (Garrison *et al.*, 2008) formulated as:

$$\text{Breakeven (IDR)} = \frac{\text{Fixed cost}}{\text{Contribution Margin Ratio}} = \frac{92,855,700.00}{0.415}$$

$$\text{Breakeven point (IDR)} = 223,748,675.00$$

It means that the breakeven sales were 223,748,675.00, so CV. Transtrek Indonesia was able to cover all fixed and variable loads which made the company's sales limit was categorized as even (no profit, yet no loss, obtain the breakeven point).

Margin of Safety

Margin of safety is the difference between sales planning and breakeven sales determined using the formula as:

$$\text{Margin of safety} = \text{sales planning} - \text{break event sales (Simamora, 2002)}$$

$$\text{Margin of Safety} = 294,780,000.00 - 223,748,675.00 = 71,031,325.00 \text{ IDR}$$

$$\begin{aligned} \text{Margin of Safety Ratio} &= \frac{\text{Margin of Safety}}{\text{Total Sales}} \times 100\% \\ &= \frac{71,031,325.00}{294,780,000.00} \times 100\% = 24.09\% \end{aligned}$$

Meaning that CV. Transtrek Indonesia should be able to maintain the sales in order to keep it above 24.09% margin of Safety ratio, so the company obtained the breakeven point.

Target Profit Analysis

Target profit was used to determine the targeted minimum sales in obtain the profit using the formula:

Sales (unit) = (Fixed cost + Target profit)/Contribution Margin per unit, or:

Sales (IDR) = (Fixed cost + Target profit)/Contribution Margin Ratio (Garrison *et al.*, 2008).

Based on cost classification, contribution margin, breakeven point analysis, and margin ratio, the target profit analysis can be alternatively determined from:

- a. If CV. Transtrek Indonesia expected to increase the target profit as 15% from sales assumed that fixed cost, variable cost, and sales were not changed, so the targeted minimum sales obtained was:

$$\text{Sales} = \frac{\text{Fixed cost} + \text{Target profit}}{\text{Contribution Margin Ratio}} = \frac{92,855,700.00 + 44,217,000.00}{0.415}$$

$$\text{Sales} = 330,295,662.65 \text{ IDR}$$

- b. If the fixed cost increased as 5% assumed that the variable cost, target profit, sales volume, and sales price were not changed, so the targeted minimum sales obtained was:

$$\text{Sales} = \frac{\text{Fixed Cost} + \text{Target Profit}}{\text{Contribution Margin Ratio}} = \frac{97,498,485.00 + 29,478,000.00}{0.415}$$

$$\text{Sales} = 305,967,433.73 \text{ IDR}$$

- c. If the sales volume increased as 5%, target profit increased as 11.68% from starting sales and variable cost increased as 5%, with the assumption the fixed cost and sales price were not changed, so the minimum targeted sales obtained was:

$$\text{Sales} = \frac{\text{Fixed cost} + \text{Target Profit}}{\text{Contribution Margin Ratio}} = \frac{92,855,700.00 + 34,445,700.00}{0.4128}$$

$$\text{Sales} = 308,385,174.42 \text{ IDR}$$

From the various assumptions and simulations related to profit planning, company management is able to select the best alternative action to obtain the biggest profit. Cost-Volume-Profit Analysis is not only able to figure the profit planning considering the changes of factors affecting target profit but it is also used as reference in sales planning at targeted profit.

CONCLUSION AND SUGGESTION

In conclusion, the management of CV. Transtrek Indonesia did not have budget and did not classify the costs based on cost behavior. The result of contribution margin showed 41.5% meaning the company was able to cover fixed costs in order to obtain the profit. Breakeven Point Analysis showed the sales of 223,748,675.00 IDR meaning the management was able to cover all fixed and variable loads, so the sale limits can be said as no profit, yet no loss (breakeven point). The result of security margin showed 24.09% meaning the management in making sales should not lower 24.09% from the budgeted sales in order the company to obtain the breakeven point. According to results of target profit analysis, the company was able to determine the minimum level of sales achieved related to the changes of target profit as 15% of sales price, 5% of fixed cost, and 5% of sales volume, as well as 5% of variable cost 5%.

Based on the conclusion, the study suggests that the management of CV. Transtrek Indonesia should classify the costs according to the cost behavior in order to apply cost-volume-profit analysis as the basis of sales and profit planning using contribution margin, breakeven analysis, security margin, and target profit analysis.

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