

Activity based costing report sample

Business, Company



Activity-based costing focuses on the activities on specific items and not the products of a given firm. In addition, activity-based costing effectively identifies specific activities within a firm whilst assigning the associated costs on the basis of the levels of consumption. Notably, activity-based costing is different from conventional costing on the basis that the former categorizes overheads as direct costs. Theoretically, Competition Bikers merger should not adopt activity based costing as a replacement of the conventional accounting system but as a complimentary or additional accounting system. This will help to transform the company's accounting process into an authentic state.

There may be sufficient incentives to support the change of costing from the current traditional system. In a traditional costing system, the cost of products may appear distorted because it uses a single, volume based cost driver. It is worth noting that traditional costing system allocates overheads based on the used direct labor thus making the costing system to appear inaccurate in terms of products costs. Notably, through traditional cost system product cause costs are assumed besides the fact that activity based system assumes that it is activities that cause such costs.

On the basis of cost/cause relationships, activity based system helps in improving the control of overheads. It is characterized by high flexibility. Flexibility feature enables activity-based costing to relate incurred costs to customers, production processes, and responsibilities of the management without confinement to the products only. Activity based costing is a scientific method of cost reduction that ensures an easy way of analyzing and justifying manufacturing cycle time improvements.

The company should consider switching to Activity Based Costing (ABC). This is because this approach will help the company determine the real cost of its products and will help make a decision whether to eliminate products that are unprofitable, adjust prices for products that are overpriced therefore making the company more competitive, and identify which of the processes involved are ineffective and should be eliminated.

Based on the traditional and ABC examinations and computations, it is evident that the concerned company may rely on the differential of costs to reduce titanium frame's selling price whilst at the same time increasing carbon frame's selling price. Activity-based costing illustrated in the following table indicates the real profit level for the company on the assumption that there are no changes in the selling prices of the two main products:

According to computations of the traditional costing, the firm is likely to attain a profit level of 236, 300 whilst ABC computation yields a profit level of 237, 100. Titanium contribution to this amount is higher than that of carbon frames. Precisely, ABC computation shows a 30% higher profit level for titanium whilst the ABC computations shows a 74% lower profit level for carbon that the amount indicated in the traditional computations.

Consequently, there is room for increasing carbon frame's selling price in a bid to increase its contribution whilst at the same time reducing the titanium's contribution through reduction of its selling price. The main aim of this strategy would be to attract and command a higher market share for both the products.

Break Even Points

Breakeven point of an organization is attained at the point where the total revenue equals total costs hence there are neither profits nor losses.

Breakeven point is obtained from the following formula:

$$T. R = T. C, \text{ which is given by } P * X = TFC + V * X$$

$$P * X - V * X = TFC, \text{ which translates into } (P-V) * X = TFC$$

$$X = TFC/P-V$$

Where:

T. C = Total Costs

T. R = Total Revenue

TFC = Total Fixed Costs

X = Sales

V = Unit Variable Cost

P = Unit Sales Price

According to the above calculations, the breakeven units are 2, 201 units for both the products. From these units, 786 represent the units for carbon frames and 1, 415 units are for titanium frames. In dollars, the company will attain breakeven at the 2, 448, 570 point.

Cost-volume-profit (CVP) analysis is essential in examining changes in the levels of profit in respect to the sales volume, associated costs, as well as the prices of the product in question. Through CVP it becomes easier for a business organization to identify specific products to put emphasis on, volume needed for sales, minimum amount of revenue required to prevent loss, and to assess whether there has been an increase in fixed costs associated with production (Horngren, Harrison, & Oliver, 2009). The starting

point of CVP analysis is the profit function, which is given by the difference between total revenue and total costs.

$$\text{Profit} = \text{Total revenue} - \text{Total costs}$$

$$\text{Profit} = \text{Total Revenue} - \text{Total variable Cost} - \text{Total Fixed Cost}$$

On the other hand, the difference between total revenue and total variable costs results into contribution margin and the difference between selling price charged for every unit of a product and the variable cost per unit of the product results into contribution margin per unit (Gitman, 2008).

Contribution margin per unit helps in understanding how much revenue that can be derived from each unit that is sold by a business organization applicable on the fixed costs used in the production process.

$$\text{Profit} = P \cdot Q - V \cdot Q - F$$

$$\text{Profit} = (P - V) \cdot Q - F$$

Where; P = selling price per unit; V = Variable cost per unit

(P-V) = Contribution margin per unit

Q = Quantity of product sold (units of goods or services)

F = Total fixed costs

According to the above cost-volume analysis, the higher the contribution margin per unit (the different between the sales prices and variable cost) of a product the lower the quantity of units required to break even. For instance, comparing Titanium and CarbonLite of Competition Bike, it is evident that the contribution margin per unit of Titanium (221) is greater than the contribution margin per unit of CarbonLite (111). Subsequently, the break even units for Titanium (1415) are more than the break even units for CarbonLite (786).

According to Horngren, Harrison, and Oliver (2009), contribution margin may be termed as the contribution made by all the responsible products towards meeting the fixed costs involved in the production process as well as making profits. However, since at break even there are no profits, products will make contributions toward covering the fixed costs (Gitman, 2008). In this scenario, Titanium makes greater contribution towards covering fixed cost as compared to CarbonLite. On the other perspective, sales dollar for each unit of the product is indirectly proportional to the amount of contribution and break even units. For instance, Titanium has a selling price of 900 per unit while that of CarbonLite is 1495 per unit but the contribution and break even units for Titanium is higher than that of CarbonLite.

It is evident that the breakeven point of the sales mix increased by 1, 053 units to 3, 254 given the 10% increase in associated costs for all direct materials and a 50, 000 increase in the fixed costs. Moreover, the additions of costs caused the breakeven point to increase to 3, 61, 900 with the cost additions. In this quantity, there was an increase from 1415 to 2092 for the Titanium on one hand whilst the CarbonLite breakeven units increased from 786 to 1162 given the increase in fixed costs.

Increases in Fixed and Variable Costs

Horngren, Harrison, and Oliver (2009) discuss that the contribution made by each product within the break even analysis is to meet the fixed costs involved in production. Therefore, an increase in fixed costs would require further contributions from the products of the firm. However, since the selling price and variable cost remain constant, the contribution margin for each product would not change as well. In this perspective, meeting the

increased fixed cost would then require additional amount of units (Gitman, 2008). This explains why the break even units for Titanium and that of CarbonLite have increased. It is only through increasing the break even units that the firm will be able to meet the breakeven point given the fact that the selling price, variable costs, and contribution margins per unit have not changed.

It is important to note in the following table that the contribution margin has changed courtesy of the sales mix. Nevertheless, the selling price and variable cost have remained the same. In order for the organization to meet the increased fixed costs there is need to have an increase in sales mix hence the change in contribution margin. The following table provides an in-depth cost-volume analysis with respect to the Titanium and CarbonLite products in a bid to attain a breakeven point.

References

- Gitman, L., (2008). Principles of managerial finance (12th ed.). Boston, MA: Addison Wesley.
- Horngren, C., Harrison, W., & Oliver, M. (2009). Accounting (8th ed.). Upper Saddle River, NJ: Prentice Hall.