



University of Wales
Trinity Saint David

MANAGEMENT ACCOUNTING

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INTRODUCTION

Management accounting is providing financial details in this kind of manner as to facilitate administrators in developing a company's strategy and day-to-day activities. It concerns the company's overuse accounting data gathered with the assistance of financial accounting and cost analysis for policy implementation, preparation, monitoring and action taking. Management accounting is the process of determining, tracking, reviewing, understanding and relating financial information to supervisors for the purpose of achieving the objectives of an enterprise. The area of management accounting takes on a very important role in companies in current market climate as critical choices are made contributing to income maximization and value formation. Companies choose to monitor quality research that goes well beyond the value-based information given by conventional managerial accounting records from historical general ledger structures. This report is consisting of absorption and activity based costing with their advantages and disadvantages. Additionally, relevance of break even analysis in the 21st century companies produces multiple products and single products.

PART A

Methods of costing

1. Absorption cost of each type of stove

Information given in question of Hoffman Ltd

	Light weight	Megarange
Production units	4500	500
Direct Material	3 cost per unit	10 cost per unit
Direct labour	6.30 per hours (9hours)	6.30 (7 hours)
	16 hours per stove	15 hours per stove

Statement of absorption cost

Particular		LWs	MRs
Direct Material @ per unit	(4500*3) (500*10)	13500	5000
Direct Labour @ per hours	(500*6.30) (72*6.30)	3150	453.60
Overhead		33750	3750
		50400	9230.60
Allocated unit		4500	500
		11.20	18.40

Working Notes:

Allocated machine hours

67500: 7500

$LWs = 37500 \times 67500 / 75000$

$MRs = 37500 \times 7500 / 75000$

(1) Calculation of machine hours

	LWs	MRs
Machine hours per stove	15 Hours	15 Hours
No of stoves	4500	500
Total machine hours	67500	500

(2) Calculations of labor hours

$LWs = 1/9 \times 4500 = 500$ labor hours

$MRs = 1/7 \times 500 = 71.4286 = 72$ labor hours

2. Activity based costing

	LWs	MRs
Direct Material	13500	5000
Direct Labor	3150	453.60
Overheads		
Purchasing (360*50) (40*50)	18000	2000
Training (20*20) (20*30)	400	600
Setting up machines (60*25) (30*25)	1500	750
Running Machine (67500*0.19) (75000*0.19)	12825	1425
Total Cost	49375	10228.60
No of units	4500	500
Cost per unit	10.97	20.46

Statement of cost pool

Cost Pool	Cost	Cost Driver	Cost Drivers rate
Purchasing	20000	Purchase orders (360:40)	50
Training	1000	Training hours (20:30)	20
Setting up machine	2250	No of set ups (60:30)	25
Running Machine	14250	Machine hours (67500:7500)	0.19

3. Methods of costing

Absorption Costs

This type of expense is popular as the complete expense used in accounting. Absorption costs are all costs associated with production, these are variable costs, fixed costs, commodity costs. As the volume of work increases, operating costs change while fixed costs remain the same. Variable costs are the costs of raw materials, labor costs - (production machinery and personnel). The final cost of the product is mainly determined on the basis of variable costs.

Advantages

Absorption costing is considered an extraordinarily simplified method used in cost accounting. Cost of absorption take less time. The method is good for small businesses. Uses a single basis for cost guidance. It is more effective for companies with low overhead costs.

Disadvantages

Accounting and business professionals are of the opinion that the absorption approach does not produce accurate results. The main disadvantage of the method is the way it allocates and calculates overheads and fixed costs. This type of cost cannot be traced directly to the final value of the product produced. These costs exist regardless of whether the level of production is decreasing or increasing. Absorption costs will allocate overheads using a single base (such as machine time, labor, or number of units).

Activity-based costing

The activity-based costing method is new and effective in allocating costs at the operational level. By allocating activity costs, they can be allocated to subjects that have this type of practice. By managing the ABC method, the company can significantly reduce its operating costs. The activity-based cost method does an excellent job in complex operations when handling multiple types of goods.

Advantages

Activity-based costs are an effective and reliable way of determining the value of a product, and gives a clear idea of the company's assets. Using the ABC method, the company is well aware of the costs associated with administration, improve the management of the exploitation of activities that could result in an increase in the value of the product or service. By raising awareness, the company can easily reduce or eliminate completely activities that increase the price of the end product. Many effective ways of optimally allocating and reducing overhead can be implemented through this method. ABC enables helps optimize and improve production processes and more accurate measurement of productivity. ABC improves the competitiveness of the organization and gives managers a clear idea of the status of the company at every level of work.

Disadvantages

The activity-based costing method produces good results for different companies, but the organizations that mainly use it are large corporations that cooperate on a large scale, while for smaller companies ABC is not as applicable. ABC is not applicable to organizations that are characterized by low overhead costs. This method of calculating activity-based costs is a rather complex process over traditional methods of calculating production costs. Another disadvantage that makes it not applicable to some companies is that it requires a longer period of time to give the necessary conclusions for the company.

PART B

Break even analysis

A break even is a method by which the success of a company or commodity can be ascertained. It is used to numerically measure the product with the company has to sell to cover its costs. The analysis includes all fixed and variable costs and shows how many units need to be sold to generate revenue. A business with less fixed costs should usually have a higher break-even selling price. Following the equation above, the company will decide how several items it generates to break-even. When the company achieved this stage, all expenses (fixed costs) were collected in revenue or unit sales (Quinn and Jackson, 2014). Any incremental product selling

above this stage will lead to increased revenue for the company. The increase in income should be by the quantity of unit expenditure profit, and that is the quantity of extra income to support operational costs and benefit. It is calculable as follows:

Unit contribution margin equals Sale Price – Variable Cost

Types of calculation

Through unit: BEP normally is measured in kilograms that offer the organization the amount of kilograms it has to generate to break-even. It is determined by multiplying participation profit by overall fixed expenses:

Break even unit (in points) equals Fixed costs / Contribution margin per unit

Through sales value: The break-even level was determined in form of unit amount in the earlier example. BEP could be measured in the volume of sales). It can be achieved by multiplying the overall fixed costs of a business by ratio of investment profit.

Contribution margin = Contribution margin per units/Sales per unit

Components of break even analysis

- **Fixed cost:** Also called fixed costs, as the overhead cost. Such overhead costs arise after the decision is made to start a commercial operation and these expenses are directly linked to manufacturing costs, but not output quantities. Fixed costs comprise (but not restricted to) inflation, taxation, wages, mortgage, value of maintenance, labor costs, cost of electricity, etc. No cares how often selling certain expenses are static.
- **Variable cost:** Variable costs are expenses which will significantly reduce in particular terms of the amount of output. Such expenses comprise production prices, shipping costs, transport costs as well as other costs directly connected to the manufacturing.
- **Revenues:** Revenue is the income a company directly collects from its clients over a given time for the sale of goods and facilities. Rebates and discounts are already being modified, meaning that it is the accumulated profits through which specific expenses are

then excluded for the purpose of measuring capital gain. Total income can be determined by calculating the value the amount of copies sold sell products or services at.

- **Contribution margin:** It can measure the investment profit by deducting adjustable expenditures from the profits. The investment margin demonstrates that much of the business's income would contribute to paying the economies of scale. It can be represented either per component, or for the entire sum. It can also manifest itself as a proportion of gross profit.

Benefit of break even analysis

Catch missing expenses: When companies are planning a new venture, it's very likely that could worry about a few expenditures. Furthermore, if they are carrying out a break-even report, it will examine all financial obligations to assess break-even. Surely, this review reduces the amount of uncertainties down the track.

Set revenues target: When the break-even assessment is done, they'll find out how much require to legitimately making a return. This will allow to manager and their sales team set further achievable revenue objectives.

Arrange fund for business: In any marketing plan, the evaluation is a vital aspect. When some choose to finance company it is usually a necessity. They have to demonstrate that the proposal is feasible for enterprise to finance. In addition, if the research looks fine, it will be confident sufficient to take on the pressure of multiple sources of funding.

Better pricing: The break-even point would lead to improved selling the goods. This technique will be used widely to provide the best deal for a commodity that can get full benefit without growing the current value (Kotas, 2014).

Application of Break even Analysis

Cost calculation: Break-even calculation is commonly used it to assess how many items the client has to sell to prevent expenses. This measure allows the company to assess price of product, variable costs and fixed costs. When those statistics are calculated, the measurement of break-even stage in quantities or selling cost is relatively straightforward.

Budgeting and setting targets: Break-even maps and measurement is used for the cycle of money management, because the company knows precisely how often products it is appropriate to sell to break-even. In fact, the business is always mindful of the income that the company would be able to gain at different times, which can conveniently be demonstrated on a clear break-even map. This will help businesses set concrete, measurable objectives for themselves (Osborne and Ball, 2010).

Motivation tool: Break-even analysis also actually motivates workers, specifically the selling workers, as it clearly illustrates the earnings at different points of sales. The graph shows specifically what effect additional revenues will have on the business's competitiveness.

Cover fixed cost: A break even analysis is supported to covering all the fixed costs.

Make smarter decision: Business people often undertake emotionally driven actions about their companies. Excitement is essential, that is to say how feel, although it is not sufficient. To be a good businessman all choices should be supported by evidence.

How break even analysis works

In 21st century many organizations are using break even analysis whether manufacturing single product and multi products. There are discussing how to use this tool as per the requirement such as:

Break even analysis for Multi product

It is necessary to know the principle of a revenue mix in respect to execute a break-even calculation for a business that sells numerous goods or offers additional resources. A market mix reflects the binding affinities of the goods a business manufactures — that is, the ratio of overall company money coming from Commodity A, Commodity B, Commodity C, etc. For business owners and employees, sales mix is critical since they pursue a mix that enhances income, while not all goods get the same profitability.

In the break-even stage evaluation study that approach of measuring break-even level of a particular product business was addressed. It will clarify a multi-product business's method of measuring break-even point. A non-product enterprise indicates an organization that offers two or even more goods. A multiple brand business's computation break-even process is somewhat more complex than just a particular product business's.

The break-even point in a multi-product setting ultimately depends on the combination of goods offered. Furthermore, as the consumer composition varies, the break-even stage varies as well. If market changes and consumers buy more minimal-margin goods, the break-even point will then increase. Alternatively, the break-even level decreases if consumers buy further strong-margin goods. However, while overall sales dollars remain intact, the break-even stage can vary depending on the product combination (Maskell, Baggaley and Grasso, 2017).

A multi product organisation can apply this formula for breakeven point:

Break-even point = Total fixed expenses / Weighted average selling price – weighted average variable expenses

As per the particular formula the weighted average selling price is worked defined as below:

(Sale price of commodity A * Sale percentage of Commodity A) + (Sale price of commodity B * Sale percentage of Commodity B) + (Sale price of commodity C * Sale percentage of Commodity C)...

In a corporation with double and sometimes more items to compute break-even point, they need to consider the number of revenues of particular goods in the overall revenue mix. Such knowledge is used for estimating total weighted sale price and total average adjustable expenditures.

The weighted average variable expenses are as adopts:

(Variable expenses of manufactured goods A * sales percentage of commodity A) + (Variable expenses of manufactured goods B * sales percentage of commodity B) + (Variable expenses of manufactured goods C * sales percentage of commodity C)...

They get weighted average investment profit each product once weighted average contingent expenditures every item are removed from the weighted average sales wholesale price. So the equation here can be described as obeys:

Break-even point = Total fixed expenses / weighted average contribution margin per unit

There are presenting an example of the multi product and sort out through formulas

	A	B	C
Selling price	100	120	50
Variable cost per unit	60	90	40
Contribution margin per unit	40	30	10
Contribution margin ratio	40%	25%	20%

The company sells out about 5 units of C for each unit of A and 2 units of B for each unit of A. Therefore, the sales mix is 1:2:5. The organisation consists in \$120,000 total fixed costs:

BEP in units: Total fixed costs/ Weighted average CM per unit

= 120,000 / 18.75

= 64000 units

a. Computation of weighted average CM per unit:

$\sum (CM \text{ per unit} \times \text{Unit sales mix ratio})$	
Product A (\$40 x 1/8)	\$ 5.00
Product B (\$30 x 2/8)	7.50
Product C (\$10 x 5/8)	6.25
WA CM per unit	\$18.75

The weighted average CM may also be computed by dividing the total CM by the total number of units.

WACM Per unit = $(40 \times 1) + (30 \times 2) + (10 \times 5) / 8 = 18.75$

Break even analysis for single product

Break-even analysis is valuable in assessing manufacturing level or a predetermined optimal sales combination. The analysis is just for use by administrators, as the metrics and measurements are not needed for externally including shareholders, authorities or financial services. This kind of analysis relies on a break-even point measurement (BEP). The break-even stage is determined by measuring the overall fixed overhead costs by the value of a commodity per single unit, minus the adjustable cost of production. Fixed costs are the ones that appear anyway no matter how often products are produced.

Break-even analysis focuses at the amount of fixed expenses compared to the income that each incremental unit generated and marketed is receiving. A business with lower fixed costs should usually have a lesser break-even selling point. For example, a firm with \$0 of fixed costs would have quickly broken even when the initial commodity is delivered; ensuring operating expenses do not surpass revenue from sales. The development of input costs, nevertheless, will reduce the business's flexibility, as these expenditures emerge from whatever product sold.

Break-even analysis can be determined using two equations. Segregate the gross economies of scale by the component expenditure variance into the first estimate. In the previous case, conclude that the cost of all fixed expenses is \$20,000. The break-even level is 500 units with such a donation gap of \$40, ($\$20,000$ divided by $\$40$). Compensation among all fixed costs is complete after the sale of 500 units, and also the organization must show a net capital gain of \$0. Break-even measurement is more difficult when a business sells less than one item or offers rather than one product since not all goods sell at the same price or have the same expenses involved with them: every product has its own profit (Periasamy, 2010). The break-even stage in a multi-product setting based largely on the combination of goods offered. Furthermore, as the product composition varies, the break-even point varies as well. For such multi-product companies, carrying out a break-even analysis is more complicated as each commodity has a various sales cost, a unique production cost, and eventually a separate participation profit.

CONCLUSION

As per the above report it has been concluded that in present time every business entity can apply management accounting to conduct daily routine activities and prepare report to present in front of top executives. On the basis of these reports they are taking all the required actions in regard of short term as well as long term. There are calculating by costing method of absorption and activity based method. Both are important part of costing and get effective results. In 21st century companies are utilizing break even analysis to get no profit and no loss. Many organizations are dealing into multi product while they are applying break when whatever it is complex. For this apply various types of formula to getting effective results.

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