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University of Wales
Trinity Saint David

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ACCOUNTING FUNDAMENTALS

TIME: 9:00AM TO 4:00PM

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Date & Time : 27/08/2021 13:00

QUESTION 1 (a)

Break-even point in units

Contribution per unit = Selling price per unit - total Variable costs per unit

Contribution per unit = £11 - £6 = £5

Break-even point = Fixed Cost/contribution per unit

Break-even point = £350,000 / £5 = 70,000 units

Break-even point in revenues

Contribution margin = Selling price per unit - Variable costs per unit / selling price per unit

Contribution margin = £11 - £6 = £5 / £11 = £0.45

Break-even point = Fixed Cost/contribution margin

Break-even point = £350,000 / £0.45 = £777,777 (770,000)

To confirm break-even point in revenues = break-even point in units x selling price per unit.

BEV in revenues = 70,000 units x £11 = £770,000

QUESTION 1 (b)

Profit = (sales volume – BEV in units) X contribution per unit

$$\text{Profit} = (75,000 - 70,000) \times £5 = 5000 \times £5 = £25,000$$

Or

$$\text{Sales} = \text{sales volume} \times \text{selling price per unit} = 75,000 \times £11 = £825,000$$

$$\text{Costs} = \text{Variable costs (sales volume} \times \text{total variable costs per unit)} + \text{Fixed costs} =$$

$$\text{VC (75,000} \times \text{£6)} = £450,000 + \text{FC (350,000)} = £800,000$$

$$\text{Profit (second method)} = \text{Sales} - \text{Costs} = £825,000 - £800,000 = £25,000.$$

QUESTION 1 (c)

New selling price per unit = £13

New total variable costs = £6 + £1 = £7

Contribution per unit = £13 - £7 = £6

New fixed costs = £350,000 + £10,000 = £360,000

New sales volume = 80,000 units

New break-even point = £360,000 / £6 = 60,000 units

New profit = (80,000 – 60,000) x £6 = 20,000 x £6 = £120,000

or

Sales = 80,000 x £13 = £1,040,000

Costs = VC (80,000 x £7) = £560,000 + FC (£360,000) = £920,000

New profit (second method) = £1,040,000 - £920,000 = £120,000

QUESTION 1 (d)

Break-even Analysis is crucial when we need to determine three factors in functions. I.e. sales volume, profit and costs. However, when using Break-even analysis, we need to take into consideration some limitations.

- Non-linear relationships: relationships between factors are not always in a linear relationship.

Economies of scale with labour. A business may operate more economically at a higher volume of activity. For example, employees may be able to increase productivity by specializing in particular tasks.

Economies of scale with buying goods or services. A business may find it cheaper to buy in goods and services where it is buying in bulk as discounts are often given. (Atrill, P., and McLaney, E., 2017)

- Stepped fixed costs: Due to many factors involved in the different typologies of fixed costs (rent, salaries etc.), which represent "steps", we need to be careful when assuming them; they tend to be "stepped", indeed. Not fixed over the whole broad spectrum of activities.
- Multi-product business: Nowadays, most companies are releasing more than one service or product. The break-even analysis could represent a problem since it can affect sales of another product. Identify the fixed cost related to another product that could represent an issue. Two products could be both parts of an internal system. Therefore, evaluation could be undefined or erratic.

Despite limitations, it is crucial to list also some advantages concerning Break-Even analysis:

- Better knowledge of the business position. It focuses on how long a company will take to profit and which output, total sales or money to invest are required.
- Easy calculation and calculation of margin of safety.
- Better understanding of the importance of keeping fixed costs and which risks are involved.

REFERENCES

- Atrill, P., and McLaney, E., (2017), *Accounting and Finance for Non-Specialists*, 10th ed., Pearson Education Limited.

QUESTION 2 (a)

In order to enhance their chances to join the market's competitiveness, new companies need to take fast and efficient decisions. Therefore, the leading accounting managers need to determine all the factors influencing the business and take rapid action to make future actions. The main goal so of Management Accounting is to provide essential data to make new action plans. Some of these plans are:

- Relevant cost Analysis: It helps you to understand all irrelevant costs and the important ones. To make new plans is vital to be able to divide them the quickest way possible. Fixed Costs and Variable costs represent the main costs where we need to focus on.
- Decision-making: Based on relevant information and data, management accountants could make proper decisions concerning financial patterns, such as long term plans or business expansion.
- Budgeting: Creating an adequate budget including all the aspects in a company (investments, former actions or fragmentary tasks) play a vital role in the company. It is better not to leave each business department with insufficient funds.
- Rational Resource: Management accounting help us to determine which resources we need to use day by day. Variable costs allow us to make decisions, when necessary, not to affect the quality of our products or their marketability.

In few words, Management Accounting determines the company's behaviour, providing precise and essential information to achieve timely decisions.

Furthermore, Accounting, in general, includes two different branches:

Management Accounting (as previously explained) and Financial Accounting.

Both of them are closely related, sharing common goals such as: "Nature of the reports produced, Level of detail, Regulations, Reporting interval, Time orientation, Range and quality of information." (Atrill, P., and McLaney, E., 2017)

- Nature of the reports produced: Financial accounting reports are mainly likely to be general, focusing on financial data interesting for external providers. Management accounting reports, instead, include specific purposes for intern usage.
- Level of detail: Financial accounting provides a general overview of the business. Instead, Management accounting gives managers detailed data to mainly operating.
- Regulations: In financial accounting, many companies need to meet standard regulations imposed by law. Management accounting is not subject to regulations.
- Reporting interval: In financial accounting, reports are prepared yearly or for some half-yearly. In management accounting, reports need to be ready according to the manager's needs. It could be daily, weekly or monthly.

- Time orientation: In financial accounting, reports highlight the company performance in its past. In management accounting, instead, reports cover the future and past of a company's performance.
- Range and quality of information: In financial accounting, the information provided mainly focuses on finance terms. It also focuses on verifiable evidence when preparing a statement. On the other hand, management accounting focuses more on non-financial reports (inventories, number of revenues etc.). Therefore, less verifiable information is also provided.

In conclusion, management accounting has more control over the contents. No regulation and free reporting intervals. Financial accounting needs to meet more standards, and it is more constrained, mainly due to its external use.

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- Atrill, P., and McLaney, E., (2017), *Accounting and Finance for Non-Specialists*, 10th ed., Pearson Education Limited.
- McLean, J., (2019), *Why Management Accounting Is Important*. Available at: <https://industrytoday.com/why-management-accounting-is-important/> (Accessed: 27th of August 2021)

QUESTION 2 (b)

If we are talking about Management Accounting; Planning, Control, and Decision Making represent the three main functions.

PLANNING: when talking about planning, the main focus is on goals and how we are using the means to achieve them. It represents a way to decide what has to be done and represents the basis for future activities. In order to estimate or evaluate the future behaviour and plans in a company, Management uses goals that represent an end state of the targets and results that managers hope to achieve.

CONTROL: Sometimes, things do not go exactly as a company has planned. One of the primary duties of a manager is to solve situations using a control process that includes efficient strategies to remedy bad situations. The actual performance of the organization is compared with detailed operation plans.

DECISION MAKING: Decision, as already stated, is a part of planning. When referring to decision making, we talking about a process or an intermediate mean the help us from identifying a problem until making a decision. In few words: the manager identifies a specific situation and try to sort threats and opportunities out.

Planning, controlling, and decision making are all interrelated. For example, according to iEduNote (2021):

“Decisions can be made without planning but planning cannot be done without making decisions. Planning can be defined as the process of selecting a future course of action. Decision-making defined as the process of selecting a course of action from the alternatives. They need to be accurate for the welfare of the organization.”

Some of the main techniques that use the stated functions are *Budgeting, Break Even Analysis and Capital Investment Appraisal*.

BUDGETING: “Decisions can be made without planning but planning cannot be done without making decisions. Planning can be defined as the process of selecting a future course of action.

Decision-making defined as the process of selecting a course of action from the alternatives. They need to be accurate for the welfare of the organization.” (Frank Wood, 2001). It arranges costs and revenues expected to be in future times.

The essential stages in the budgeting process are:

- Guidelines of budget policy: Important guidelines or planned changes need to be specified to make aware accountants of the budget policy due to the responsibility they have when preparing the current year budget.
- Sales budget: the sales budget is the most critical plan during the year, and it also represents the most difficult. The sales determine the level of the company's activities; customers influence the total sales revenues.

- Budget review: After a deep examination, the accountant must identify inconsistencies and talk to a manager. All the parts in the budget process need to meet the acceptable requirements.
- Final acceptance: "The approval of the master budget is the authority for the manager of each responsibility centre to carry out the plans contained in each budget." (Drury, C., 2012)

BREAK-EVEN ANALYSIS: it specifies, instead of profit and loss, the number of all the sales we needed to cover variable and fixed costs. It determines the minimum number of units to sell and calculate them with the sales volume used to pay all the expenses before making any profit.

There are different ways we can use the break-even analysis. For example, we can use it to:

- Control the costs
- Determine changes in fixed and variable costs
- Monitor the staff
- Create a strategy plan according to break-even charts.

In order to state the formula, some clarifications need to be made. First, break-even analysis includes Fixed Costs and Variable Costs.

FIXED COSTS represent salaries, insurance, advertisement, business rates.

VARIABLE COSTS: Labor costs, material, commissions.

The formula also included Contribution (excess of sales revenue over variable costs)

To calculate the Contribution, the formula is:

SELLING PRICE PER UNIT – VARIABLE COSTS PER UNIT = CONTRIBUTION PER UNIT

The break-even formula is:

FIXED COSTS (sales revenue) / contribution per unit.

Further applications may be required:

Margin of Safety (measuring the sales amount that can fall before making loss) and TARGET PROFIT (sales needed to cover fixed costs and make a particular profit)

CAPITAL INVESTMENT APPRAISAL: in order to determine if we want to make a significant investment, there are specific techniques that can help us: Payback, Accounting rate of return (ARR), Net present value (NPV) or Internal rate of return (IRR).

- PAYBACK PERIOD: It helps us understand how long it will take for a project to produce more cash flow and cover the initial costs. It is straightforward to calculate and understand, but it ignores the time value of money and cash flows after payback.

- ARR: Also known as a return in capital, it helps us calculate the profit made from an investment. The formula is $ARR = (\text{Average annual profit after tax} / \text{Initial investment}) \times 100$. It is really easy to calculate and understand, ensuring profitability, but it takes no account of the investment size and ignores the time value of money.
- NPV: It considers all cash flows over the life of the project and makes allowance for the time value of money.
 "The formula of NPV = { + + ... } – Initial Investment
 Where: CFi = Cash-flow of first period
 CFii = Cash-flow of second period
 CFiii = Cash-flow of third period
 CFn = Cash-flow of nth period
 n = No. of Periods
 i = Discounting rate " (Aisha P., 2019)
- IRR: "An internal rate of return is the discounting rate, which brings discounted future cash flow at par with the initial investment. In other words, it is the discounting rate at which the company will neither make loss nor make a profit." (efinancemanagment.com, 2019)

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