ACC 406: Managerial Accounting

TRAIN TO LEARN EFFECTIVELY: TIP SHEETS

Prepared by Sofia (2024)

Chapter 1 | Introduction to Managerial Accounting

- **Managerial Accounting**: Collects information that is used to identify problems, solve problems, and evaluate performance.
- It helps managers with three steps:
    1. Planning: The detailed formulation of action to achieve a particular goal;
    2. Controlling: The monitoring of a plan's implementation; and
    3. Decision-Making: Choosing among alternatives.

Chapter 2 | Basic Managerial Accounting Concepts

- There are various costs: cash or cash-equivalents, associated in managerial accounting.
- The direct costs are costs that can be traced to cost objectives and are based on a cause-and-effect relationship (e.g., the labour cost to pay employees making a product).
- The indirect costs are allocated to cost objectives based on assumed relationships (e.g., manufacturing overhead, such as utility rates for a facility that manufactures a product).
- To calculate the **total product cost** to manufacture a good, the formula used is:

  Total Product Cost = Direct Materials + Direct Labour + Manufacturing Overhead
- To calculate the unit product cost (i.e., how much does it cost per product manufactured), the formula used is:

  Unit Product Cost = Total Product Cost ÷ Number of Units
- In order to calculate the product cost (i.e., all the costs that go into manufacturing a product), one must calculate the "big three:" **direct materials (DM)**, **direct labour (DL)**, and **manufacturing overhead (MOH)**:

  DM = (Beginning Inventory of Materials + Purchases) - Ending Inventory

  DL = Number of Hours Worked × Pay/Wage per Hour
- MOH can be tricky to calculate if it is not given, however, look for values that are associated with the product but are neither the materials nor labour used to make it.
- Common components of manufacturing overhead include:
    1. Depreciation (of equipment used to make the product or the building in which the product is manufactured);
    2. Insurance (for the building or the equipment being used to make the product);
    3. Taxes (paid on the specific building in which the products are manufactured);
    4. Rent or Utilities (for the specific building);
    5. Indirect labour (e.g., janitorial services).
- Once the "big three" are calculated, one can identify the **cost of goods manufactured (COGM)** and the **cost of goods sold (COGS)**.
- To calculate them, it is best to use a table as opposed to a formula.

  COGM = Total Manufacturing Cost (DM+DL+MOH)
  + Beginning Work-in-Progress Inventory
  - Ending Work-in-Progress Inventory

  COGS = Cost of Goods Manufactured
  + Beginning Finished Goods

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- Ending Finished Goods Inventory

Chapter 3 | Cost Behaviour

- **Cost Behaviour**: The way a cost changes in relation to changes in activity output.
- The variable costs change in total as the driver, or output measure, changes.
- To calculate the variable cost, the formula used is:

  Total Variable Cost = (Variable Rate × Units of Output)
- The fixed costs remain constant regardless of activity level.
- **Mixed Costs**: Have both a variable and fixed component.
- **Step Costs**: Remain at a constant level of cost for a range of output and then increase or decrease according to activity level.,
- For example, step costs will increase and jump to a higher level when the output exceeds the stated range.
- In the high-low method, only two data points are used: high point and low point with respect to activity level.
- At the end of a high-low question, students are usually asked to compute a **cost formula**, which is a linear representation of the cost per each unit of output (including both fixed and variable costs):

  Cost Formula = Total Cost = Total Fixed Cost + (Variable Rate × Units of Output)

Chapter 4 | Cost-Volume-Profit Analysis

- At break-even, total costs (variable and fixed) equal total sales revenue.
- Break-even units equal total fixed costs divided by the contribution margin (price minus variable cost/unit).

  Break-Even (Units) = Fixed Cost ÷ (Price - Unit Variable Cost)
- Break-even revenue equals total fixed costs divided by the contribution margin ratio.

  Break-Even (Dollars) = (Fixed Cost ÷ Contribution Margin Ratio)

  or

  Break-Even (Dollars) = Fixed Cost ÷ (1- Variable Cost Ratio)
- To earn a target or desired profit (i.e., a certain increase in income), the target is added to the fixed costs to determine the needed increase in sales revenue.
- For example, if a company wants to increase their operating income by $200,000, they would use the below formula:

  Fixed Costs + $200,000 = Sales Revenue to Have Income Increase by $200,000
- The multiple-product analysis required the determination of expected sales mix.
- The margin of safety shows how far the company's actual sales and/or units are above/below the break-even point (BEP).

  Margin of Safety = Sales - Break-Even Sales
- The operating leverage refers to the impact that a company's cost structure has on profitability as sales revenue increases or decreases.

  Degree of Operating Leverage = Total Contribution Margin ÷ Operating Income

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Chapter 5 | Job-Order Costing

- Job-order firms produce heterogeneous products/services (i.e., each unit/batch may have a different total cost)
- .Process firms produce homogeneous products (i.e., the cost of one batch or unit is the same as another batch or unit produced in the same period).
- **Predetermined Overhead (P. OHR)**: Total budgeted overhead cost divided by total budgeted activity level.

  P. OHR = Estimated Annual Overhead Cost ÷ Estimated Annual Activity Level
- Overhead is applied by multiplying the predetermined rate by the actual activity usage.

  Applied Overhead = Predetermined Overhead Rate × Actual Activity Usage
- Once actual overhead and applied overhead are determined, one must determine the variance (or difference) between them.

  Overhead Variance = Applied Overhead - Actual Overhead

  If *Applied Overhead* > *Actual Overhead* → Overhead is **overapplied**.

  If *Applied Overhead* < *Actual Overhead* → Overhead is **underapplied**.
- Once a variance has been determined, the "unadjusted COGS" must be adjusted to accurately reflect the difference between the actual and applied overhead.

  Adjusted COGS = Unadjusted COGS ± Overhead Variance
- If overhead is overapplied, it must be subtracted from the unadjusted COGS.
- If overhead is underapplied, it must be added to the unadjusted COGS.
- For example, if the applied overhead is $10,000 more than the actual overhead, overhead is overapplied and $10,000 must be subtracted from the unadjusted COGS.
- In another instance, if the applied overhead is $10,000 less than the actual overhead, overhead is underapplied and $10,000 must be added to the unadjusted COGS.

Chapter 7 | Activity-Based Costing and Management

- Activities are identified and defined through the use of interviews and surveys. This information allows an activity dictionary to be constructed.
- The activity dictionary lists activities and potential activity drivers, classifies activities as primary or secondary, and provides any other attributes deemed to be important.
- Resource costs are assigned to activities by using direct tracing and resource drivers.
- The costs of secondary activities are ultimately assigned to primary activities by using activity drivers.
- Activity-based management focuses on process-value analysis.
- Process-value analysis has three components: driver analysis, activity analysis, and performance evaluation.These three steps determine what activities are being done, why they are being done, and how well they are done.
- The formulas used in this chapter are similar to previous ones:

  P. OHR = Estimated Annual Overhead Cost ÷ Estimated Annual Activity Level

  Applied Overhead = Predetermined Overhead Rate × Actual Activity Usage

  Overhead Variance = Applied Overhead - Actual Overhead

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Chapter 9 | Budgeting, Production, Cash, and Master Budget

- **Budgeting**: The creation of a plan of action expressed in financial terms.
- Budgets serve to improve communication and coordination.
- The **master budget** is made up of the operating and financial budgets.
- The **operating budget** includes the following:
    1. The **sales budget** consists of the anticipated quantity and price of all products to be sold; it is done first, and the results feed directly into the production budget;
    2. The **production budget** gives the expected production in units to meet forecasted sales and desired ending inventory goals; results for the production budget are required for the DM and DL budget;
    3. The **direct materials (DM) purchases budget** gives the necessary purchases during the first year for every type of raw material;
    4. The **direct labour (DL) budget** shows the number of direct labour hours (DLH) and the direct labour cost needed to support production;
    5. The **manufacturing overhead (OH) budget** may be broken down into fixed and variable components to facilitate preparation of the budget;
    6. The **selling and administrative expenses budget** gives the forecasted costs for these functions;
    7. The **finished goods inventory budget** and the **cost of goods sold budget** detail production costs for the expected ending inventory and the units sold, respectively;
    8. The **budgeted income statement** outlines the net income to be realized if budgeted plans come to fruition.
- The **financial budget** includes three budgets: the **cash budget**, the **capital expenditures budget**, and the **budgeted balance sheet**.
- The following are equations used to calculate information within these budgets:
  Units to Produce = Expected Unit Sales + Desired End Inventory - Beginning Inventory
  Purchases = Materials + Materials in Desired End Inventory - Materials in Beg. Inventory
  For Retail Firms:
  Units to Purchase = Expected Unit Sales + Desired End Inventory - Beginning Inventory

Chapter 10 | Standard Costing

- A **standard cost system** budgets quantities and costs on a unit basis. Therefore, **standard costs** are the amount to be expended to produce a product/service.
- The standard cost sheet provides the details for computing the standard cost per unit.
- The sheet shows the standard costs for materials, labour, and variable and fixed overhead.
- The total variance is the difference between actual costs and planned costs.
- In a standard costing system, the total variance is broken down into price and usage variances.
- The **materials price variance** is the difference between what was actually paid for materials and what should have been paid.

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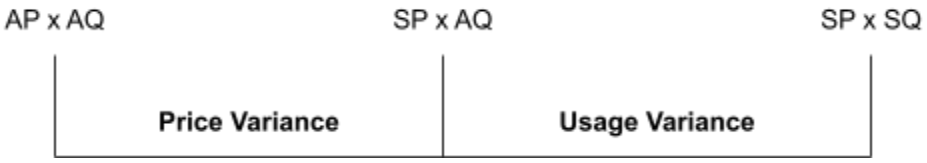
- To find the materials price variance, you have to find the difference between AP × AQ and SP × AQ, where AP = Actual Price, AQ = Actual Quantity, SP = Standard Quantity. Materials Price Variance = Difference Between AP × AQ and SP × AQ
- The **materials usage variance** is the difference between the actual amount of materials used and the amount of materials that should have been used.
- To find the materials usage variance, you have to find the difference between SP × AQ and SP × SQ, where SQ = Standard Quantity.
- Materials Price Variance = Difference Between SP × AQ and SP × SQ
- The **labour rate variance** is caused by the actual wage rate differing from the standard wage rate.
- To find the labour rate variance, you have to find the difference between AR × AH and SR × AH, where AR = Actual Rate, AH = Actual Hours, and SR = Standard Rate.
- **For ease of calculating material variances**:



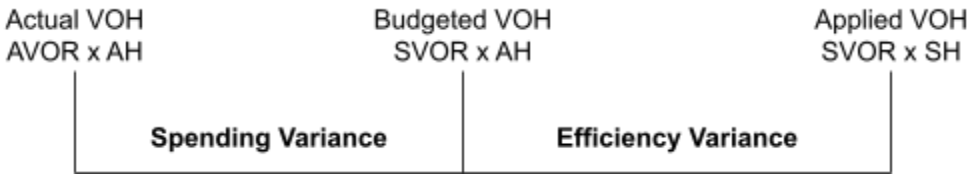
- Labour Rate Variance = Difference Between AR × AH and SR × AH
- The **labour efficiency variance** is the difference between the actual amount of labour that was used and the amount of labour that should have been used.
- To find the labour efficiency variance, you have to find the difference between SR × AH and SR × SH, where SH = Standard Hours.
- Labour Efficiency Variance = Difference Between SR × AH and SR × SH
- **For ease of calculating materials variances**:

- The variances can be either favourable or unfavourable, not negative or positive.
- A **favourable variance** is when actual prices or usage is less than the standard price or usage.
- An **unfavourable variance** is when actual prices/usage is greater than the standard price/usage.
- Furthermore, favourable/unfavourable variances are not the same as good/bad; they merely indicate the relationship between the standard used and actual results.

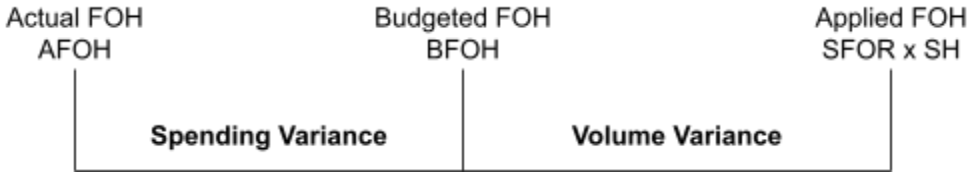
Chapter 11 | Flexible Budgets and Overhead Analysis

- **Static budgets** provide expected cost for a given activity level.
- **Flexible budgets** divide costs into those that vary with units of production (or direct labour hours) and those that are fixed with respect to these unit-level drivers.

- There are two main applications of flexible budgets:
    1. **Before-the-fact applications** allow managers to see what costs will be for different levels of activity (sensitivity analysis), therefore helping in planning;
    2. **After-the-fact applications** allow managers to see what the cost should have been for the actual level of activity achieved in the period.
- In a standard cost system, it is possible to break down these overhead variances into component variances.
- For variable overhead, the two component variances are the spending variance and the efficiency variance.
- The **spending variance** is the result of comparing the actual costs with budgeted costs.
- To find spending variance for variable overhead(VOH), you need to find the difference between Actual VOH and Budgeted VOH.
  Actual VOH = AVOR × AH, where AVOR = Actual Variable Overhead Rate and AH = Actual Hours
  Budgeted VOH= SVOR × AH, where SVOR = Standard Variable Overhead Rate
- The **variable overhead efficiency variance** is the result of efficient or inefficient use of labour because variable overhead is assumed to vary with direct labour hours.
- To find efficiency variance, you need to find the difference between Budgeted VOH and Applied VOH.
  Applied VOH = SVOR × SH, where SH = Standard Hours
- **For ease of calculating variable variances**:



- For fixed overhead, the two component variances are the spending and volume variances.
- The **spending variance** is the result of comparing the actual costs with budgeted costs.
- To find spending variance for fixed overhead(FOH), you need to find the difference between Actual FOH and Budgeted FOH.
- Actual FOH and Budgeted FOH are given in the question, so they do not have formulas and do not require calculations.
- The **fixed overhead volume variance** is the result of producing a level different from that used to calculate the predetermined fixed overhead rate; it can be interpreted as a measure of capacity utilization.
- To find volume variance, you need to find the difference between Budgeted FOH and Applied FOH.
  Applied FOH = SFOR × SH, where Standard Fixed Overhead Rate (SFOR) = Budgeted Fixed Overhead Costs ÷ Practical Capacity; SH = Standard Hours
- **For ease of calculating fixed variances**:



Chapter 13 | Short-Run Decision-Making: Relevant Costing

- There are various ways to apply relevant costing and decision-making concepts in business situations, such as:
    1. Outsourcing decisions;
        - Compare the cost of making versus outsourcing.
        - Consider the costs when doing so (i.e., production versus purchase cost).
    2. Special-order decisions;
        - Compare accepting versus rejecting the special order.
        - Consider the cost of producing the additional units (for the order).
        - Ensure that you account for production capacity when accepting/rejecting.
    3. Keep-or-drop decisions; and
        - Compare the value of keeping versus dropping the product.
        - It comes down to the revenue the product brings in in comparison to the fixed costs it covers (and these fixed costs persist if it is dropped).
    4. Further processing of joint products.
        - Compare the profits of selling versus processing further.
        - Compare also the costs of selling versus processing further.
        - Once you find their totals, choose the decision with the higher value.
- Markup costing applies markup to cost to determine price.
  Price Using Markup = Cost Per Unit + (Cost Per Unit Markup Percentage)
- Target costing works backward from desired price to find allowable cost.
  Target Cost = Target Price - Desired Profit