Standard Costing

CA Final Course Paper 5 Advanced Management Accounting Chapter 5 Part 2

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Budgetary Control

1. Objectives
2. Methods
3. Advantages of Budgetary Control
4. Problems
5. Characteristics
6. Administration
7. Budget Preparation

Discussion on difference between Standard Costing & Budgetary Control

1. Common Principles
2. System Differences
3. Overview
4. Applicability
5. Period

Management Control

1. Variance Analysis
2. Management by Exception
3. Application in different organizations
4. Standard Cost & Behavioral Issue

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Profit reconciliation statement

Concepts

Profit reconciliation statement

- Profit reconciliation statement is used to sum up all variances
- It can help the top management to explain the major reasons for the difference between budgeted and actual profits
- The sales margin variance and fixed overheads variance are different between absorption and marginal costing system

Marginal costing

PRS

Example

Profit Reconciliation Statement

	$	$	$
Budgeted profit			14000
Sales variances			
Sales margin price	8000 F		
Sales margin volume	3400 A	4600 F	
Materials cost variance			
Materials price	480 A		
Material usage	2400 F	1920 F	
Labour cost variance			
Labour rate	3200 A		
Labour efficiency	4000 A	7200 A	
Variable overhead variance			
VO Expenditure	900 F		
VO Efficiency	1600 A	700 A	
Fixed overhead expenditure variance		400F	980 A
Actual profit			13020

Absorption costing

PRS

Example

Profit Reconciliation Statement

Budgeted profit			14000
Sales variances			
Sales margin price	8000 F		
Sales margin volume	2800 A	5200 F	
Materials cost variance			
Materials price	480 A		
Material usage	2400 F	1920 F	
Labour cost variance			
Labour rate	3200 A		
Labour efficiency	4000 A	7200 A	
Variable overhead variance			
VO Expenditure	900 F		
VO Efficiency	1600 A	700 A	
Fixed overhead variance			
FO expenditure	400F		
FO Volume	600 A	200 A	980 A
Actual profit			13020

Reasons for Variance – Material, Labour, OH

Production , processing and costing aspects

Reasons for variances

Material price variance

- Price changes in market conditions
- Change in the efficiency of purchasing dept. to obtain good terms from suppliers
- Purchase of different grades or wrong types of materials

Materials usage variance

- More effective use of materials/ wastage arising from the efficient production process
- Purchase of different grade or wrong types of materials
- Wastage by the staff
- Change in production methods

Reasons for variances

Labour rate variance

- Non-controllable market changes in the basic wage rate
- Use of higher/lower grade of workers
- Unexpected overtime allowance paid

Reasons for variances

- Labour efficiency variance
  - Purchase of different grade or wrong types of materials
  - Breakdown of machinery
  - High/low labour turnover
  - Changes in production method
  - Introduction of new machinery
  - Assignment wrong type of worker to work
  - Adequacy of supervision
  - Changes in working condition
  - Change in motivation methods

Reasons for variances

Variable overheads expenditure variance

- It may be caused by the non-controllable change in the price level of indirect wages or utility rates since the predetermined rate is set
- It is meaningless to interpret this kind of variance on its own. One should look various components of the fixed overheads

Variable overheads efficiency variance

- Both the variable overheads and direct labour cost vary with the direct labour hours worked

Reasons for variances

Fixed overheads expenditure

- It is meaningless to interpret this kind of variance on its own.
- It may be caused by the change in the price levels of rent, rates and other fixed expenses

Fixed overhead volume variance

- When the level of activity is higher than the budgeted level, there is a favourable variance

Reasons for variances

Sales margin price variance

- Change in the pricing strategies of the company
- Response to the change of pricing policies of its competitors
- Higher profit margin with growing demand for the product
- Lower profit margin for stimulating sales

Sales margin volume variance

- Change in prices and demand
- Change in the market share of its competitiors

Enterprise Performance Management using variance analysis

- Case study

Managerial Performance Report Using Variance Analysis

Cambria Company
Managerial Performance Report
Bag Assembly Department
For the Month Ended August 31

Productivity Summary:

Normal capacity in units	167 bags
Normal capacity in direct labor hours (DLH)	400 DLH*
Good units produced	180 bags
Performance level (standard hours allowed for good units produced)	432 DLH

*Rounded.

Cost and Variance Analysis:

	Standard Costs	Actual Costs	Total Variance	Variance Breakdown	
				Amount	Type
Direct materials	$ 4,320	$ 4,484	$164 (U)	$ 76.00 (F)	Direct materials price variance
				240.00 (U)	Direct materials quantity variance
Direct labor	3,672	4,140	468 (U)	315.00 (U)	Direct labor rate variance
				153.00 (U)	Direct labor efficiency variance
Variable overhead	2,484	2,500	16 (U)	87.50 (F)	Variable overhead spending variance
				103.50 (U)	Variable overhead efficiency variance
Fixed overhead	1,404	1,600	196 (U)	300.00 (U)	Fixed overhead budget variance
				104.00 (F)	Fixed overhead volume variance
Totals	$11,880	$12,724	$844 (U)	$844.00 (U)	

Managerial Performance Report Using Variance Analysis

Causes of Variances	Actions Taken
Direct materials price variance:	
New direct materials purchased at reduced price	New direct materials deemed inappropriate; resumed purchasing materials originally specified
Direct materials quantity variance:	
Poor quality of new direct materials	New direct materials deemed inappropriate; resumed using direct materials originally specified
Direct labor rate variance:	
Machine operator who had to learn assembly skills	Temporary replacement; no action taken on the job
Direct labor efficiency variance:	
Machine operator who had to learn assembly skills	Temporary replacement; no action taken on the job
Late delivery of parts to assembly floor	Material delivery times and number of delays being tracked
Variable overhead spending variance:	
Cost savings on purchases	No action necessary
Variable overhead efficiency variance:	
Machine operator who had to learn assembly skills on the job	A cross-training program for employees now under consideration
Fixed overhead budget variance:	
Large number of factory insurance claims	Study of insurance claims being conducted
Fixed overhead volume variance:	
High number of orders caused by demand	No action necessary

Additional aspects of Standard Costing, interpretations & implications of Variance analysis

Investigation of Standard Cost Variances

Please note that standard cost variances are not a definitive sign of good or bad performance.

These are merely indicators of potential problems which must be investigated.

Related Learning Objectives:

1. Explain how standard costs are developed.
2. **Calculate and interpret variances for direct material.**
3. **Calculate and interpret variances for direct labor.**
4. **Calculate and interpret variances for manufacturing overhead.**
5. Discuss how the management by exception approach is applied to investigation of standard cost variances.

Management by Exception

As investigation of standard cost variances is itself a costly activity, management must decide which variances to investigate.

Most managers practice management by exception.

Usually an absolute rupee amount or a percentage rupee amount.

Related Learning Objectives:

1. Explain how standard costs are developed.
2. Calculate and interpret variances for direct material.
3. Calculate and interpret variances for direct labor.
4. Calculate and interpret variances for manufacturing overhead.
5. Discuss how the management by exception approach is applied to investigation of standard cost variances.

“Favorable” Variances May Be Unfavorable

The fact that a variance is “favorable” does not mean that it should not be investigated. Suppose inferior, low-priced materials are ordered. One the one hand, a favorable price variance will arise. On the other hand, most likely there will be substantially more scrap and rework, and thus a higher quantity variance.

Responsibility Accounting and Variances

Managers should be held responsible only for costs they can control.

This is true in the area of variance analysis. For example, a purchasing agent may be held responsible for direct material price variances, but not direct material quantity (usage) variances.

Standard setting – vital issues

- Establishing Standards
- 1.Potential sources of quantitative standards historical experience, engineering studies, and input from operating personnel.
- a. Historical experience should be used with caution because it may perpetuate operating inefficiencies.
- b. Engineering studies and input from operating personnel help determine the most efficient level of input quantities.

Standard setting – vital issues

- Responsibilities for establishing price standards
  - a. Operations managers determine the quality of the inputs required.
  - b. Personnel and purchasing have the responsibility to acquire the input quality at the lowest price that is limited by market forces and trade unions.

Note that:

- Purchasing must consider discounts, freight, and quality.
- Personnel must consider payroll taxes, fringe benefits, and qualifications.
  - c. Accounting is responsible for recording the price standards and for preparing reports.

Types of Standards

1. **Ideal standards** are standards that demand maximum efficiency.

2. **Currently attainable standards** can be achieved under efficient operating conditions.

3. **Kaizen Standards** are continuous improvement standards that reflect a planned improvement. Kaizen standards are currently attainable and have a cost reduction focus.

4. **Activity-based Costing** uses standards to:

   An activity's cost is determined by the amount of resources consumed by each activity.

Applying Standard costing

Standard costing systems can be used in both manufacturing and service organizations. For example, consider the standard costing in a hospital,

1. **A relative value unit (RVU)** is used to measure the relative amount of time required to perform a procedure.
2. A standard cost per RVU is computed by dividing the variable direct labor costs of a hospital department by the number of RVUs performed by that department.
3. A standard direct labor cost for a given procedure can be computed by multiplying the RVUs of the procedure by the standard cost per RVU.

Applying Standard costing

The **standard cost sheet** provides the standard costs and standard quantities of materials, labor, and overhead that should be applied to a single product or service, including:

1. A **standard cost per unit** is the per-unit cost that should be achieved given materials, labor, and overhead standards. It can be computed as follows:

   Standard cost per unit = Standard price × Standard usage

2. The quantity of each input that should be used to produce one unit of output is shown.

   a) **Standard quantity of materials allowed** (SQ) is computed as follows:

      SQ = Unit quantity standard × Actual output

   b) **Standard hours allowed** (SH) is computed as follows:

      SH = Unit quantity standard × Actual output

Responsibility of Standard costing

- The responsibility for controlling the materials price variance is usually the purchasing agent's because he/she can influence controllable factors such as quality, quantity discounts, distance of the source from the plant, etc.

- The production manager is generally responsible for direct materials usage because he/she can minimize scrap, waste, rework and other ways to ensure that the standard is met.

- The production managers are responsible for the productive use of direct labor and, thus, responsible for the direct labor rate variance and efficiency variance.

Limitations of Standard costing

- The cause of the variance may be attributable to other departments.
- Frequent breakdown of machinery may cause interruptions and nonproductive use of direct labor. But these breakdowns are attributable to faulty maintenance by the maintenance department, not production departments.
- Focusing on the direct material usage variance and/or direct labor variances to evaluate performance can tempt the manager to allow defective units to be transferred to avoid using additional materials and/or hours because of rework. These defective units may create customer-relation problems once a customer gets stuck with the bad product.

Disposition of variances

Disposition of Materials and Labor Variances:

1) Most companies dispose of variances at the end of the year.
2) If the variances are not material, they simply are closed out to Cost of Goods Sold.
3) If the variances are material, they are prorated to Work in Process, Finished Goods, and Cost of Goods Sold.
4) GAAP requires that inventories be reported at actual costs. (AS 2 / IAS 2)
5) But it is sometimes hard / unreasonable to justify carrying costs of inefficiency as an asset.

Controls & Variance analysis

Feedback control

- Steps are taken to get operations back on track as soon as there is a signal that they have gone wrong

Feed forward Controls

- Predictions are made about what could go wrong and then steps taken to avoid that outcome e.g. in the preparation of budgets

Kaizen Costing

- Kaizen costing is a cost-reduction system that is applied to a product in production.
- It comes from the combination of the Japanese characters ‘kai’ and ‘zen’ which mean ‘change’ and ‘good,’ respectively.
- The word ‘Kaizen’ translates to ‘continuous improvement’ or ‘change for the better’ and aims to improve productivity by making gradual changes to the entire manufacturing process.

Kaizen Costing

- Some of the cost-reduction strategies employed involve producing cheaper re-designs, eliminating waste and reducing process costs. Ensuring quality control, using more efficient equipment, utilizing new technological advances and standardizing work are additional elements.

Kaizen Costing

- Kaizen costing is variant of standard costing. Standard costing specifies a cost target for the production team for the coming period. Normally standard cost is set for an year. It will be revised every year. It is constant for an year as a planning device. Any variances from it are examined and the reasons are identified and understood.

- There is a learning effect in every activity undertaken by the organization right from the lowest cadre employee to the CEO and Board and cost comes down.

Evolution of Kaizen

- The Japanese implemented this cost reduction philosophy in a systematic and objective manner. They made planned reductions in the standard costs of an item every year. So the production and sales team have to plan their department and activity cost to achieve reduction in standard cost. The idea was extended by them to monthly costs.
- Such a reducing cost target for every month demands some effort on cost reduction by departments every month. Hence cost reduction is on the monthly agenda of every department in the company. Kaizen costing is providing the monthly cost target information and accounting for actuals during the month.

Kaizen costing & life-cycle costing

- Although most management accounting techniques assess performance on a yearly basis and normally focus on the production phase, it's accepted that a product starts incurring costs long before it comes to the market.

- It incurs them from the time the initial idea is conceived until the last unit is sold, the unsold stock is scrapped and all other product-related run-down activities cease.

Kaizen costing & life-cycle costing

- The product's total life-cycle costs include:

- Design and legal costs – eg, patenting.
- Research, development and testing.
- Recruitment and training. Manufacturing, which would include any learning-curve effect.
- Marketing, sales and distribution.
- Inventory, storage, obsolescence etc.
- Retirement and disposal.

So, while target costing relates to planning and Kaizen costing covers manufacturing, total life-cycle costing is relevant to all stages of a product's life.

Kaizen vs. Standard costing

- In contrast, Kaizen costing is based around improving the manufacturing process on a continual basis, with changes being implemented throughout the year.

- The cost deviation analysis done in Kaizen costing examines the difference between the target Kaizen costs and the actual cost reduction achieved. The basic idea here is to make tiny incremental cost reductions on a continual basis in a product's life cycle.

Kaizen vs. Standard costing

- Since the goal is to reduce costs on a monthly basis, every department in the company makes an effort to introduce operational changes on a daily basis.

- The fundamental basis of the Kaizen approach centers around recognizing that employees who work on a particular job are aware of how that particular task can be greatly improved. They are then empowered to do so in the Kaizen costing system. Employees are treated as valuable sources of viable solutions, an approach that differs greatly from the standard cost system that views employees as laborers with variable performance levels.

Standard costing & cost reduction – Case study : Japan vs. US

- In the U.S., the **purpose of standard costing is to practice management by exception**; i.e., management's attention is directed towards situations where the actual results differ from the expected results. The expected results are based on standards set relative to the current manufacturing process. Therefore, standard costing reflects existing technology and fails to motivate improvements in the process.

- The Kaizen costing technique that is used at the Japanese car manufacturer, Daihatsu, and is different to the U.S. method of standard costing. Kaizen costing is a Japanese technique used to manage costs *during a product's planning and design stages* and has been used by some Japanese firms for over twenty years.

Standard costing & cost reduction – Case study : Japan vs. US

- It is now widely used in Japan in such industries as electronics, precision machinery, and automobiles. Its objective is to reduce current costs by using various improvement tools such as value engineering and functional analysis for each manufacturing facility. The term “Kaizen” translates as “continuous improvement”.

- A manager in the United States generally expects to use cost information to make decisions about pricing or investments, while a Japanese manager expects to use cost information to reduce costs.

Kaizen method

For a Japanese firm that uses target costing, a new product project is established when a new product is proposed. The actual costing system is implemented during the initial design stage. There are 6 plans involved in the product process:

- Plan 1 – Production, Distribution, and Sales Plan (which includes projections of contribution margins from sales).
- Plan 2 – Projected Parts and Materials Costs.
- Plan 3 – Plant Rationalization Plan (projected reductions in manufacturing variable costs).

Kaizen method Cont.…

- Plan 4 – Personnel Plan (for direct labor work force and service department personnel).
- Plan 5 – Facility Investment Plan (capital budget and depreciation).
- Plan 6 – Fixed Expense Plan (for prototype design costs, maintenance costs, advertising and sales promotion expenses, and general and administrative expenses).

Cost reduction through Kaizen

- Cost improvement through Kaizen is obtained by reducing variable and fixed costs. Functional analysis is applied at the design stage for a new product, and a target cost for each function is set. The functional target costs are summed, and the result is a product target cost.

Cost reduction through Kaizen

- After the first year of production for a new product, the actual cost of the previous period becomes the starting point for further cost reduction.
- This process of continuous improvement is known as kaizen costing and encourages continual improvements by tightening the "standards."

Continuous improvement

- Standard costs are steadily reduced by continuous improvement efforts towards the target cost. While the target cost is established during the design stage, standard costs (as well as other cost reduction techniques) are used during the production stage to attain the target cost. Thus, the standard costing system tracks progress in achieving the target cost.

Continuous improvement

- Cost reduction techniques include standard costing. However, standard costing has limited applicability and can lead to undesirable results. For example, to minimize the purchase price variance, a purchasing manager may purchase a cheaper, lower quality part.

Continuous improvement

- As a result, the quality of the product is likely to be reduced, and the company may experience higher overall costs in the form of rework or warranty problems.
- In contrast, Kaizen costing is performed on a company-wide basis and can be used in planning, design, and other processes as well as production. Kaizen costing activities do not reduce the overall quality of the product; they do ensure that expenditures result in the receipt of appropriate value.

Comparison

Standard Costing Concepts

- Cost control system concepts.
- Assume current manufacturing conditions.
- Meet cost performance standards.

Kaizen Costing Concepts

- Cost reduction system concepts.
- Assume continuous improvement in manufacturing.
- Achieve cost reduction targets.

Comparison

Standard Cost Techniques

- Standards are set annually or semiannually.
- Cost variance analysis involving standard costs and actual costs.
- Investigate and respond when standards are not met.

Kaizen Costing Techniques

- Cost reduction targets are set and applied monthly.
- Continuous improvement (Kaizen) is implemented during the year to attain target profit or to reduce the gap between target profit and estimated profit.
- Cost variance analysis involves target Kaizen costs and actual costs reduction amounts.
- Investigate and respond when target Kaizen amounts are not attained.

Performance Management

- CIMA defines standard costing as “a control technique that reports variances by comparing actual costs to preset standards facilitating action through management by exception”.
- The main aim of this cost-control tool is to avoid adverse variances, based on the assumption that manufacturing conditions will not change. Standards are usually set before the year to which they relate and do not change for the whole period, unless a major cost or change in circumstances renders them obsolete. Kaizen cost targets, on the other hand, are usually set monthly.

Performance Management

- One of the main criticisms of standard costing is that, as long as adverse variances are avoided, no attempt is made to seek further cost savings.
- Kaizen costing is a more proactive approach that assumes improvements can always be made – it promotes a culture in which all employees are constantly seeking to reduce production costs.
- Relevance of SC and KC in service and manufacturing sector
- Major professional opportunity for CA

STANDARD COSTING – CHALLENGES IN IMPLEMENTATION IN TODAY'S MANUFACTURING ENVIRONMENT

Emerging issues

- In recent years, experts have argued that standard costing variance analysis should not be used for cost-control and performance-evaluation purposes in today's manufacturing world.
- Its use, they argue, is likely to induce behaviour which is inconsistent with the strategic manufacturing objectives that companies need to achieve in order to survive and prosper in today's intensely competitive international economic environment.

Standard setting

- The scientific management engineers divided the production system into a number of simple repetitive tasks in order to obtain the advantages of specialisation and to eliminate the time wasted by workers changing from one task to another.
- Once individual tasks and methods have been clearly defined it is a relatively simple matter to set standards of performance using work study and time and motion study. These standards of performance then serve as the basis for financial control: monetary values are assigned to both standards and deviations from standard, i.e. variances. These variances are then attributed to particular operations/ responsibility centres.

Business Environment

- Companies operating in today's manufacturing environment, however, are likely to have strategies based on objectives such as improving quality, increasing flexibility to meet customers' individual requirements, reducing manufacturing lead times and delivery times, reducing inventories and unit costs.
- To help achieve these objectives, manufacturing strategies such as just-in-time (JIT), advanced manufacturing technology (AMT) and continuous improvement are often applied. Kaplan and others argue that standard costing is counter-productive in such an environment.

Standard Costing – specific challenges

- Efficiency variances measure labour hour input against the standard labour hours of the production achieved.

- Producing in smaller batch sizes will mean that more labour time is spent on machine set-ups and consequently the standard hours of output will be lower relative to the labour hour input -- resulting in adverse efficiency variances.

FO Volume variance

- The fixed overhead volume variance arises as a result of a given level of overhead expenditure being spread over a different number of units from the number budgeted. Adjusting output downwards to meet a fall in short-term demand will, however, mean fewer units to absorb the fixed overhead, resulting in an adverse volume variance.

- Hence managers may be motivated to produce for stock in direct contravention of the philosophy of JIT.

Material price variance

- Materials price variance: adverse materials price variances may result from buying in small quantities in order to keep stocks low as part of the JIT philosophy.
- Measuring this variance may therefore put pressure on purchasing managers to buy in bulk to obtain quantity discounts and thus favourable price variances

Advanced Manufacturing Technology

- In an AMT environment, the major costs are those related to the production facility rather than production volume related costs such as materials and labour which standard costing is essentially designed to plan and control
- Standard costing is concerned with comparing actual cost per unit with standard cost per unit. Fixed costs imputed to the product unit level are only notionally 'unit' costs.
- Any difference between the actual and standard fixed cost per unit is not therefore meaningful for controlling operations, as it does not necessarily reflect under or overspending --it may simply reflect differences in production volume. What matters is the total fixed overhead expenditure rather than the fixed overhead cost per unit.

Advanced Manufacturing Technology

- Therefore, in an AMT environment, standard costing variances have at best a minor role to play and at worse they may be counter-productive insofar as they force managers to focus on the wrong issues.
- An activity-based cost management (ABCM) system may be more appropriate, focusing on activities that drive the costs in service and support departments which form the bulk of controllable costs.

JIT

- In a JIT/AMT/continuous improvement environment, the workforce is usually, organised into empowered, multi-skilled teams controlling operations autonomously
- The feedback they require is real time and in physical terms. Periodic financial variance reports are neither meaningful nor timely enough to facilitate appropriate control action.

TQM

- In a total quality management (TQM) environment, standard costing variance measurement places an emphasis on cost control to the likely detriment of quality
- TQM requires a total managerial and worker ethos of improving and maintaining quality, and of resolving problems relating to this.
- The emphasis of standard costing is on cost control; variance analysis is likely to pull managerial and worker interest away from perhaps critical quality issues. Thus cost control may be achieved at the expense of quality and competitive advantage.

Need for modifying traditional standard costing system

- In today's intensely competitive environment we no longer look to the total unit cost in order to determine selling price; instead, we use the selling price to help determine the cost the market will allow. This allowable or target cost per unit is a market-driven cost that has to be achieved if desired profits are to be achieved.
- In a highly competitive, dynamic world there is likely to be considerable downward pressure on this allowable cost. Cost management must therefore consist of both cost maintenance and continuous cost improvement.

Need for modifying traditional standard costing system

- In such a competitive, improvement-seeking environment, standard costing may have limited application based on predetermined engineering standards which creates a mind set of achieving the standard rather than of continuous cost reduction

Standard Costing in Kaizen

- In a largely automated production system, most costs are committed at the product design stage
- While many costs are, indeed, committed at the product design stage, there is usually considerable scope for cost variability at the production stage. This is exemplified by the manner in which Kaizen is intended to complement target costing.
- Target costing is applied in managing costs at the product design stage via value engineering. Kaizen is then used to encourage continuous improvement, i.e. cost reduction. It does this by targeting reductions to current unit costs and then comparing actual reductions against these targets.

The 'dark area' of Standard costing

- Over-emphasis on cost control can be detrimental to quality, customer satisfaction and market share.

- This is a danger which management should be aware of. This does not justify the abandonment of cost control, however. It simply reinforces the need to measure performance through a range of indicators-cost, quality, lead times, inventory levels and so forth.

Limitations of Standard costing

- This traditional approach is one whereby actual performance is compared with the standard cost of activity achieved and is based on predetermined standards. If the predetermined standard, set prior to the budget period, is still realistic under current conditions then the variance report will still be of added value to the user.
- However if there has been changes in both internal and external factors then the standards may no longer be realistic and the variances reported will be of little use and no longer relevant for control purposes.

SC, Lean Statement & Decision Making

- **Typical Line Items**
  - Net Sales
  - Overtime
  - Material Cost
  - Supplies
  - Gross Margin

Lean Accounting V/s Standard Costing

- Focus & Approach
- Process Control
- Operational Differences

Transformation to Lean Accounting System

- 5 Steps process

Standard Costing Software Program

- Objectives
- Capabilities
- Advantages

Standard Costing Corporate Insights

- Results of Global Survey & Research

Standard Costing

- Future Role
- Transformation in approach

Way forward

- The basic principle of accounting control embodied in standard costing remains sound. The constituents of the standard, the variances calculated and the way they are interpreted may need to change.

- A fruitful productive area for future research is the way in which organisations are retaining the cost control methodology inherent in standard costing but are adapting their systems to take account of the changing production environment.

Recap

- SC Concepts
- Budgetary Control
- RM, L, OH, S
- Variance Analysis
- Kaizen
- Quality Variance
- Lean Accounting
- Software
- Survey

Introduction to MCQ & CA Final problems

- General
- CA Final exam questions

Section A: Short Notes

1) Difference B/W SC & Budgetary Control

   - Listen to Solution & Discussion

Section A: Short Notes

2) Disposal of Cost Variances

- Listen to Solution & Discussion

Section A: Short Notes

3) Reasons of Labour Rate Variance

- Listen to Solution & Discussion

Section A: Short Notes

4) Problems of SC in Time of inflation

   - Listen to Solution & Discussion

Section A: Short Notes

5) Is SC a Post Mortem exercise

   - Listen to Solution & Discussion

Section A: Short Notes

6) Features of Partial Plan of SC

- Listen to Solution & Discussion

Section B: Fill in the blanks

1. The difference between actual fixed overhead and budgeted fixed overhead is the _____.

   fixed overhead spending variance

2. The difference between what was paid and what should have been paid for actual inputs is called the _____ or the _____.

   price variance, rate variance

3. The difference between the direct materials actually used and the direct materials allowed for actual output multiplied by the standard price is the _____.

   direct materials usage variance

4. A(n) _____ is produced whenever the actual rupee amount spent are greater than the standard allowance.

   unfavorable variance

Fill in the blanks

5. The _____ is the price that should have been paid per unit of input; the quantity of input allowed per unit of output is the _____.

price standard, quantity standard

6. **T**he difference between the actual payroll and what should have been paid for the actual hours worked is the _____.

direct labor rate variance

7. The _____ is a measure of capacity utilization.

fixed overhead volume variance

Fill in the blanks

8. The difference between the actual labor hours worked and the standard hours allowed multiplied by the variable overhead rate is the _____; the difference between what was spent and what should have been spent for variable overhead at actual hours is the _____.

variable overhead efficiency variance, variable overhead spending variance

9. The per-unit cost that should be achieved given materials, labor, and overhead standards is the _____ or _____.

standard cost per unit, unit standard cost

10. A listing of the standard costs and standard quantities of materials, labor, and overhead that should apply to a single product is the _____.

standard cost sheet

11. The maximum allowable deviation from a standard is called the _____.

control limit

12. A(n) _____ reflects perfect operating conditions.

ideal standard

13. The difference between the actual cost of an input and its planned cost is the _____.

total budget variance

14. The difference between standard quantities and actual quantities multiplied by the standard price is the _____.

usage variance

15. The difference between the standard material cost of the standard yield and the standard material cost of the actual yield is the _____.

yield variance

16. The difference between the standard cost of the mix of actual material inputs and the standard cost of the material input mix that should have been used is the _____.

mix variance

17. A(n) _____ reflects an efficient operating state.

currently attainable standard

18. A(n) _____ is produced whenever the actual dollars spent are less than the standard allowances.

favorable variance

19. A detailed listing of the type and quantity of materials allowed for a given level of output is called the _____.

standard bill of materials

20. The difference between what was paid for materials purchased and what should have been paid is the _____.

direct materials price variance

21. The direct labor hours that should have been used to produce the actual output is the _____; the quantity of materials that should have been used to produce the actual output is the _____

standard hours allowed, standard quantity of materials allowed

22. The difference between the actual direct labor hours used and the standard labor hours allowed multiplied by the standard hourly wage rate is the _____.

direct labor efficiency variance

SECTION C: MULTIPLE-CHOICE QUESTIONS

1. If more direct materials were used for production than were allowed for the output, then the:

   a. direct labor efficiency variance will be unfavorable.

   b. direct labor rate variance will be favorable.

   c. direct materials price variance will be favorable.

   d. direct materials usage variance will be unfavorable.

   e. overhead budget variance will be unfavorable.

2. The direct labor rate variance is computed as:

   a. (Actual labor hours worked – Standard labor hours allowed) × Actual labor rate.

   b. (Actual labor hours worked – Standard labor hours allowed) × Standard labor rate.

   c. (Actual labor rate – Standard labor rate) × Standard hours allowed.

   d. (Actual labor rate – Standard labor rate) × Actual hours worked.

   e. none of the above.

3. Which of the following variances would be *least* likely if the materials used were of much poorer quality than the standard?

   a. unfavorable direct materials price variance
   b. unfavorable direct materials efficiency variance
   c. unfavorable direct labor efficiency variance
   d. unfavorable variable overhead efficiency variance
   e. All of the above would be equally likely to occur.

4. If the direct labor force is poorly trained, which of the following variances is *most* likely to occur?

   a. unfavorable direct labor efficiency variance
   b. unfavorable direct labor rate variance
   c. favorable direct materials efficiency variance
   d. favorable fixed overhead spending variance
   e. unfavorable variable overhead spending variance

5. Which of the following circumstances is *least* likely to cause a direct materials usage variance?

a. inexperienced workers
b. lack of regular maintenance of automated production machinery
c. materials of poorer than expected quality
d. price increases by suppliers
e. unanticipated changes in the design of the product

6. Which of the following would accompany an unfavorable direct labor efficiency variance?

a. favorable direct materials usage variance
b. unfavorable direct materials price variance
c. unfavorable direct labor rate variance
d. unfavorable variable overhead efficiency variance
e. unfavorable fixed overhead spending variance

7. The overhead spending variance computed using a three-variance analysis:
   - **a.** consists only of fixed costs; no variable costs are included.
   - **b.** consists only of variable costs; no fixed costs are included.
   - **c.** consists of both variable and fixed costs.
   - **d.** is favorable when the direct materials price variance is favorable.
   - **e.** None of the above are true.

8. The overhead efficiency variance computed using a three-variance analysis:
   - **a.** is (Flexible budget for actual hours worked – Flexible budget for standard hours allowed).
   - **b.** consists only of variable costs; no fixed costs are included.
   - **c.** is [(Actual hours worked – Standard hours allowed) × Standard variable overhead rate].
   - **d.** is unfavorable when the direct labor efficiency is unfavorable.
   - **e.** All of the above are true.

9. The direct materials standard for XYZ Company is 10 pounds of input at $4.00 per pound. XYZ purchased 25,000 pounds of material for $97,600. The company used 22,000 pounds of material to produce 2,250 units of output. The direct materials price variance is:

a. $2,000 unfavorable.

b. $2,400 favorable.

c. $7,600 unfavorable.

d. $9,600 unfavorable.

e. none of the above.

10. Assume the same information as in Question 9 above. The direct materials usage variance is:

a. $2,000 unfavorable.

b. $2,400 favorable.

c. $7,600 unfavorable.

d. $9,600 unfavorable.

e. none of the above.

Please Note: “Favorable” Variances May Be Unfavorable

The fact that a variance is “favorable” does not mean that it should not be investigated. Raw materials are good examples of this phenomenon, especially considering the competitive pricing environment for most commodities. Suppose inferior, low-priced materials are ordered. On the one hand, a favorable price variance will arise. On the other hand, most likely there will be substantially more scrap and rework, and thus a higher quantity variance.

Responsibility Accounting and Variances

As noted previously, managers should be held responsible only for costs they can control. This is true in the area of variance analysis. For example, a purchasing agent may be held responsible for direct material price variances, but certainly not direct material quantity (usage) variances.

Lesson Summary & CA Final Exam strategy

1. We have learnt the meaning and purpose of standard costing

2. We had also seen the classification of standard costing and discussed them under 4 groups – material, labour, OH, Sales

3. We had discussed the variance analysis computation, PRS & reasons for variance

Thank You