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I. <u>Flexible (Variable) Budgets</u>

- A. Budgets that can be adjusted for changes in the level of activity encountered by the firm (as opposed to **static budgets** that are only useful only at a fixed (static) level of activity.
 - 1. Flexible budgets are used in conjunction with static budgets to identify:

a. <u>sales volume variance</u>: the difference in operating income (net income) between the flexible-budget amounts and the static (master) budget amounts while <u>holding selling prices and</u> <u>variable costs constant</u>;

Sales Volume Variance = (Flexible-budget units sold - master-budget units sold)(budgeted UCM)

b. <u>flexible budget variance</u>: the difference between actual operating income (net income) and flexible budget operating income;

Flexible-budget Variance = Actual Operating Income - Flexible-budget Operating Income

Note: All variances must be labeled as favorable (F) or unfavorable (U)

- 2. When using these variances to evaluate managerial performance it is important to distinguish between: a. **Effectiveness:** the degree to which a manager has achieved a predetermined objective
 - b. **Efficiency:** the degree to which a manager maximizes outputs with a given number of inputs

II. STANDARD COSTING

A. A flexible-budgeting system that utilizes **predetermined per unit standard costs** for Direct Material (DM) Direct Labor (DL) and Variable Overhead (VOH)



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| | | Muster (Static) Dudger |
|---|------------------------|------------------------|
| Flexible-budget Variance | Sales Volume | Variance |
| Master-budget Variance | | |
| B. <u>Standard Costing Journal Entries</u> | | |
| Record Direct Materials Purchased and Tsolate DM Variance | 25: | |
| Stores (Act Q purchased)(Std \$) DM \$ Variance (U) $[\Delta $ (Act Q)]$ DM \$ Variance (F) $[\Delta $ (Act Q)]$ Accounts payable (Act Q)(Act \$) | xxxx UUUU* | FFFF* xxxx |
| Record Direct Materials Used In Production:Work in process (Std Q for units produced)(Std \$)DM Efficiency Variance (U) [Δ Q (Std \$)]DM Efficiency Variance (F) [Δ Q (Std \$)]Stores (Act Q used in production)(Std \$) | xxxx UUUU* | FFFF* xxxx |
| Record Direct Labor Cost and Isolate DL Variances:Work in process (Std Q for units produced)(Std \$)DL \$ Variance (U) [Δ \$ (Act Q)]UDL Efficiency Variance (U) [Δ Q (Std \$)]UDL \$ Variance (F) [Δ \$ (Act Q)]UDL Efficiency Variance (U) [Δ Q (Std \$)]UDL \$ Variance (F) [Δ \$ (Act Q)]UDL Efficiency Variance (U) [Δ Q (Std \$)]U | xxxx UUUU* UUUU* | FFFF* FFFF* |
| Payroll Payable (Act Q)(Act \$) | | xxxx |
| RECORD VARIABLE OVERHEAD AND ISOLATE VARIANCE | S (three s | teps): |
| 1. <u>Record VOH Incurred</u> : VOH Control (Act Q)(Act \$) Accounts payable and other credits | xxxx | xxxx |
| <u>Record VOH Applied to WIP</u>: WIP (Std Q for units produced)(Std \$) VOH Applied | xxxx | xxxx |
| <u>Isolate VOH Variances for the period</u>: VOH Applied (Std Q for units produced)(Std \$) VOH \$ Variance (U) [Δ \$ (Act Q)] VOH Efficiency Variance (U) [Δ Q (Std \$)] VOH \$ Variance (F) [Δ \$ (Act Q)] VOH Efficiency Variance (U) [Δ Q (Std \$)] VOH Efficiency Variance (U) [Δ Q (Std \$)] | xxxx UUUU* UUUU* | FFFF* FFFF* xxxx |
| Record Fixed Factory Overhead and Isolate Variances: (two <u>1. Record Actual FOH</u> : Fixed OverHead (FOH) Control (Actual amounts incurred) Variant Accounts (at actual billed amounts) | o steps) xxxx | |

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2. Isolate FOH Variances:

| FOH Applied (application rate)(level of activity) | xxxx | |
|--|-------|------|
| FOH Budget Variance (Actual Cost - Flex-budget cost) (U) | UUUU* | |
| FOH Volume Variance (Flex-budget - Master Budget) (U) | UUUU* | |
| FOH Budget Variance (Actual Cost - Flex-budget cost) (F) | | FFFF |
| FOH Volume Variance (Flex-budget - Master Budget) (F) | | FFFF |
| FOH control (actual amounts) | | xxxx |

Allocate Variances [Variances may be allocated to inventory accounts and COS or allocated directly to COS]

* Two accounts of the same type will not occur simultaneously; they are depicted here to illustrate handling for favorable (F) and unfavorable (U) variances

C. Criteria for Selecting Standards

- The nature of the standards selected and utilized by the firm in a standard costing system can have profound effects on those employees striving to attain them. To the extent that the standards are viewed as unobtainable or not realistic they will not have a motivating influence on managers or other employees. The following is a list of types of standards sometimes utilized in practice:
 - a. Perfection Standards: (AKA ideal, maximum efficiency and theoretical standard) Those standards obtainable only in a "perfect environment"; should be used only in those circumstances where they may provide a psychological motivation
 - b. **Currently Obtainable Standards**: Standards that are difficult but obtainable. These standards take into account normal spoilage, breakdowns, absenteeism etc.; are more widely accepted as realistic by employees (especially if employees are involved in there creation) and therefore generally provide the most motivation. Most widely used in practice.

D. Investigation of Factors Underlying Variances:

1. The decision to investigate the underlying causes of variances must be made based on the size of the variance without regard to whether a particular variance is favorable or unfavorable.

| Type of Cost | Actual Absorption Costing Balance in WIP | Normal Absorption Costing Balance in WIP | Standard Absorption Costing Balance in WIP |
|-------------------|--|--|--|
| Direct Materials | (Act Q)(Act\$) | (Act Q)(Act \$) | (Std Q for Output)(Std\$) |
| Direct Labor | (Act Q)(Act\$) | (Act Q)(Act\$) | (Std Q for Output)(Std\$) |
| Variable Overhead | (Act Q)(Act\$) | (Activity level)(Appl. Rate) | (Std Q for Output)(Std\$) |
| Fixed Overhead | (Act Q)(Act\$) | (Activity level)(Appl. Rate) | (Std Q for Output)(Std\$) |

Summary of Standard Costing Systems

Note: DM variances are based on purchases

DL, VOH and FOH are based on production

III. Review Questions:

- Standard costs are more likely to be developed for a static budgeting system than for a flexible budgeting system.
- Actual direct-material cost was \$20,000 for the production of 4,000 product units. The static budget showed a direct material cost of \$24,000 for the production of 5,000 units. If a static-budget analysis were used, the direct-material cost variance would be \$4,000 favorable.
- 3. A flexible budget is helpful in measuring the efficiency of using units of direct-materials. T $\,$ F $\,$
- Salamander Company prepared a budget that showed \$80,000 of direct-labor cost for the production of 16,000 product units. Actual direct-labor cost was \$96,000 for the production of 20,000 product units. The flexible-budget variance is \$4,000 favorable.
- Aylette Eyelet Company's budget included \$200,000 of direct-material cost for the manufacture of 5,000 product units. However, actual direct-material cost was \$220,000 for 6,000 units. The flexible-budget variance was \$20,000 unfavorable.
- When the standard direct-labor rate is multiplied by the excess of labor hours used over the standard number of labor allowed for good product units, the result is an unfavorable direct-labor efficiency variance.
 T F
- 7. Generally, the combined price-efficiency variance is included with the price variance. T $\,$ F $\,$
- Random variances are not exempt from corrective actions by management.
 F
- When material price variances are recognized as materials are issued to production, the Stores account would be carried at actual prices.
 T F

Т

- 10. In general, currently attainable standards would be more appropriate than ideal standards for control purposes as well as product-costing purposes. T F
- 11. Static budget figures are not directly used to compute either:
 - (1) price variances or sales-volume variances
 - (2) sales-volume variances or efficiency variances
 - (3) efficiency variances or price variances
 - (4) flexible-budget variances or sales-volume variances
- 12. Sales-volume variances are the differences between:
 - (1) static-budget figures and actual results
 - (2) flexible-budget figures and static-budget figures
 - (3) actual results and flexible-budget figures
 - (4) none of the above
- 13. Flexible-budget variances are the differences between:
 - (1) static-budget figures and actual results (3) flexible-budget figures and static-budget figures
 - (2) actual results and flexible-budget figures (4) none of the above

14. The total flexible-budget cost variance to be explained is the difference between actual inputs times actual price and:

- (1) actual inputs times standard price
- (3) actual inputs times standard costs allowed
- good outputs times actual price
- (4) good outputs times standard costs allowed

15. Jerrico Corporation's static budget included \$70,000 of direct-labor cost for the production of 14,000 slippers, but the actual direct-labor cost was \$67,000 for the production of 13,000 slippers. These data indicate:

- (1) a favorable sales-volume variance of \$3,000
- (2) an unfavorable flexible-budget variance of \$2,000
- (3) an unfavorable flexible-budget variance of \$3,000
- (4) a favorable sales-volume variance of \$2,000

16. An unfavorable sales-volume variance for direct-labor cost would be:

- (1) excess of static-budget cost over flexible-budget cost
- (2) excess of static-budget cost over actual cost
- (3) excess of actual cost over flexible-budget cost
- (4) none of the above

17. A favorable sales-volume variance for direct-material cost would be:

- (1) excess of flexible-budget cost over actual cost
- (2) excess of static-budget cost over flexible-budget cost
- (3) excess of static-budget cost over actual cost
- (4) none of the above

18. Given for Material E: standard price per pound \$8, actual price per pound \$9, quantity purchased 200 pounds, guantity used 190 pounds, standard guantity allowed 188 pounds. Compute efficiency variance:

- (1) \$18 unfavorable (3) \$96 favorable
- (2) \$90 favorable (4) none of the above

19. Par Company is using a direct-labor cost standard of 4 hours and a \$12 wage rate per hour for one of its products. Planned production was 300 units, but actual production was 250 units, using for each unit 3 labor hours at a \$13 wage rate. Compute the labor-price variance:

- (1) \$1,200 unfavorable (3) \$900 unfavorable
- (2) \$1,000 unfavorable (4) some other variance

20.Generally, managerial control is most feasible for:

- (1) labor wage rates and material prices
- (2) labor wage rates and material quantities
- (3) labor hours and material prices
- (4) labor hours and material quantities

21. Fortunata Corporation uses a standard cost accounting system and provides the following data:

Product units manufactured: 100 Direct labor: Standard hours allowed: 2 hrs. per product unit Standard wage rate: \$12 per hour Actual direct labor: 190 hrs., total cost \$2,300

Use F to indicate favorable variances and U to indicate unfavorable variances.

- (a) Compute the direct-labor price variance.
- (b) Compute the direct-labor efficiency variance.
- (c) Draft the journal entry to record the direct-labor costs, including both variances.

SOLUTIONS:

- 1. F
- 2. T 3. T
- 4. T
- 5. F
- 6. T
- 7. T
- 8. F
- 9. T 10. T
- 11. (3)
- 12. (2)
- 13. (2)
- 14. (4)
- 15. (2)
- 16. (4)
- 17. (2)
- 18. (4)
- 19. (4)
- 20. (4) 21.
- (a) Compute the direct-labor price variance.
 Price variance = Δ \$ (Act Q) = [(\$2,300/190) \$12] (190) = \$20 U
- (b) Compute the direct-labor efficiency variance. Efficiency variance = ΔQ (Std \$) = (200 - 190) (\$12) = \$120 F
- (c) Draft the journal entry to record the direct-labor costs, including both variances.

| Work in process (200)(\$12) | 00 |
|---|--------|
| DL \$ Variance (Ū) [Δ\$ (Áct Q)] | 20* |
| DL Efficiency Variance (U) [Δ Q (Std \$)] | 120* |
| Payroll Payable (Act Q)(Act \$) | 2,300* |

*Refer to computations above