

ACCTG 533: Module 9: Planning and Control: Lecture 2: Budget Analysis

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Budget Analysis

Jeanne Yamamura

[Jeanne H. Yamamura]:

Budget Analysis

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Variance Analysis

- *Identification of differences*

- *Budget to actual*

[Graphic Shown]

[Jeanne H. Yamamura]:

While preparing the budget has benefits, such as improved communication up and down, it is the comparison of budget to actual that really gets things jumping! Budget analysis, also known as variance analysis, involves the identification of differences – where actual and budget parted ways – and then the determination of exactly what happened.

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Example 1: Salaries and Wages

Budgeted S&W \$25,000 Actual S&W

26,600 Difference (\$1,600)

Unfavorable variance

[Jeanne H. Yamamura]:

The first step is the calculation of variances. There are many different variances that can be calculated. You may be familiar with some or all of them. We'll look at a couple of simple variance computations to familiarize you with the process but will not spend a lot of time calculating all of the different variances.

Example 1: Salaries and wages: You expected S&W for June to be \$25,000. It actually turned out to be \$26,600. The difference (\$1,600) is an **unfavorable** variance. It is unfavorable because it decreases operating income.

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Standard Costs

- Established benchmark or norm*
- Expected level of performance*
- Quantity and cost*

[Jeanne H. Yamamura]:

Before we look at example 2, the concept of “standard costs” needs to be introduced. Standard costs are utilized most often in production operations such as manufacturing, service, and food. A standard is an established benchmark or norm used to measure performance. When standard costs are utilized in a budget, they identify the expected level of performance. Standards can be set for quantity and cost for each major input in a production operation.

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Example 2: Salaries and Wages Under Standard Costing

Budgeted S&W:

$$\$25/\text{hour} * 1,000 \text{ hours} = \$25,000$$

Actual S&W:

$$\$28/\text{hour} * 950 \text{ hours} = \$26,600$$

$$\text{Difference: } (\$1,600)$$

[Jeanne H. Yamamura]:

Now, example 2 shows salaries and wages under standard costing. Now assume that the June S&W budgeted amount of \$25,000 was computed as follows: \$25 per hour * 1,000 hours. The \$25 rate and the 1,000 hour quantity are standard costs. The actual June S&W of \$26,600 consisted of: \$28 per hour * 950 hours.

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Example 2: Salaries and Wages Under Standard Costing

$$\begin{aligned} &\text{Price Variance (Std. - Actual) rate *} \\ &\text{Actual hours } (\$25 - \$28) * 950 \text{ hours} \\ &= (\$2,850)U \end{aligned}$$

Quantity variance: *(Std. – Actual)*
*hours * Std. rate (1,000 – 950) **
 $\$25 = \$1,250 \text{ F}$

Total variance $(\$1,600) \text{ U}$

[Jeanne H. Yamamura]:

We can now calculate two variances – a price (cost) variance and a quantity variance. The price variance is \$25 minus \$28, or the difference between the standard rate and the actual rate paid, times 950 hours or the actual hours worked. That yields an unfavorable variance of \$2,850. The quantity variance is computed as 1,000 minus 950, or the standard hours minus the actual hours, times \$25 (the standard rate). That yields a favorable variance of \$1,250. The total variance is the combination of the two which is a negative variance, or an unfavorable variance, of \$1600.

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Most Important – Find Out Why

- Deviations from budget (plan)*
- Detect and correct problems*
- Long or short-term change?*
- Price increase possible?*
- Due to inefficiencies?*

[Jeanne H. Yamamura]:

Variances are simply deviations from budget. They are identified in order to detect problems and ideally correct them. The calculation of the variance, therefore, is the initial step. What is more important is identifying WHY the variance occurred. Does the variance reflect a long or short-term change? If unfavorable, will you be able to increase prices to cover it? Is it due to inefficiencies in the organization's processes?

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Most Important – Find Out Why

- CGS + \$1,500 U*
- Increases in flour and sugar costs*
- Increase in water and energy costs*

[Jeanne H. Yamamura]:

For example, cost of goods sold increased by \$1,500 over the amount budgeted for the month. Why? The cost of flour and sugar increased along with energy and water costs. It is important to fully understand these cost increases. Are they temporary? Were any of the increases due to waste or other inefficiencies? You have to find out what caused the variance before you can take action to address the problem.

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Possible Choices

- Raise prices*
- Reduce labor or overhead costs*
- Revise recipes*

[Jeanne H. Yamamura]:

Possible choices available to the bakery: The bakery can try to raise prices. In a down economy, this may be difficult if not impossible. It may also alienate the bakery's customers if they do not perceive value in the higher-priced products. Or the bakery can try to reduce labor or overhead costs, for example investing in a solar energy system to reduce energy costs. This will require a substantial outlay before any benefits are realized. Or the bakery can try to revise the recipes for its products to reduce the cost of the most expensive ingredients. This can be a little risky as the flavor and texture might be changed as a result which could make the products less desirable.

So the options for the bakery included both short-term and long-term solutions. Each option has consequences, favorable and unfavorable. It is important that the problem be fully identified before corrective action is taken. If you jump in too quickly, you may end up causing more problems rather than solving any.

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Production Volume Variance

Budgeted fixed overhead

Budgeted production

=Fixed overhead rate per unit production

- If actual production < budgeted production, applied fixed OH < actual fixed OH*
- Resulting in an unfavorable production volume variance – adds to expense*

- *Absorption costing – incentive to produce more than needed to eliminate production variance*

[Jeanne H. Yamamura]:

One additional type of variance that I want to mention is the production volume variance. Remember that we introduced the idea of static and flexible budgets. A static budget assumes one volume level. If the actual volume differs from this level, a volume variance is created. In a flexible budget, adjustments are made for volume changes so there is no volume variance.

This is how the production variance occurs. First, budgeted fixed overhead costs are divided by the budgeted production volume. The fixed overhead rate that results is used to apply fixed overhead to each unit of product. If actual production < budgeted production, the fixed overhead applied will be less than the actual. This creates an unfavorable production volume variance which ends up being expensed.

Remember when we talked about absorption costing earlier in the class. Because unfavorable production volume variances are expensed, it creates an additional incentive under absorption costing for managers to overproduce. That way the fixed overhead will be capitalized as inventory and not expensed.

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Budget Variance Analysis

- *Not just a numeric exercise*

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[Jeanne H. Yamamura]:

Organizations today are typically able to generate a full variance report meaning a budget reconciliation report that identifies every variance from actual that has occurred. This report may contain hundreds of variances, burying you in data. You then face the task of trying to pull out those numbers that are most meaningful. Approach variance analysis with caution.

Treating variances as solely a numeric exercise misses the whole point. Variances are departures from plan. They must be investigated to find the cause or causes so that the correct action can be taken.

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Budget Variance Analysis

- *Avoid variance frenzy!*
 - *Investigate ALL significant variances*
 - *Identify trends*
 - *Don't forget big picture*

[Picture Shown]

[Jeanne H. Yamamura]:

Variance frenzy can result from data overload and lack of prioritization. A suggested approach is to: Start by investigating all significant variances both favorable and unfavorable. Significant variances mean that something big has happened and you need to know what it is and whether it is temporary or permanent. Then identify trends. Small variances that occur consistently may indicate a developing problem. It would be better to investigate and solve the problem BEFORE it becomes significant. Then don't forget the big picture. When inundated with numbers, it becomes easy to get lost in the detail. It is important to step back and look at the whole. Buying cheaper raw materials may have resulted in a favorable materials variance but created an unfavorable labor variance when the poor quality raw materials required additional handling. Linkages often appear in variances – stepping back to look at the whole enables you to identify such connections.

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Creation of Standard Costs

- Theoretical (ideal) standard*
 - *Assumes perfection*
 - *Not usually achievable*
- Practical standard*
 - *Tight but attainable*
 - *Allow for normal inefficiencies*

[Jeanne H. Yamamura]:

When utilizing standards, it is important to know what kind of standard has been created. Are they “ideal” standards which assume perfect conditions? Or are they “practical” standards (also known as realistic or attainable standards) which allow for less than perfect conditions?

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Good and Bad Variances

- Favorable and unfavorable ≠ good and bad*
- Often interrelated*

[Picture Shown]

[Jeanne H. Yamamura]:

Favorable and unfavorable variances do not always equate to good and bad. A favorable variance may result from poor quality or poor work. For example, cutting the amount of time required for final inspection of goods coming off the production line. An unfavorable variance may indicate a switch to a higher quality material that results in labor savings elsewhere. Another

thing to remember about variances is that they are often interrelated. Favorable variances in one area may result in unfavorable variances in another area.