

Chapter 12 revision notes

Budgetary control

Standard costing

Standard costing can be used to calculate costs of units or processes that may be used in budgeted costs.

Not all budgeted amounts are standard amounts, as the latter will be precise by nature, unlike budgeted amounts.

Standard costing provides the basis for performance evaluation and control from comparison of actual performance against budget through the setting of predetermined cost estimates.

A standard cost is defined as the planned unit cost of the products, components or services produced in a period, and may be determined using many alternative bases. The main uses of standard costs are:

- ◆ measurement of business performance
- ◆ control of processes
- ◆ valuation of stocks
- ◆ establishment of selling prices

The standard direct labour cost is the planned average cost of direct labour, based on the standard time for the job and standard performance.

Standard performance is the level of efficiency, which appropriately trained, motivated and resourced employees can achieve in the long run, after allowing for the learning curve effect. The standard direct labour cost is then calculated by multiplying a standard direct labour hour by a standard hourly rate. Direct labour rates per hour are determined with reference to the type of skills to be used, union agreements, inflation and the market rates.

Advantages of standard costs

There are a number of advantages in using a standard costing system:

- ◆ it is a basis for budget preparation
- ◆ it may be used in planning and control
- ◆ it can be used to highlight areas of strength and weakness
- ◆ it can be used in evaluation of performance by comparing actual costs with standard costs and so assisting in implementation of responsibility accounting
- ◆ it should result in the use of the best resources and best methods and so increase efficiency
- ◆ it may be used as a basis for stock valuation
- ◆ it can be used as a basis for pay incentive schemes
- ◆ it can be used for decision making in its estimation of future costs
- ◆ it fits in with management by exception, whereby only significant variances (differences between actual and expected results) are investigated so making effective use of management time:
 - control action is immediate because for example as soon as materials are issued from stores into production they can be compared with the standard materials which should have been used for actual production
 - transfer prices (the prices at which goods or services are transferred from one process or department to another or from one company in the group to another) may be based on standard rather than actual costs to avoid inefficiencies in the form of excess costs

Disadvantages of standard costs

There are also a number of disadvantages in the use of standard costs:

- ◆ the difficulty in the establishment of the standard fixed overhead rate if standard absorption costing is used as opposed to standard marginal costing
- ◆ standard costing requires a great deal of input data, which can prove time-consuming and expensive, as can the maintenance of the cost database
- ◆ standard costing is usually used in organisations where the processes or jobs are repetitive
- ◆ if the standard is weak then the comparison is of little value

- ◆ there may be difficulties in determining which variances against standard are significant, and too narrow a focus on certain standards may exclude other useful information
- ◆ if performance evaluation is linked to management by exception, which assumes actual equals standard unless variance contradict, then there may be attempts by managers to cover up negative results
- ◆ morale may suffer if reprimands follow poor results and managers are not praised for positive results
- ◆ standards therefore need to be continually updated and revised - once a year is usually not often enough

Types of standard

In addition to current costs there are three types of standard that may be used as the basis for a standard costing system:

- ◆ basic standards are those that remain unchanged since the previous period and probably many previous periods
- ◆ ideal standards are the results expected from perfect performance under perfect conditions - they assume no wastage, nor inefficiencies
- ◆ attainable standards are the results expected under normal operating conditions, having some allowances for wastage and a degree of inefficiency

Flexed budgets

Control budgets need to be revised in line with actual levels of activity to provide more realistic levels of expected costs against which to measure performance.

A flexed budget reflects the costs or revenues expected as result of changes in activity levels from those planned in the master budget.

Flexed budgets enable comparison of actual costs and revenues on a like-for-like basis through the calculation of differences, or variances.

The standards chosen for use in the budget preparation are also used in the revised flexed budget to provide a method of comparison with actual performance.

This system of management control uses a closed loop system. This is a system which allows corrective action using a feedforward or a feedback basis.

Normally, fixed overheads by definition are fixed over the short-term regardless of changes in the level of activity, for example, units sold, units produced, number of invoices. Equally, direct labour and direct materials costs may be assumed to vary directly with sales. In practice, there is usually a wide band of activity over which direct labour costs may not vary.

Care should be taken in using the above assumptions but we may consider that they hold true for the purpose of illustration of flexed budgets and variance analysis.

Variance analysis

Variances are the difference between planned, budgeted or standard costs (or revenues) and actual costs incurred and may be summarised in an operating statement to reconcile budget with actual performance.

Variance analysis is the evaluation of performance by means of variances, whose timely reporting should maximise the opportunity for managerial action. These variances will be either favourable variances (F) or adverse variances (A). Neither should occur if the standard is correct and actual performance is as expected. A favourable variance is not necessarily good - it may be due to a weak standard. Management by exception assumes that actual performance will be the same as the standard unless variances contradict this.

Detailed variances can identify each difference within the elements making up cost or revenue by looking at unit prices and unit quantities. Variances may be due to:

- ◆ measurement errors
- ◆ use of standards that are out of date
- ◆ operations that are out of control
- ◆ random factors

When variances occur it must then be considered as to whether these variances should be investigated or not. The variances may not be material, or it may not be cost effective to carry out such an investigation.

Calculation of variances

A number of variances are calculated to quantify the difference in activity or volume. Most of the other variances show the impact of:

- ◆ differences in prices:
 - price variances
 - rate variances
 - expenditure variances

and

- ◆ differences in quantities:
 - usage variances
 - efficiency variances

between those prices and quantities actually incurred and those which should have been expected at the actual level, or volume of output.

The exception to this is the fixed production overhead variance.

The total fixed production variance is the difference between:

- ◆ the actual cost

and

- ◆ the cost shown in the flexed budget

The two components of the total fixed production variance are:

- ◆ the fixed production overhead efficiency variance:
 - a 'normal' one that calculates the difference between actual and flexed hours at the standard overhead absorption rate
- ◆ the fixed production overhead capacity variance:
 - calculates the difference between actual and budgeted hours at the standard overhead absorption rate
 - it measures the amount by which overheads have been under or over-absorbed (under-absorbed in the example), caused by the actual hours worked differing from the hours originally budgeted to be worked

A non-accountant will not be called upon to calculate variances. However, as a manager, it is important to clearly appreciate the way in which variances are calculated to be better able to:

- ◆ consider their materiality
- ◆ investigate the reasons for their occurrence if necessary
- ◆ take the appropriate corrective actions

Operating statements

The comparison of actual costs and revenues with budget is normally regularly reported to management (daily, weekly or monthly) and presented in what is called an operating statement. The operating statement is usually supported by a report explaining the reasons why specific variances have occurred.

The reasons for variances

Variances between actual and standard performance may be investigated to explain the reasons for the differences through completion of a complete analysis of all variances, or alternatively through the use of exception reporting that highlights only significant variances.

Although not an exhaustive list of possible causes, the following provides the reasons for most of the common variances encountered in most manufacturing and service businesses:

- ◆ direct material price: skills of purchasing department, quality of materials, price inflation, supplier discounts, foreign currency exchange rate fluctuations, invoicing errors
- ◆ direct material usage: quality of materials, labour efficiency, pilfering, stock control, quality control
- ◆ direct labour rate: use of higher or lower skilled labour than planned, wage inflation, or union agreement
- ◆ direct labour efficiency: use of higher or lower skilled labour than planned, quality of materials, efficiency of plant and machinery, better or worse than expected learning curve performance, inaccurate time allocation - employees have to learn a new process and then repeat that process for real many times, within times established during the learning curve evaluation

- ◆ overhead expenditure: inflation, wastage, resource usage savings, changes in services - many companies are outsourcing basic in-house services , for example accounting
- ◆ overhead efficiency: labour efficiency, efficiency of plant and machinery, technological changes
- ◆ overhead capacity: under or over-utilisation of plant capacity, idle time

Materials mix and yield variances show the effects on costs of changing the mix of materials inputs, and of materials inputs yielding either more or less than expected.

Planning and operational variances

Variance analysis is normally based on the questions:

- ◆ what did it cost
- and
- ◆ what should it have cost
- or
- ◆ how long did it take
- and
- ◆ how long should it have taken

There are inevitably problems with traditional variance analyses, which are invariably due to:

- ◆ failure to distinguish variances due to an incorrect standard from those that are operational
- ◆ failure to indicate which variances are controllable and which are uncontrollable
- ◆ failure to identify responsibility for variances
- ◆ lack of updating standards to current efficiency levels

Inaccuracies in original budgets may be identified through planning variances, and actual performance may then be compared with a subsequently revised budget to show operational variances.

There are a number of variance investigation decision models:

- ◆ the percentage rule, which prompts investigation if variances are greater than a certain percentage of the standard
- ◆ statistical significance rule, which investigates variances that are 'unusual' occurrences using a normal distribution
- ◆ statistical control charts, which provide warning limits and action limits