

II. BASIC COSTING TOOLS & TECHNIQUES

1. Cost Accounting And Analysis

1.1. It should be noted, at the outset, that cost reduction is not the same as cost control. The latter is more concerned, with the maintenance of costs in accordance with established standards; the former with pushing costs downward.

1.2. Cost control takes the established cost standards and endeavors to keep operation costs in line with those standards. Cost reduction challenges all costs standards and endeavors to reduce these continuously. Standards are targets in cost-control procedures, but are suspect in the case of cost reduction. In cost control, there is more of an element of the present and the past, while with cost reduction, the emphasis is much more upon the present and the future. Cost control is often limited to those items for which standards have been set, and this, all too frequently, means productive operations. Cost reduction should be applied to every section of the business. It is not dependent upon standards, though target amounts may be set. Cost control seeks to get the best results at the lowest possible cost under existing conditions. Cost reduction recognises no condition as permanent where a change will secure a lower cost figure.

1.3. Cost must not be confused with expenditures. Cost reduction may increase expenditure, as it is sometimes necessary to spend more money to reduce costs. Greater sums may be spent on research or tooling, but the final cost of the product may be reduced. It is, therefore, important to note that it is not the total cost, but the unit cost which really counts.

1.4. Although there is a difference between cost control and cost reduction, the analyses from cost accounting are among the most valuable information available to cost reduction, because:

- (i) They give an analysis of cost which may lead a cost reduction committee directly to answers as to how much, where, and, often, why costs are high. They thus enable concentration upon quick savings.
- (ii) They divide costs into the elements of material, labour, and expense. This is important because if in Rs. 100, of production cost, materials amount to Rs. 80, labour to Rs. 12, and expenses to Rs. 8, there is obviously a clear call for a great deal of attention to be given, in the first place, to what can be saved in material costs. In another organisation, if materials were Rs. 15, labour Rs. 30, and overhead Rs. 55, overhead is to be examined first •.
- (iii) If standard costs are in operation, losses exhibited through variances may also show where examination and effort are invited. In such a case, a cost reduction committee may be called upon partly to reduce costs to the standards set, and partly to reduce those standards.
- (iv) Some standard cost analyses are prepared in such a way as to show up reasons and causes. This type of approach makes for spaced results. The cost of idle time may~ for example, invite immediate attention, and maybe capable of speedy reduction.
- (v) In addition to the types of information already mentioned, cost analyses give valuable information for the purpose of arriving at alternatives and the cost of such, as well as calculating savings made through cost reduction procedures. Differential or marginal costs are also valuable in this regard.

1.5. Cost analyses are one of the most valuable tools available for analyzing potentialities and possibilities of reducing the cost of the product, the process operating procedure, or the general factory expenses. Cost accounting reports are necessary to give an appraisal of the effectiveness of cost reduction and control as initiated by the cost reduction personnel.

2. Standard Costs, Budgets & Budgetary Control

2.1. Under a properly constituted system of standard costs and cost control, standards of performance are first set; costs are compiled continuously through a scientific system of cost accounting, comparison is made of the actual costs with the standards, and the results of comparison are presented in appropriate forms to various executives concerned with production, sales, etc.; and finally in consultation with these executives, corrective action is taken so as to improve the performance in future and reduce the variation from standard.

2.2. In order to compare properly the actual performance with standards it is further necessary to have a system of budgetary control. Budgetary control means the careful planning of all operations to secure maximum profit from a minimum investment in business. It is the accounting projection into the future that provides a well-

Formulated programme for execution in terms of physical and monetary limits, and targets. Thus, budget provides a standard yardstick for measuring the accomplishment of various activities of the business.

2.3. Three steps that involve the operation of budgetary control are akin to the mechanism of cost control planning and forecasting; co-ordination; and control. Budgetary control helps the economic use of resources. The chief cause of high cost is "Waste"-waste by wrong plant utilisation, waste of materials, waste of labour, waste of services, and waste caused by unwise expenditures.

2.4. Prevention of wastes and definition of responsibilities, and complete attention of management where corrective steps are necessary, enthruses the whole business towards the desirable goal. The master budget has a break up of detailed budgets for sales, production, manpower, materials and stores, plant and equipment and finances; and it secures the participation of all the policy makers and executives in management.

2.5. As a supplement to cost control, the budgetary control system also promotes efficiency, economy, and vigilant check-up of expenditure trends. After callipering the importance of the two basic tools of cost and budgetary control, let us consider further what actually constitutes control. Control is a continuing process of measuring the actual results of the operations of an organisation in relation to those planned for it, and of subsequent action. Hence there are two aspects of control, i.e. presentation of control information, and taking control action. It is with the former aspect that cost accounting is primarily concerned.

2.6. When costs are being controlled it is essential to distinguish between controllable and uncontrollable variances. The former are those which are the responsibility of a particular person or group of persons, whereas the latter are outside the control of some one employed within the business, being due to outside influences. A price increase of a raw material or the award of wage increase may be uncontrollable costs and, therefore, uncontrollable variances. Costs should be controlled at the point at which they are incurred, and the assigning of responsibilities for variances is, therefore, of utmost importance.

2.7. When budgeting for maximum profit, the optimum size of output should be determined. This then becomes the foundation stone of planning.

2.7.1. If for any reason a plant is not employed fully, there is a real danger that the expected profit will not be earned. Many businesses depend upon a very large volume of output to earn the desired level of profit, the principal reason for this being a large total of fixed overheads and a relatively small rate of profit earned per Rupee of sales.

2.8. 'All levels of management are concerned with ensuring that the capacity selected is achieved. To the general management this is of great significance. Not only will there be a loss of profit due to fewer sales, but there will be a failure to recover fixed overhead costs in the costs of the products.

2.9. Management may be informed on what is happening through the calculation and analysis of the overhead volume variance, or, as it is also called, the overhead capacity variance. If plant is idle due to a trade recession, machinery breakdowns, shortage of material or labour, power failures, inefficient planning or any other reasons, then management should be informed of this fact together with the effect on costs.

2.10. The overhead volume or capacity variance may be calculated by application of the following formula:

Standard hours for period -- Actual hours for period X Standard overhead rate. 2.10.1. If the normal capacity in a period is represented by a volume of output equal to 10,000 standard hours, then any loss in this total will mean under-recovery of overhead costs. When calculating the overhead volume variance, care should be taken to use the appropriate standard number of hours as shown in the budget, i.e. the total number of hours regarded as normal capacity.

2.10.2. When overhead costs are divided into Fixed and Variable, then the formula is modified slightly, and the standard overhead rate becomes the standard rate for fixed overhead.

2.11. The art of management is the correct continual use of the four 'M's-"Money", 'Men', "Materials", and "Machines" to attain the company's objective in the competitive market in which values are, for various reasons, continually fluctuating.

2.12. In order to reach this objective, management sets a plan, and the plan is embodied in its budget. Through these budgets it seeks to operate at a set or standard cost. By means of cost control it seeks to measure performance against the plan. It produces hours of work, and it sells articles that are the produce of work effort.

2.13. The measurement is, of necessity, negative measurement. The deviations from plan are measured. The causes for the variances are determined, and constructive management applies corrective action.

2.14. There is no merit in the elimination of unfavorable variances, but their existence is a challenge to management. Their existence means that management is not operating to plan, and that the management of the economics of the business is unsound. A system of flexible Budgetary Control and standard costs is an instru-

ment of management, and in considering its use it is necessary to define what is meant by the management of a business. The management of a business is the direction of the affairs to achieve a specified objective. Just as navigation charts and instruments are necessary to enable a captain to bring his ship to port, so also an effective system of cost control is necessary to enable the management of a business to attain its objective. The making of a good profit by a business does not necessarily indicate good management, for its prosperity may be due to fortuitous and temporary circumstances, and its management may be poor. In effective management, in which flexible budgetary control and standard costs are used, there are five essential phases.

The plan

The measurement of performance

Investigation

Action

Revision

2.14.1. In all these phases of management, flexible budgetary control and standard costing form the system of recording and presenting the necessary information to management. It is also a system of accounting which is designed to conform with the principles of management laid down as plan, measure, investigate, act and revise.

2.15. Flexibility is, as its name implies, another main feature of flexible budgetary control and standard costs. As the plans, or budgets are used to measure performance, the budgets must be capable of adjustments so that they can represent a fair measure of performance under different conditions of activity. For example, the plan for a department may call for a production in a 4-week period of 10,000 units at a departmental expense cost of Rs. 3,000, i.e. 30 paise each. If in any period reduction of sales caused 8,000 units only to be produced at this activity of 80 per cent, the budget for departmental expense must be capable of adjustment to indicate the cost allowed to the departmental executive as a measure of performance. As certain of these expenses, such as depreciation, remain fixed, and cannot be reduced, the cost allowed would be greater than (8,000 @ 30 paise) Rs. 2,400, and might be Rs. 2,600, the excess of Rs. 200 representing the effect of the fixed element in the expenses.

3. Marginal Costing

3.1. Marginal costing is a comparatively new technique in the presentation of cost information. The marginal cost exponent defines marginal cost as "the amount, at any given level of output", by which aggregate costs are changed -if the level of output is increased or decreased by one unit. They claim that the marginal cost of an article includes all variable costs, that is, all prime costs together with variable

Overheads, but excludes fixed expenses, that it is unnecessary to include fixed expenses in cost, and further that it complicates and confuses the results. There can be no doubt that the latter is partly true.

3.2. To operate marginal costing, a clear distinction must be made between fixed and variable expenses. The fixed expenses are regarded as management or policy expenses, which are incurred as a result of the policy adopted by the management. The variable expenses are regarded as out-of-pocket expenses, which are incurred in sympathy with the nature and volume of production. The difference between the selling price of a product and its marginal cost is termed as 'contribution,' or 'margin' out of which fixed expenses should be recovered. In the majority of circumstances, 'contribution' is a more accurate guide to profitability than is the orthodox net profit figure.

3.3. Note that these fixed expenses, though excluded from costs, are to be subject to a tight control. Top management should be made aware of the significance of fixed expenses.