

## **XIV. CASE STU 01 ES**

**Case 1:** A company manufacturing electrical appliances and control instruments is using 40 varieties of different screws, and bolts and nuts. You may be interested to know that the money tied up in inventory carrying amounted to Rs. 10,000 to Rs. 12,000. The management is very much bothered with the mounting inventory costs, and an analysis revealed that a large number of varieties of the fitting materials are being carried. Now it is a question of rationalisation. The number of varieties were reduced to 22, where by the inventory carrying costs were cut down by 35% .

**Case 2:** Another company manufacturing electrical consumers' items, like electric iron and table fans, in the programme of cost reduction consulted design engineers and found that the present design is so complicated that a good number of castings were to be rejected, and the rejection was to an extent of 40%. An analysis of the cost indicated that the materials cost was as high as 62 % of the total cost, and that heavy rejection of castings contributed to 28 %. The design engineers simplified the design, and the company reduced the material cost to 54%, and, the rejection to 26%.

**Case 3:** A third company manufacturing machine screws has found that their conversion costs were mounting up, and were about 45% of the total cost. On further analysis it was found that the number of rejections left unnoticed during the operations and finally, were rejected in the final inspection. Consequently, the management tightened up the inspection at three turning operations at different stages. The cost of inspection was raised by 15 %, and the rejection fell down to 20%, the conversion cost to 35%, and the total cost by 20%.

**Case 4:** There is another case where the management was apprised of the cost of idle time. The breakdown of idle time cost indicated a large amount of idle time in man hours and machine hours:

Man hours lost during the quarter is 5,400 i.e. 45%

Available man hours for the quarter is 12,000.

Machine hours lost during the quarter is 2,100 i.e. 35%.

Machine hours available during the quarter are 6,000.

The cost of man hours lost for the quarter is Rs. 3,240.

The cost of machine hours lost for the quarter is Rs. 4,200.

The management is gripped of this huge idle time cost.

It was further found that while there was overtime work in the assembly department, there was plenty of idle time in the machine department. This is a clear case for proper planning and coordination. The machine down time was reduced by 10 %, and men idle time by 25%. The management in consultation with the design' engineer and sales manager thought of a new product for a local automobile industry, and used the idle machine hours to the extent of 15 %, and men idle hours to 20 %. This has resulted in an overall cost reduction of 20%.

**Case5:** There is yet another situation where cost reduction is the only way out to keep a company above water. The company distributing a number of consumer products found that its distribution costs were as high as 25% of the total cost. Selling expenses and sales force remunerations had gone up far above the mark, while the sales turnover had shown a downward trend. Analysis \_showed that the salesmen were not satisfied with the present compensation scheme and that there was no incentive for aggressive selling. While there was a sample sale potential and the company's image was well built in the market, the sales force must certainly be bringing a good result, and the mounting selling costs could be reduced. A suitable remuneration scheme was evolved, and the operating results stood as follows:

Increase in overall sales cost is 10%

Increase in overall sales turnover is 60%.

Decrease in selling cost for Rupee of sales turnover is 8%.

Now the distribution cost is only 17% of sales.

**Case 6:** In a tile factory manufacturing roofing floor tile, the material handling cost stood at 20% of the total cost. An analysis of the labour cost revealed that the percentage of indirect cost brought home to the management where to place their hands for cost reduction, and the management was convinced that a contributory factor for the fall in the rate of return was the cost of material-handling besides fall in the selling price. In order to maintain the same rate of return, the company evolved a method to reduce the cost. The material-handling problem was first tackled, and the management had to spend a few hundred Rupees to reduce the handling cost to the barest minimum. Conveyors were erected to carry the clay, green and burnt tiles. The handling costs were reduced to 50% of productive labour. Investment in conveyors was paid off in a one-year period;

The total cost was also reduced by 15 %, and, in fact, the rate of return had increased by 20%.

In another situation in the tile factory, there was an operation called "oiling and

beating" and which precedes the pressing of the slabs in a revolving press. The number of operators involved in this operation was:

1.Slab beaters	4
2.Oilers	1
3.Slab feeder	1
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The main purpose of beating the slabs is to see that both sides of the slabs are smooth, so that the finish and appearance of the tile is good. Oiling is done to prevent the slab from sticking to the dies after pressing. A new method was suggested.

The slabs after splitting from blocks will be passed through two rollers running in the opposite directions. Provision was made to drip oil on the top roller, and keep the bottom roller dipped in oil to ensure oiling of the slabs while passing through between the two rollers.

The proposed arrangement cost the management about Rs. 2,500, and resulted in an ultimate cost reduction of 15 % in the total cost.

*Illustrations:* Plant No.1 was manufacturing aluminum coffee kettles in three sizes. It had presses and machines to manufacture 3 different sizes of lids, 3 different sizes of sprouts, 3 different sizes of handles, and 3 different sizes of the body of the kettle. With a view to simplifying work and reducing cost, the factory at a later date standardized the sizes of the sprouts, lids and handles in the 3 sizes, varying only the body of the kettle. This resulted in savings on operators, machines, recesses, materials and a considerable amount in the cost of the product.

In Plant No.2, manufacturing wooden bobbins, the conveyor and chute systems were introducing savings on labour, movements, and material handling.

In Plant No.3, to cite a more specific instance, where cost reduction was brought about in simplifying product design, the cherry blossom shoe polish tins may be seen. The clip opener device was given up in preference to the coin opening method, and recently this coin-opening method has also been given up in preference to a built-in press-opening method. Naturally, these improvements have saved on machines, materials, and men resulting in savings in cost.

### CASE EXAMPLES

It is doubtful whether there is any area of business which does not provide some opportunity for cost reduction. In evaluating various proposals for cost reduction, it

might be well to establish some general guidelines and policies. Getting the most for the money being spent can often be more rewarding than merely spending less money. The following examples are offered in support of this hypothesis;

1. A company having an annual budget of Rs. 1,00,000 for R. & D. expenditure may spend the entire amount either on scientists or laboratory assistants. For example, this could represent salaries for five scientists at Rs. 20,000 per annum or for 20 laboratory assistants at Rs. 5,000 per annum. Either of this is, no doubt, unlikely. Yet the proper balance of scientists, technicians, etc., is very important both functionally and economically. Obviously, it would be costly to permit a situation where a scientist with a doctor's degree would perform routine work which could just as completely be performed by a laboratory assistant. Proper evaluation of research and development operation should be concerned not only with the total amount spent, but how it is being spent, how the spending is related to the degree of technical sophistication, and what results are being obtained.
2. Usually some companies purchase expensive and complex machine tools and equipments. They get them installed by their own engineers, and get them running smoothly. Most of the large equipment manufacturers furnish engineering services at little or no additional cost, and it is possible that the purchasing companies would not have to divert their own engineers for this purpose. Cost savings can sometimes be obtained by using the services of the suppliers or the vendors to the full.
3. A few companies follow a policy of quantity-buying of many commodities to obtain quantity discounts. Judicious quantity-buying certainly contributes to cost reduction. Indiscriminate quantity buying can increase costs if it results in inordinately high carrying cost of inventories, obsolescence risks, excess warehousing costs and large amount of capital tied up to affect adversely the liquid position of the company.
4. In any business, costs are incurred to accomplish many things. Unless there is a profit, however, other objectives, no matter how lofty, become pretty much academic.
5. Most products have different characteristics. These have a direct effect on costs, making some products more costly than others. Large products take up more storing space, and some require special handling. Different products call for different types of advertising and promotional campaigns. At times costs are knowingly raised, instead of being reduced. For instance, if a business decides to open a new sales territory

its profit and loss statement for the new territory will normally show losses during the early periods. The decision-makers explain such excess costs in a current period as an investment in future sales and Accompanying profits.

6. In commencing a cost reduction programme, it might be strategic to prepare an initial list of cost improvement areas, at least until some momentum has been attained. The following suggestions are quite general, and are intended to spark specific ideas and programmes:
  - i. Audit payments of suppliers to assure that they are paid in time to obtain cash discounts when entitled.
  - ii. Explain value engineering techniques. "Value Engineering" might be defined as precise cost accounting *plus* applied industrial engineering. It is a scientific method of obtaining equal or better performance and value for a specific product, or product components at a lower cost. This is done by step by step scrutiny, and testing of every part and every operation in the manufacture of a product.
  - iii. Check labour situation for possible expensive overtime, and' absenteeism and proper balance of workloads. Consider employee training programmes.
  - iv. Study plant layout for possible improvement in work flow. Evaluate the performance and condition of present equipment for replacement, if necessary with newer and more efficient machines, and" improve quality control procedures and reduced spoilage wherever possible.