

Information showing how actual profits compare with standard, however, is of limited value unless provision is made for analyzing this variation from standard by "causes." Here the same procedure is followed as that already described in connection with the analysis of variations from standard manufacturing costs. Profit-variation formulae are used for this purpose. The profit-variation sheet is the chief executive's key statement. It shows the actual net profits for the month and the standard profit for the month. The difference between the two, if an excess of actual over standard, is shown in black; a decrease is shown in red. The analysis of the net increase or decrease shows that either may be due to the following "causes": sales volume, variety of goods sold, selling prices, selling and administrative expenses and factory costs.

Supporting the profit-variation sheet are subsidiary schedules. The increase or decrease from standard profit, due to variations from the standard sales volume, for instance, is further analyzed by territories, salesmen and lines of product.

A business operating a standard-cost system along the lines described is certainly organized for profit. Every key man in the organization, in the sales, manufacturing and administrative departments, has his individual objective which represents one component of the ultimate objective of the business, standard profits. A few minutes' study of the profit-variation sheet and its supporting schedules enables the chief executive to place his finger on conditions in his business and organization adversely affecting profits. If a branch sales office, or a salesman, is slipping, red figures on the subsidiary statements clearly tell the story; if selling prices have been cut to secure increased volume the black figure resulting from greater volume can be compared with the red figure recording the loss through the reduction in prices. If an extra clerk has been added to the shipping-department force the fact is recorded in red; if a larger than standard variety of low-profit goods has been sold red figures again record the effect of this on the company's profits.

In the most recent development of standard costs, profit objectives are automatically adjusted to conform to changes in general business conditions. In one business, for instance, a study of its past sales showed that over a ten-year period fluctuations in its sales directly followed fluctuations in the tonnage of steel ingots produced in the U. S. A. The standard sales figure for that company is adjusted monthly to conform to the current index of steel ingot production

and the standard profit figure is modified to reflect the revised sales figure. The standard-profit figure is then a correct index of the profits which should be earned under current conditions. When a standard-cost system is carried to this final development it can be considered definitely scientific.

There is a limit, however, to the results which can be secured from the setting up of standards and the recording of the efficiency of the individual in relation to these standards. Probably the most important development of standard costs has been their use as a basis for incentive payments to key men in return for super-accomplishment.

Until the development of scientific standard-cost accounting, which rendered it possible to analyze accurately increases and decreases in costs due to conditions outside the control of individuals and to variations in efficiency, it was not possible to formulate key-man incentive plans which were fair either to the company or to bonus participants. When production increased because of larger sales volume, costs were automatically reduced and the company paid out bonuses which were not earned. Conversely, when production fell off the key men were penalized for cost increases entirely beyond their control. Standard-cost accounting rendered key-man bonus plans feasible and immensely profitable. As an illustration I have before me a statement showing reductions in costs of approximately \$110,000 in a medium-sized factory in a single year. This was secured mainly through the operation of a key-man bonus plan which provided for sharing a percentage of the savings realized with the men responsible for them. In that factory every key man participates in the savings made—the superintendent, foremen, assistant foremen, inspectors, toolmen, stock supervisors, the traffic manager, the purchasing agent and the cost accountant. Standard-cost accounting in furnishing an accurate and equitable foundation for key-man incentive plans is solving the greatest of industrial problems, namely, the need to stimulate every key man in a business to put forth the greatest possible amount of intelligent and co-operative effort.

Standard-cost accounting provides the correct foundation for incentives to salesmen. There is only one sound basis for a sales-incentive plan, namely, identical interests of the incentive participants and the company. In other words, the plan should be so lined up that the salesman's reward will increase as his contributions to company profits increase. Not one sales-incentive

plan in a hundred conforms to this obvious requirement. Standard-cost accounting is the key to this door to increased profit. Salesmen can favorably influence profits in three major ways; first, by increasing their total sales volume; second, by securing a large ratio of gross profits, either by selling a larger percentage of the more profitable lines or by increasing the percentage of sales in the lower-discount classes, and third, by reducing their personal selling expenses. A standard-cost system enables these three factors to be brought adequately into account in a sales-incentive plan.

This brief summary of the uses of standard costs in managerial technique would be incomplete if some reference were not made to the use of standard costs as a guide to executive action. It has been claimed that standard costs are essentially scientific in character in that sense which implies the ability to foresee the effects of a proposed course of action. It is in this connection that they are of great value.

Perhaps the simplest illustration of the use of standard costs as a guide to future action is in connection with selling costs. In these days of business depression practically all sales managers are straining every nerve to secure increased sales volume. To sell goods costs money; to increase sales generally involves an increased ratio of selling expenses to sales. At some point the law of diminishing returns begins to operate. Due to inadequate accounting, sales managers who know where this point occurs are in the great minority. We, therefore, have the extraordinary situation of sales managers who are everlastingly driving to increase sales, and spending money to this end, without knowing the value in terms of increased profits of one hundred dollars worth of increased sales.

Let me give an illustration. A small manufacturer in the Middle West is endeavoring to cover the whole country with a woefully inadequate sales force. He admits that he cannot sell intensively, but claims that his few men can secure more sales per man by calling on the important accounts than a larger force by working more accounts. Years ago he conceived the idea that the maximum cost of sales effort should be 6 per cent of sales, and he maintains this percentage. As a result of this policy his factory is operating at about 25 per cent capacity and the business is badly in the red.

An analysis of his figures, however, shows that his breaking point of sales cost is 28 per cent. That is to say that, at existing selling prices, he can spend

\$28.00 to secure \$100.00 of sales without losing money. If he can increase his sales by 20 per cent and spend 9 per cent of this increase for selling expenses to secure it he can get out of the red, as shown by the following statement:

	<i>Existing Condition</i>
Sales	\$650,000
Costs and expenses	668,000
Net loss	18,000
	<i>Revised Condition</i>
Marginal profit on 20 per cent increased sales or 28 per cent of \$130,000.....	\$ 36,400
Increased selling cost 9 per cent of \$130,000	11,700
Net profits on increased sales.....	24,700
Net loss as above.....	18,000
Revised net profit	6,700

Here is an illustration of a business which was headed for bankruptcy all because of a lack of accounting knowledge.

I have endeavored in this paper to demonstrate that standard costs represent a great constructive factor in industry, that they place in the hands of management a tool of enormous value.

Advanced thinkers on accounting have always realized that accounting has invariably trailed behind in the industrial procession. Compared with engineering, accounting is a laggard indeed. It was an engineer, not an accountant, who first conceived the idea of standard costs.

It is a strange thing, but most of the resistance to the introduction of improved accounting methods comes from the industrial accountant, who can most greatly benefit therefrom. Time and again have I seen the operating officials clamor for the benefits of standard costs while the accountant stubbornly advanced the old argument that "standard costs may be all right in other industries but they won't work in ours." There are, of course, many outstanding exceptions to this rule.

The key to the situation, in my opinion, is the education of executives to the possibilities and advantages of scientific standard costing. After all is said and done, "he who pays the piper can choose the tune." When executives demand the results to which they are entitled from their accounting departments, it is a foregone conclusion that these results will be forthcoming.

Executives as a class, however, have not realized the great possibilities of adequate accounting. They have regarded accountants as clerks and have paid them