Computation and Analysis of Deviations from Cost Reports

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Abstract

Cost calculation proves to be a management tool that has become indispensable for any type of organization, but especially those in industrial production. Thus, to cope with the market economy, companies must organize cost calculation showing primarily the consumption of resources, but providing information outlining the inadequacies of conducting production activities. In this regard use of a standard cost calculation allows company management to identify, monitor and report deviations from standard design and can make decisions based information for efficient production flow.

Key-worlds: standard cost, accounting, deviations
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1. Assumptions for use standard-cost calculation method

The original concept of standard cost method, no longer have to calculate the actual cost, whereas the standard cost is the cost in both scientific and real reason for any deviations of actual costs from the standard is regarded as a departure from normal and as such should pass directly on account of financial results.

However, we cannot exclude the possibility of calculating the actual costs of production achieved. This is done by adding or, where appropriate, reducing the cost of standard deviations taken from managerial accounting which will seek not only cost jobs and cause, but also products. The calculation is as follows:

$$Cu_e = \frac{Ct_s \pm A}{Q} \quad (1)$$

where:

- Cue – effective unit cost;
- Cts – standard total cost;
- A - deviations;
- Q - production quantity obtained.

The main work involved applying standard cost method consists in developing standard product calculations, calculation, monitoring, analysis and reporting deviations

from the standard cost-effective to perform budgetary control, managerial accounting organization in terms of applying the standard cost method.

For development of standard product calculations, the following work is needed: standards for direct expenditures, work that involves development of quantitative standards and standards-making materials and labor supply value pricing standard and standard wage rates; developing standards for indirect expenditures or overhead, which involves performing the following work: budgeting indirect expenditures of production and directing the departments, on the one hand, and budgeting general administrative expenditures or overheads of the company, on the other and finally, the development of standard cost calculations for unit cost per product unit in the structure or budget items specific calculation of that enterprise.

Developing standards for production costs should be established varieties and standard production volume to determine the optimal use of production capacity of machine-building enterprises.

Calculation, tracking, analysis and reporting deviations from the actual standard costs shall be the operative (daily, weekly, decay etc.) on places of expenditure, on items of calculation and on causes (if even on products or their parts), for budgetary control of costs and making decisions on the side of managing the value of the production process.

To this end it shall be prepared reports or statements for irregularities in the structure mentioned, and the centralization is achieved by deviation report or statement of the undertaking.

Applying the standard - streamlining the advantage of labor of cost calculation, whereas the standard unit cost determined in advance is considered real cost and thus not be calculated the actual cost of final production and production in progress at the end of each period of management and deviations are considered as deviations from normal and straight to mind the company's financial results. Production finished and in progress can be settled on the standard cost. This feature however does not preclude effective calculating unit costs from time to time, through distribution of deviations on the final production and production in progress by conventional criteria, such as, for example, in relation to standard costs of such production.

Another advantage of the standard cost method, is that although the concept is based on the total costs of production using the classification of expenses in direct and indirect, it uses and classification of production expenses in variable and fixed, enabling cost analysis of production volume and calculation of specific indicators direct-costing method, namely, the right balance point optimal activity, coverage factor, the coefficient and confidence interval, necessary for the adoption of science-based decisions.

So, using this method to perform an operational control of how they consume resources and working materials alive by pursuing separate, permanent and complete irregularities during the activity and not at the end of period of management as conventional methods, both records operative and in accountancy, overall and by cause, since the occurrence, that their identification and to the distribution of financial results.

Basic feature of the standard cost method is the existence of an appropriate framework operational comparisons between actual expenditure and pre-taken as a reference. Applying the standard - cost, the standard version - single cost, lead to greater practical value of accounting information and thus to improve the organization of

economic activity. All of this result in an improved foundation budgets and costs, thus establishing benchmarks to express as well the ordinary course of business of the enterprises in machine building industry. Management based on predetermine size as standard costs, corresponding principle driving method based on objective and gives accounting, as supplier of useful decisions and remedies of major importance.

Accordingly, the accounting becomes a useful tool for management of companies as its main mission is not to determine the cost of production, but to check that it determined in advance, was respected by leaders of business sectors. In this way, managerial accounting can make tracking and monitoring the previsions of the budget classification and can provide intelligence information on the level of production expenses.

Applying the standard - cost mainly seeks increased role in ensuring the production costs of achieving the objectives set, the direction and functioning of the enterprise. The main purpose of such calculations is to provide operational information needed to budget, evaluate, coordinate and control the business.

Starting from the role and place of accounting information in modern management, applying standard cost method gives it a matter of efficacy, determined by the degree of recovery in the preparation and decision making to trigger corrective action.

Standard cost method replace the simple transaction of collecting and recording the actual data to compare them to the end of the period of management, which is made using the commands used in machine building industry, providing an analytical character, operational and forward the information, which enable their exploitation in efficiency of future work.

More than ever, standardization of production costs should be based on quantity and value science-based standards, the technical and economic reasons. This is required, whereas actual expenditure deviations from the standard, determined simultaneously with the process of production have a significant deviations higher than calculated at the end of the administration, leading in many cases the decision late, or only the actual data taken in isolation, showing only what was done, but not how to do. It necessarily requires the determination of operative cases, as they are essential elements in future decisions and actions to correct deviations in the objectives set, the improvement work. But to increase the role of management accounting, information relating to misconduct should be presented to interested bodies in a form suggestive so as to be able to take operational remedies.

As a necessary prerequisite for entry into practice use of standard cost method, in addition of the existence of a scheme sufficiently comprehensive science-based standards, and there is a well-tuned techniques and intelligence production program. This implies a good level of organization of production and a high degree of knowledge and clarification of technological and economic factors of production for all products and especially for products and new technologies.

Organization in good condition of primary documentation on the expenditure of production and cost calculation, and proper organization of records of deviations from standards are also necessary prerequisites for adopting this method of managerial accounting and cost calculation.

Tracking production costs by accounting using the standard cost method, can be arranged in one of the following: standard partial cost, standard cost and standard cost only twice. The differences between these variants are in the reflection of the cost calculation accounts and recording of deviations from standard costs.

Given the advantages and disadvantages of each of the three variants of standard cost accounting organization, I consider that the option that best meets the needs of management of companies in machine building industry, the standard unique cost version.

This option enables the actual deviations of costs from the standard course of production process, costs on items of calculation and the causes, which facilitates budgetary control and cost effective decisions by line management at all levels of the hierarchy. It also eliminates workload caused by the operation of production in progress inventory, whereas the recording system of consumption and production obtained in the accounts only to the standard cost calculation, it can be determined by the method of accounting.

Thus, I believe that the adoption and entry into enterprises of machine building industry standard cost calculation method, the standard unique cost version, needs to enhance the usefulness of information on domestic activity and the design integrates modern management based on objectives, continuous improvement of the use of bringing production costs and strengthen economic management.

2. Determining deviations from the standard cost

Following the calculations of standard costs in raw materials and direct materials, managerial accounting needs to ensure the tracking of operational records, recording, analysis and reporting deviations from the standard of actual expenditure limit. Setting deviations is of great importance to accurately quantify the actual consumption.

Organizing the records shall ensure that the operational deviations, throughout the course of the production process, the ways, places and causes generators. Deviations from the standard costs of raw materials and direct materials are analyzed both in volume and value, it can capture the deviations from the standard quantities of consume prices or deviations from the standard supply.

Deviations from the standard consumption for raw materials and direct materials are determined for each area of expenditure types or groups of raw materials by:

- documentation of releases or/and returns of materials;
- cutting or cutting the top of all of the raw materials and materials necessary to execute the batch of products launched in manufacturing;
- inventory of raw materials and direct materials consumed at the remaining jobs in the department.

Deviations are reflected directly in the issue documents in case of replacement of other materials and in case of the request for additional quantities. Unused raw materials and direct materials are reflected in separate documents. Deviations from the standard consumption is calculated summarizing additional consumption and that refunds the kinds of raw materials and recorded in documents and making the difference between them.

"Deviation value is determined by centralizing these quantities in a single operation":

$A_{vm}=A_{cm} \times P_s$ (2)

where:

- A_{vm} – valuable deviation from raw materials and direct materials consumption;
- A_{cm} – quantity deviation from raw materials and direct materials consumption;
- P_s – price of standard supply.

In the industrial business, operational monitoring of the consumption of raw materials and direct materials is done through the rules of consumption, which only makes quantitative and statistical reports rather than to inform the company management. Applying this method leads to obtaining accurate information and intelligence on the deviations of quantity.

Process of cutting in anticipation of the quantities needed for consumption is used when raw materials are processed in batches, and process technology requires cutting them from the start with certain sizes. Deviations from the standard consumption are determined for each batch of comparing actual consumption with the standard.

Numeracy relationship is:

$A_{vm} = (c_e - c_s) \times Q \times P_s$ (3)

where:

- A_{vm} – valuable deviation from materials consumption;
- c_e – effective consumption by product unit;
- c_s – standard consumption by product;
- Q – quantity of products manufactured;
- P_s – standard unit price of material.

In machine building companies, determining the causes of quantity deviations are: use of non-standard materials or different efficiency in manufacturing, lack of machinery, equipment and standard tools, machinery breakdown, failure of certain processes, misuse of equipment etc.

The second type of deviation from the standard costs for raw materials and direct materials is the deviation of the materials price. Deviations of materials price can be calculated: based on material supplied (inputs) or according to the materials consumed (outputs). For businesses in machine building industry is proposed to use the second method, the materials consumed, provided that the material is recorded in the accounts at cost effective supply prices. Deviations of prices (A_{PM}) are calculated in this case, according to:

$A_{PM} = (P_E - P_S) \times C_E \times Q,$ (4)

where:

- P_E – effective supply price;
- P_S – standard supply price;
- C_E – effective use by product unit;
- Q – quantity of products manufactured.

Deviations from price differences have various causes such as supply from other suppliers than those considered when drawing up standards of expenditure, the supply price are changed, amend the conditions of transport, etc.

Deviations from standard raw materials and direct material costs can be calculated by total (global calculation) or by the difference between actual expenditure and standard levels, using the relationship:

$$ATM = (CE \times PE \times Q) - (CS \times PS \times Q) \quad (5)$$

Calculation and analysis of the deviations can be made concurrently with the process of production or at the end of period of management when is possible to post-factual control the way of framing the budget of production cost. In the first case, the analysis aims to discover the causes which produced those transgressions against them for leadership to adopt a series of decisions by correction of the previously taken, and in the second case, aims to substantiate the adoption of future decisions based on forecasts which are on production cost.

The main advantage of applying the standard cost method in unique standard cost version, applied in machine building companies, is pursuing operational irregularities on each item of calculation, with technical and operational records, so obtain relevant information on the location, causes and costs carriers when they occurred. Daily or at very short intervals of time, like weekly in machine building companies, are prepared "reports on deviations from standard costs for materials" into sections, orders and cases, indicating is also the responsibility for misconduct.

Primary documents evidencing registration of material consumption in reports (statements) must be done daily in order to not affect the efficiency of control and analysis of production costs.

For reporting the deviations from the standard consumption of materials, documents for the issue or refund shall be valued at invoice price, is sorted by sector, and the kinds of materials, then operate the paper document and determine deviations, that economies or exceeding, the causes and responsible - individuals or departments.

Refunds are made to material in the document summary in red or box and lower consumption of materials issued to those listed above in the report deviations on bonds or limit consumer records. Thus, they decrease the volume of materials released for consumption and as such, does not feed calculation accounts, thus not affect the volume of production expenses.

When using the consumption limit sheet on release of materials to consumption is not raised such an issue as refunds directly into the sheet material because it subtracted directly with the quantities released, and deviations report of the materials consumption record only reflected their effective consumption.

3. Determining of the deviations from the standard costs for semi products

Regarding deviations from the standard costs of consumption of unfinished products which was made with own forces, can be calculated by the methodology shown in consumption of raw materials and direct materials, with the report (statement) of deviations, except that instead of price standard supply and effective price it use the standard cost and effective cost of unfinished products used. Such as materials, this are calculated with deviations from standard consumption and deviations from prices. After that they will be distributed as price difference after determination in production departments.

Calculation of deviations after the second variant, involves the following steps methodology: the calculation of deviation on case for unfinished products obtained from stations at which they occurred, using methodology known from raw materials and direct materials consumption, then the allocation is made by deviations those for total and for forms over unfinished products used in consumption stations in polling to their standard cost. In this order, first is calculate the distribution coefficient and is determined based on its allocated share of deviation.

Distribution coefficient is calculated by comparing the kinds of deviations (consumption and cost) of unfinished products from sections where they were produced, the standard cost of unfinished products from that department. So basically, is calculated by allocating two factors: one for the distribution of deviations of consumption, and second, the distribution of deviations of the difference in price (cost).

Coefficients so calculated is then amplified with the standard cost of unfinished products used for consuming and thus determine the rate of deviation of consumption and price (cost) is assigned to polling consumption stations.

Calculation and analysis on the causes of deviations in the sections where they were produced semi-products is required that the responsibility for them it have those sections. At stations where was produced semi-products, not interested only in terms of the settlement of irregularities.

Whereas the first option is recommended, however, lead to more accurate results and an analysis of factors influence accurate.

Conclusions

Economic and social environment of an organization affect the strategy and control. These elements can be embodied in two concepts: culture and environment. There is considerable evidence that the main objective of a corporation may vary from country to country and from culture to culture. Although it may invoke many reasons for international differences in the choice of objectives, long-term consequences of these conditions can be summarized in a principles system called accounting culture.

Business management, in coordination, control and regulation, aimed at establishing the optimum conditions of its predetermined parameters. Thus, the management requires the ability to decide. But the right decision may be taken only on accurate information, resulting from an analysis of technical factors, economic and organizational causes and effects and that it generates.

Costs of production activities as indicator for management is one of the most important sources of information for monitoring all phases of exploitation process from ensuring the implementation of technical documentation and resources to receipt of finished goods and services.

Cost level is a barometer that gives information on the conditions for performing a specific production activity, which enables management tracking, analysis and targeting process to a rational use of resources and economic resources and information necessary planning, preparation of cost budgets.

Relevant information character that is related to costs allows us to known those sides of the business that can influence the structure and development costs and imposing

decisions. Thus each manager receives significant information to base decisions can be taken within the jurisdiction and responsibility for disposal. Calculation for all production costs for each product makes implementation of management with overall, but each section or workshop thereby increasing the responsibility of each place generating costs. In the general economic information system of enterprise accounts provide more than half of all data that convey information in this system. This proportion, not only be found in the area of cost, but it is amplified and diversified substantially in conditions created by applying the new accounting system traders. Accounting is considered the main decision-making tool because:

- registered through documents, means and sources of economic management, in terms of size, location, structure and intended purpose;
- objective parameters that the operator tends to make (cost, profit, turnover, solvency) are recorded in their internal dynamics;
- aims to achieve a state of balance between effort and effect value, revenue and expenditure, means and sources. Controlling these relationships involve mandatory use of accounting and the proper use of methods and techniques of economic and financial analysis;
- the legitimacy of leadership and managerial skills is achieved through accounting;
- most of the economic information from company's environment are an accounting information and are synthesized through economic and financial analysis.

Place therefore the problem to use of an "alive" accounting which, essentially, by costs calculation and analysis of results, prepare forecasts, monitoring their implementation, the situation and explain of deviations, measures of recovery that must take the management.

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