

CLASSIFICATION OF METHODS OF COST ACCOUNTING AND CALCULATION OF PRODUCTION COSTS

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Classification of methods of production costs accounting and calculation of product cost is considered. Comparative characteristic of the ABC-method and traditional job-order costing is given. The standard-cost method is considered. Comparative characteristic of a "just-in-time" method and a traditional process method of cost accounting and calculation is given.

In domestic and world accounting practice and calculations of product cost, the great value is attached to questions of management accounting, including methods of planning and accounting of costs.

The method of calculation assumes the system of management accounting at which the product cost (works, services) and also the unit cost is determined. The choice of the method of calculation of prime cost is connected with the production technology, its organization, and features of products. However, in the course of studying of the interpretations of the concept of management accounting presented in scientific economic literature, normative legal acts of the Republic of Belarus and foreign countries, International Financial Reporting Standards it is revealed that there is no uniform determination of this economic category in literature.

Nowadays the classification of methods of production costs accounting and calculation of the product cost still is a subject of discussions therefore we find it possible to offer the following classification:

1. Traditional (job-order costing, process cost system, process method of cost accounting) methods.
2. New (nonconventional) methods (the ABC-method or account on business processes, account on "just-in-time" system, account on the last operation).

The traditional systems of calculation of prime cost were created when most enterprises produced a limited product range and the costs of main materials and the salary of main production workers were the main costs. Costs on service of production and the management, which are mainly indirect, were rather small therefore, distortions of production costs owing to their distribution in proportion to the salary to products were insignificant. Information processing cost, on the contrary, was rather high therefore, application of more difficult methods of distribution of overhead costs was unjustified.

In the conditions of market economy prerequisites for change of a method of distribution of overhead costs ripened:

- the range of products extended;
- as a result of automation of production the share of direct labour costs in the structure of product cost decreased and indirect costs increased;
- automation of registration processes allowed applying more difficult methods of distribution of overhead costs.

The above-mentioned circumstances also became prerequisites of emergence of new methods of costs accounting and calculations of prime cost.

Let's consider new approaches. We will carry out their comparative analysis.

The ABC-method (activity-based costing, accounting of cost of functions, business processes) is the calculation system considering operations as main accounting items of costs and calculation of product cost and determination of efficiency of business processes. The method of stage-by-stage distribution of indirect costs on product cost is used.

The subject of the analysis is industrial enterprises which primary activity is the production of motor-transport electronics.

The enterprise uses the job order cost accounting system for the accounting of costs. A comparative analysis of the ABC-method and the traditional job order cost accounting system is presented in Table 1.

Table 1. – Comparison of the ABC-method and traditional job order cost accounting system

Comparison criterion	ABC-method	Job order cost accounting system
1	2	3
Production activity (business)	Execution of orders for materials, operation of the capital processing and service equipment, quality control, etc. is divided into main functions and operations, for example	It is presented by a uniform complex of operations

Continued Table 1

1	2	3
Accounting item of costs	Operations necessary for implementation of the order	Order, products
Object of accounting	Intermediate – operations, total – products	Order, products
Base of distribution of overhead costs	For each type of activity its own cost object estimated in corresponding units of measure is chosen	Main salary (labor costs)
Number of steps of overhead costs distribution	Two	One
Control of costs on stages of their emergence	It is possible	It is complicated
Application	Difficult, but becomes simpler as a result of automation of calculations	Simple
Orientation to the tasks of	Management	Accounting

There can be an impression that the use of the ABC-method is the solution of all problems of costs accounting. Certainly, the ABC-method improves the system of costs accounting of an enterprise, leading to more exact data. However, there are also restrictions in its use:

1) The randomness in the choice of indicators of distribution. Critics of the ABC-method claim that some manufacturing costs can be distributed on products randomly since they are calculated only for the whole output. However, supporters of the ABC-method object that, despite this, anyway it gives more exact information, and it's an advantage.

2) The application of the ABC-method demands big costs of the research of operations, maintaining documentation, therefore in certain cases these costs can exceed the expected benefits. Therefore, the enterprise, which wants to use the ABC-method, has to correspond to certain characteristics for obtaining benefit from its use.

The system of accounting of prime cost can influence the increase in profitability of an enterprise in the following three directions:

- 1) identification of removable losses (adverse deviations) reducing the profit of an enterprise;
- 2) providing managers with exact data on cost of production on the basis of which the sales department can plan sales volume and establish the best prices;
- 3) minimization of the registration work connected with calculations.

The standard-cost system copes with the solution of all three tasks more successfully, than the former cost accounting system. Eventually, this system stimulates the work of all the staff of an enterprise.

The comparison of these methods allows drawing the following conclusions:

1. Both methods consider costs within norms.
2. Both methods assume accounting of full costs.
3. In accounting by the standard-cost method costs over the established norms belong on perpetrators or on results of financial and economic activity and do not join in costs of production, as at a standard method.

In "standard-cost" conditions the standards cannot be changed within a year. Their full revision is carried out once a year, usually before drawing up the cost estimate for the future period. Besides, the standard prime cost can be revised in case of a radical change of the production technology or enterprise capacity. At the standard method it is possible to reconsider norms within a year.

In contrast to the "standard-cost" standard accounting system is not focused on the implementation process (focused on production), and therefore does not allow to justify prices.

With the standard accounting method the total amount of deviations comprises 5-10% of accounting deviations and 90-95% of non-accounting ones. The analysis of prime cost is carried out on the basis of designed indicators which are not confirmed by any accounting data. It is deprived of any operational value and has the character of the subsequent historical review. The method of documentation of costs and revenues does not allow for detailed and prompt analysis of financial results.

To disclose the reasons for the change in any integral indicator, it is necessary to know the reasons for the changes in the particular indicators. It is possible only when the documentation that draws up, for example, all the costs incurred, directly answers the question of cause and effect relationships and the factors

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determining the costs incurred. The information base of accounting does not provide proper performance of the analytical function of the accounting system to this day.

For example, using the order method, you can calculate both the full and the "cut" cost of the order, and the cost-and-effect calculation can be performed using information on both actual and standard costs.

It is also possible to use the synthesis of two accounting methods such as "direct costing" and "standard-costing", the result of which is a variant called "direct-standard".

Another unconventional approach to cost accounting and calculation is the "just in time" method. The "just-in-time" production system is based on a "just-in-time" management concept aimed at eliminating wasteful costs and continuously improving the production process.

The "just-in-time" management system is characterized by three key aspects:

1. The organization of business processes, contributing to the approximation of total costs to the value of processing costs.

2. Complete quality control.

3. The organization of the material flow, based on the orientation of the demand of the buyer.

An example of the effective use of the "just-in-time" approach is Japan. The method originated in Japan in the 40s of the twentieth century. Its emergence is associated with Toyota and the name of its vice-president Taiichi Ohno. Under the conditions of natural and economic constraints after World War II, Japanese manufacturers were looking for ways to use limited resources most efficiently, working on a cost-quality ratio.

"Just-in-time" calculation is a modification of the process method of cost accounting and production costs calculation (see Table 2).

Table 2. – Comparison of the "just-in-time" method and the process method of cost accounting and calculation

Comparison criterion	"just-in-time"	Process method of cost accounting
Insurance of stocks	No	Yes
Volume of stocks and procurement of material resources	Shows a current need	Determined by the formula of economic (optimal) order quantity
Market	Has priority	Has no priority
Stock availability of work in progress	No	Yes
Quality of products	Has no defective products	Small defect is allowed
Options of consolidated accounting	Does not allow accounting of semi-finished goods	Accounting of semi-finished products on special accounts
Storage and in-plant transportation costs	Minimized	Essential
Direct labour costs	Are included general production costs	Directly recorded to costs

The advantages of the "just-in-time" system are:

- reduction of stock level, and minimization of investments in raw materials and supplies. Ideal option is zero stocks;
- reduction of number of suppliers with a decrease in time and costs of negotiations;
- the use of long-term contracts with customers and reduction of costs of contracting;
- improvement of product quality;
- reduction of costs of internal movement of materials and finished goods;
- reduction of storage costs.

The "just-in-time" strategy also provides some other benefits, including non-economic ones. The use of the "just-in-time" approach by reducing costs and improving quality leads to an increase in the efficiency of the business process as well as in the competitiveness of the organization in the long run. However, when using it, the following difficulties are possible: it is difficult to avoid mistakes in the assortment and supply disruptions, and each such failure will lead to a halt in the production process with inevitable consequences in production conditions.

For the effective implementation of the "just-in-time" strategy, it is necessary to change the way of thinking of the whole team, which deals with production and sales. The traditional stereotype of thinking "the more, the better" should be replaced by the "the less, the better" scheme, if we talk about stock levels, the use of production capacity, the duration of the production cycle or the size of a production batch.

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