

# ACCOUNTING AND ANALYTICAL AND MANAGEMENT TASKS FOR THE CLASSIFICATION OF INDUSTRIAL ENTERPRISES

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**Abstract.** Modern economic development trends such as globalization of markets, increasing competition, changing consumer demand, shortening life cycle of goods and technologies, increasing demands on their quality, and rising costs of used resources require executives and managers to find effective methods for managing the enterprise activity. Ensuring the competitiveness of enterprises under such conditions is impossible without the introduction of the latest management concepts, which necessitates changes and development of functional management, one of which is cost management based on the definition of new criteria for their classification. Classification of costs for management purposes should meet the main requirement – be based on signs that allow differentiating costs to manage them in various aspects. It creates preconditions for determining the level of costs by the volume of management, organization of planning, accounting, control, and analysis. *The purpose* of the article is to consider accounting and analytical, and managerial tasks of the classification of costs of industrial enterprises and their improvement. *Methodology.* The methodological basis of the paper is a set of methods and principles of scientific knowledge, general and special methods and techniques used in the study. The theoretical basis of the research is scientific works of foreign and domestic scientists on cost management, organization of information systems, cost accounting management, cost management methods. The legal basis for the study was the current legislative and regulatory documents governing the formation of costs of enterprises in Ukraine. The information base is official statistics, reporting and accounting information of enterprises, resources and publications of the Internet, results of our own research. To achieve this purpose, when writing the article, methods of a systematic approach (for research and characterization of the theoretical basis of cost classification) and structural and logical analysis (for defining the criteria for classification of costs of an industrial enterprise) are used. *Practical implications.* The obtained results and the developed recommendations constitute a methodological basis for improving the cost management of industrial enterprises based on the definition of new criteria for their classification. Results of the most practical significance include: common features and differences in the approaches to the classification of industrial enterprises' costs are determined, the objectives of cost classification are determined, the classification of costs by costing articles is considered, the necessity of distinguishing additional attributes of cost classification is substantiated. *Value/originality.* Improved classification of costs of an industrial enterprise, which is expanded by additional criterion features (the possibility of management, reflection in accounting and reporting, principle of accepted commitments, place of formation, by the factor of stability), caused by the need to determine the relationship between the size of the enterprise costs and the possibilities of implementing managerial influence on them by managers of different levels, which enables to optimize cost composition and structure, which are reflected in different methods of cost management and are the basis for their choice of agreement.

**Key words:** costs, classification, accounting, analysis, management, enterprise.

**JEL Classification:** M41, M11, M21, L53, O12

## 1. Introduction

One of the methods of research of the objects under study is classification, that is, division into classes on the basis of certain general features of objects regular relations between them. The classification of costs allows identifying objectively the existing cost groups,

processes of cost formation, and interrelationships between their individual parts. The complexity of the structure and the variety of processes in the formation of costs involves their subdivision by a number of features. Depending on goals and methodological approaches, there are several classifications of costs. The

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more distinguished the signs of classification, the higher the degree of recognition of objects. Cost classification for management purposes should respond to the main requirement – be based on features that allow differentiating costs for cost management in different aspects. It creates preconditions for determining the level of costs of their management objects, an organization of planning, accounting, control, and analysis.

Issues of classification and grouping of costs according to various features have been studied in detail by domestic scientists and foreign researchers. Classification of production costs reveals objectively existing cost groups, processes of their formation, and interrelationships between their separate parts. Without classifying costs, it is impossible to solve the problem of managing them in an enterprise. The complexity of the structure and the variety of processes in the formation of costs involves their subdivision by a number of features. To organize an effective system of enterprise management, it is necessary to apply an economically justified cost classification on certain grounds. Classification of costs implies their integration into logical groups. This helps not only better predict and take into account costs but also establish the degree of their impact on the level of production efficiency. Thus, the purpose of classifying costs is to allocate that part of costs that can be influenced by specialists of the enterprise (organization), managing them, and to satisfy information needs of internal and external users.

## 2. Objectives of cost classification

Costs as an object of knowledge are well-studied in the foreign theory of accounting and analysis. However, in the theory of domestic literature, scientists and economics-practitioners have not yet come to a common standpoint on what signs could be used to classify production costs and what significance has a particular sign of classification for the solution of analytical and administrative tasks.

The classification of costs has purposefulness and is constantly changing under the influence of practical management needs and theoretical research. Classification reveals objectively existing cost groups, cost formation processes, and relationships between their separate parts.

At present, in the practical activity of the enterprise, management is provided with information on the cost of production in the form of segments of production costs and cost accounting articles, which is clearly not sufficient for the organization of the cost management system. To manage, managers need not just costs, but information about the object of costs – the product, the work, the service, or the type of activity of the enterprise, which need to be defined in relation to their cost production (implementation, provision).

Cost classification is predominantly purposeful. It is a consequence not only of the practical need for cost management but also one of the tools of theoretical research in this field. Classification of costs is not static, constant. Under the influence of changes in the needs for cost management, the development of the theory of costs and individual practical aspects of their management, the classification of costs developed all the time, evolved through the introduction of new criteria.

In our time, a large number of criteria are used in the classification of enterprise costs. Some of them have long been used in cost planning and accounting, since the time of the administratively centralized economy, others have appeared not so long ago in connection with the development of needs for cost management and, to a certain extent, are borrowed from foreign theories and practices.

In economic literature, there are 3 to 12 signs of the classification of costs. In general, the full classification of costs in Ukrainian systems includes: calculation (stock valuation), decision-making, control.

According to many authors, the problem of classifying costs is a variety of features of classifications and the absence of hierarchy.

Table 1 groups features of the classification of costs according to their traditional use in the domestic and foreign practice of accounting and management.

In Western countries with a developed market economy, all production costs are usually divided into three elements (as basically there are no detailed classifications): 1) direct costs for materials; 2) direct labour costs; 3) indirect costs (Chyzh, 2010).

Comparing the systems of the classification of costs, which are used in the domestic and foreign accounting, we can talk about the general moments and differences. Both in Ukraine and abroad, there are classifications of costs into general-overhead, direct-indirect, variable-fixed for the cost management. However, in foreign countries, each organization in its system of production accounting independently develops and uses its cost nomenclature to manage costs. In the domestic practice, there is the only cost classification for all branches of the economy, which until now was considered a significant advantage of domestic accounting in front of the West. At the same time, both in domestic accounting and abroad, the classification of costs by certain signs is conditional, often one concept is replaced by another (for example, indirect and overhead, general and fixed costs). This can be explained by the pragmatism of Western accounting since everything is aimed at creating the conditions for simplification and practical application, which sometimes violates a harmonious system or classification. In the domestic theory and practice, this is related to the dominant idea of the absolute accuracy of the accounting records and different interpretations of the same costs in works of many authors on this issue, without taking into account the practical value.

Table 1

**Cost classification**

Signs of classification	Group of costs
Domestic accounting	
By economic elements	Economic elements of costs: material costs (minus the cost of returns); depreciation of fixed assets; salary (basic and additional); deductions for social insurance; other expenses
By net cost items	Cost accounting items
By relation to the technological process	General, overhead
By composition	Individual, composite
By inclusion in the cost of production of goods	Direct, indirect
By relation to the finished product	Costs for unfinished production, costs for the finished product
By roles in the production process	Production, non-production
By possibility of coverage by plan	Planned, unplanned
Foreign accounting	
By expediency	Productive (effective), non-productive (ineffective)
By relation to the production volume	Variable, fixed, mixed
By the period of occurrence	Current, one-time
By degree of regulation	Regulated, discretionary (partially regulated), poorly regulated (given)
By centres of responsibility	Controlled, uncontrolled
By degree of change in the decision-making process	Relevant, irrecoverable, prescribed

Only system accounting of these conditions can become the main stimulus for developing a holistic theory of cost classification for practical necessity.

Costs of an enterprise are primarily divided into two main categories that correspond to the functional activities, with which they are related: production costs and non-production (operating) costs.

Production costs are those determined by the activity of the enterprise and the transformation of physical and raw material resources into the finished product with the help of the labour of production workers in the use of production equipment. They are subdivided into three categories: direct costs on materials, direct labour costs, and total overhead costs.

Direct costs for the materials of the enterprise include all expenses for those materials that are a part of the final product, making its basis. Materials used to create conditions of production or which cannot be linked to a particular product, are not attributable to direct costs but are included in the production overhead.

Direct labour costs represent the wages of workers directly engaged in product manufacturing, work execution, or the provision of services that can be directly attributed to a specific cost object.

Production overhead costs are the costs associated with the production process, which cannot be attributed to a specific cost object in an economically feasible way. An example of these costs can be indirect wages, maintenance and repair costs of equipment and production facilities, depreciation and insurance of fixed assets, municipal and rent payments.

Costs of direct materials, together with the cost of direct labour, form the service value. Direct labour costs and production overhead costs in amounts represent conversion costs, that is, costs of processing raw materials for conversion into the finished product. The size of production costs directly depends on the types of work and services provided to consumers and technological processes of their provision. Management of such costs is possible only from the position of choice of an assortment of work done and services provided by enterprises.

Non-productive costs include costs for management, research and development, sales and other business functions. According to the statutory documents in force in Ukraine, non-productive costs include administrative costs, expenses for sales, and other operating expenses.

The considered features of cost classification are used to calculate their size in order to compile financial statements of an enterprise designed to assess its economic status and make decisions on investing and lending to a business entity and developing a strategy for further development.

Proceeding from the possibility of tracking the movement of costs to a particular object of calculation, they can be considered as direct and indirect. Direct costs are costs that can be directly attributed to a specific cost object. Costs that cannot be identified with the specified cost object are indirect costs.

Depending on how necessary the costs are for the production, they are subdivided into costs included in the production cost and period costs. The production cost includes the costs attributable to the cost of

inventory. Such costs are treated as assets until the goods to which they relate will not be sold. At this moment, these costs become the cost of realized products. Period costs are costs that are not included in the production cost because they are not necessary for production and are treated as costs of the period in which they were incurred. Period costs are administrative expenses, expenses on sales, other operating expenses.

In order to provide uniform principles for the formation of the product cost, the costs are grouped according to their intended use by economic elements and calculations. In the process of management, estimates are needed both for providing cost saving by their elements, and for the preparation of material balances, and the development of financial plans.

For industrial enterprises, there is a mandatory nomenclature of production costs for economic elements: material costs; labour costs; deductions for social events; amortization; other expenses.

### 3. Cost classification by costing items

The grouping of costs according to costing items reflects their composition depending on the allocation of costs and places of their occurrence. Enterprises form the production cost according to the following costing items:

- raw and other materials;
- fuel for technological needs;
- power for technological needs;
- purchased resources, completing products, semi-finished products;
- costs of other material resources;
- works and services of production character of third-party enterprises and organizations;
- basic wages of production workers;
- additional wages of production workers;
- other incentive and compensatory payments;
- deductions for social events;
- total production costs;
- administrative costs;
- sales costs;
- other operating expenses.

Classification by items is mixed. It uses two different identifiers: the direction of activity and its kind, which contradicts the principles of constructing classifications in general.

Such a classification feature as the frequency of occurrence makes it possible to characterize production costs from the position of the calendar period of their occurrence (current and one-time costs). Such a classification is important for management from the point of view of cost recovery: either they are repaid immediately or by the accrual of depreciation. This classification is also important due to the fact that there are different methods of managing these costs. Current cost management refers to operational tactical management and one-offs to strategic ones.

Depending on the expediency, costs in the itemized section are divided into productive and non-productive. Productive costs stem from the nature of the enterprise's production activities and are projected by cost estimates and business plan. These costs are included in the cost of products and services. Unproductive costs are not economically inevitable but occur over the lack of technology and organization of production. It is a loss. Such costs in the activities of industrial enterprises have a significant proportion. Detection and elimination of such costs is an important reserve for reducing the company's costs. Therefore, they should also be considered on certain grounds, which will ensure control over this type of expenditure. Signs of the classification of these costs are: the type of resources lost (materials, raw materials, finished products, labour of workers, means of production); the nature of losses (incomplete use of resources, inappropriate use of resources); stage of origin (processes of production, transportation, circulation); sources of cost coverage (cost of works and services, net profit of the enterprise). The cost management information system should identify these costs. Unrecognized losses in the information system (occasional losses) increase the cost of services rendered and are untapped opportunities to reduce the cost of the enterprise. In resolving the issue of reducing the losses of industrial enterprises, not only the introduction of resource-saving technologies but also a complete system of information support for cost management, which provides centres of responsibility for losses at all levels of management is of great importance.

In the composition of the item, the costs of industrial enterprises can be homogeneous (single-element), consisting of one element of cost, or complex, consisting of several elements. Consideration in the management of just one-element costs increases the amount of information in management, which also negatively affects the cost-effectiveness management.

From the viewpoint of management, planning, and control, the most important feature for cost classification is how their dynamics changes, depending on changes in production volume or other performance indicators. Growth or decrease in the level of activity of the enterprise causes a corresponding change in the determined costs. At the same time, other costs remain unchanged. By dynamics, costs are divided into the following three main categories: variable, fixed, mixed costs.

By describing costs by this criterion, it is important to establish not only the dependence on the change in the scope of activities but also the speed of these changes. In order to make decisions on the increase of production volumes, it is necessary to determine the average cost, which includes costs per unit of production of services. Although the average aggregate costs give an idea of the cost of production typical for the enterprise unit, they do not allow judging the change in total costs of the

enterprise when the volume of output is changed. The growth of total costs of an enterprise with an increase in their output per unit of production is called marginal costs. This classification allows judging aggregate costs in a different form. Average aggregate costs indicate the costs of providing a typical service unit since aggregate costs are shared equally for each unit of services provided or work performed. Marginal costs indicate an increase in aggregate costs when providing additional services.

Classification of costs by costing items has significant differences in the industries, reflecting their specifics. However, there is a typical nomenclature of items. Due to the itemized classification, costs can be monitored

in terms of planning and accounting at the place of their occurrence and for certain types of products. In addition, for each cost item, you can determine the degree of relation of costs and the set costing item.

**4. Additional features of cost classification**

Not all classification features proposed in the relevant literature are used and applied in national cost management practices since some features are quite similar in order to allocate costs to independent groups.

In this regard, we distinguish 8 classification criteria for cost sharing (which meet the current requirements

Table 2  
Additional attributes of cost classification

Classification attribute	Types of costs	Characteristics	The object of management
1. Ability to control	variable	cost items that can be sent at the discretion of the department head	Managed costs (control over the implementation of planning, organization and regulation functions) are primarily subject to the management process
	invariable	cost items that cannot be managed and which do not depend on the department manager	
2. Reflection in the accounting and report	took place and are reflected in the register and the report	actually incurred costs reflected in accounting and management reporting	In the course of the cost management process, first and foremost, the second and third group of costs should be identified, since their availability can significantly distort the value of the product cost of the product, and question the reliability of the entire accounting
	had a place but are not reflected in the accounting and reporting	actually incurred costs that are not reflected in the accounting and management reports	
	did not have a place, but are reflected in the accounting and reporting	unavailable expenses, reflected in the accounting and reporting	
3. Principle of accepted commitments	obligatory	are the consequence of earlier commitments. In the near future, nondiscretionary expenses are fixed, they can only be changed after the expiration of the deadline for the accepted commitments	Management and forecasting, in the first place, must be subject to obligatory costs, because when circumstances change in the future, the costs caused by these circumstances are retained. Both cost groups are without returning, that is, ineffective, and therefore should be subject to mandatory control and management
	non-obligatory	are subject to earlier obligations, but may change immediately after changes in the obligations of the parties	
4. Place of formation	own	costs are made in this subdivision	This division allows, in terms of management, to further differentially allocate costs, paying a particular attention to its own costs, and is designed to address the following tasks: ensuring the possibility of managing the cost-effectiveness of individual units; increasing the accuracy and degree of detail of the calculation of production cost, especially for complex, heterogeneous production, producing a large assortment of products
	not own	costs incurred by another subdivision	
6. By factor of stability	fixed for a long time	costs that are not subject to change over a long period of time	The object of management, first of all, must be often variable costs, the level of which is determined annually in the planning process (control over the implementation of planning, regulation, and analysis functions)
	often variable	costs that vary with a high degree of periodicity	

for the transition to the international accounting system), in our opinion, the most objective and useful for the organization of accounting, control, analysis, and cost management:

- by economic content;
- by relation to the technological process;
- by net cost items;
- by types of products, works, and services;
- by the method of distribution to the object of production (accounting);
- by relation to the volume of production;
- by the duration of action (periodicity of occurrence);
- by relation to the plan.

The classification of costs is a fairly dynamic and open system, and the emergence of new criteria not prevent the use of previously proposed, nor give users the opportunity to select and manage new types of costs, depending on the needs and capabilities of the management system.

All types of costs, distinguished by the criteria considered, are used in the management of costs of the enterprise. The given multiplicity of types of expenses should be applied at large enterprises since the division of the whole value of costs of certain types by means of the considered criteria to some extent simplifies the managerial influence on them and thus contributes to their reduction.

Thus, the classification of costs affects the choice and further application of cost management methods as tools of management influence. But there are other prerequisites for such an option that require appropriate research.

The listed classification features are the basis for the formation of the system of classification and choice of management accounting methods that can be used in various enterprises taking into account business peculiarities, including those of machine-building enterprises. At the same time, it is considered possible for an enterprise to independently select those classification characteristics of the grouping of costs

that are used by it for further study and analysis of the behaviour of costs in a competitive enterprise, taking into account the specifics of production.

The above features of the classification of costs are directed to the choice of the object of control in the production process but do not take into account the factor of the possibility of the impact of each subject on specific costs, that is, do not allow fully realizing the functions of cost management. Therefore, in our opinion, it is necessary to introduce additional signs of classification (Table 2).

The variety of classification cost indicators allows accumulating information about them and using data for various purposes in management production to improve the efficiency of the enterprise.

## 5. Conclusion

Cost management is not an end in itself, it is absolutely necessary for the company to achieve a certain economic result, increase the efficiency of work. Functions of cost management are primary in relation to production, that is, in order to achieve a certain production, economic, technical or another result, firstly it is necessary to incur the costs. The study proved that the prerequisite for effective cost management is their classification, on the basis of which it becomes possible to carry out targeted managerial influences on the corresponding types of costs, the process of their formation, and take into account the interaction between individual types of costs.

The study of approaches to cost classification allows asserting that the existing features of cost classification are directed to the choice of the object of management in the production process, but do not take into account the factor of the possibility of each subject's impact on specific costs, that is, they do not allow fully implementing functions of cost management. Therefore, it is proposed to introduce new features of the classification, which allows establishing a link between the level of costs and a certain management function.

## References:

- Krumwiede Kip, R. (1998) ABC: Why It's Tried and How It Succeeds. *Management Accounting*, 32.
- Persiy, Y. (2017) Recommendations for the classification of costs as a prerequisite for managing them. *Science and society*, 1: 112-117.
- Oliinyk, O. (2001) Classification of enterprise costs. *The Journal of Zhytomyr State Technological Institute*, 14: 146-152.
- Pohorelov, Yu. (2015) Using cost management methods: principle approaches. *Herald of Khmelnytskyi National University*, 3: 18-24.
- Chyzh, V. (2010) Classification of costs in managerial accounting for information management needs. *Proceedings of Scientific Works of Cherkasy State Technological University*, 23: 48-54.