

ACCOUNTING OF INVENTORIES: ADMINISTRATIVE ASPECTS OF OPTIMIZATION

Setting the problem. The operation of economic agents in a market requires from accounting system the constant search for possible ways to optimize costs and ensure efficiency. Especially acute arise the problem due to the increasing competition in trade, which causes a qualitative change in the accounting system. Its task from the area of reflection and movement of inventory turns into the area of providing the optimization of their quantitative, ad valorem and qualitative parameters. Accordingly the issues of development and use of principles and methods those are inherent in the well-known and widely used overseas management accounting system by national economic trade become relevant. Its development in Ukraine has begun to acquire the characteristics of the systems in recent years. Illustrative is the fact of its development mainly at those companies that are privately owned. Understanding the changing needs of information management, besides some additional costs for its improvement and development turned out to be more important and able to optimize the overall final results. The explanation of this is the fact of the overwhelming effectiveness of measures introduction justified on the basis of applying the management accounting system data of trading stocks.

Accordingly, the development of scientific researches on the opportunities of improving the information base of decision-making to optimize inventory management is sufficiently justified and promising. It should be noted that in developed countries, the feasibility of its application is not in doubt because the evidence suggests a significant impact of the methodology and practice of management accounting to improve effective performance of economic agents.

The analysis of recent research and publications. Domestic science in recent years has been characterized more and more by the development of innovative approaches to the improvement of the knowledge base management. In this regard, the number of publications related to research of the ways to reduce costs and improve the final performance has significantly increased. It is worth noting the growing interest to the management accounting system. The authors form the concept of accounting optimization not only of income and expenditure, but also of other objects, which are based on their improving management, on the basis of various research methods (analysis, comparison, generalization). In particular, sufficiently fundamental in this respect can be considered the scientific achievements of P.M. Harasym, S.F. Holov, Z.-M. V. Zadorozhnyi, G.P. Zhuravel, L.V. Napadovska, M.S. Pushkar, P.Ya. Homyn and other scientists.

Considering these authors' works as a significant contribution to the development of the theory and methodology of management accounting, we note that at present a number of problems of theoretical and applied nature remain unresolved. Z.V. Hutsaylyuk focuses on this particular attention and reasonably claims that at present there is no integrated system of management accounting as a separate information system neither in theory nor in practice [3, p. 46]. A certain progress can be observed only in relation to information management costs.

However, application of the principles and practices of management accounting concerning such an accounting object as inventory (which by the way have a significant share in the total cost of any economic agent), with some exceptions, are not considered in details. Thus, it should be emphasized that the development of scientific approaches of information inventory management forming at commercial enterprises should be developed further, as it may provide greater competitiveness of those agents that use it than those that ignore.

Setting the objective. The aim of the article is to summarize the approaches to the definition of the term «management accounting» and build the block diagram of the sequence of model formation to optimize the development and implementation of inventories.

The account of the main research contents. The lack of effective methodological tools of management accounting and practical skills of its application in domestic businesses, including retail, can be associated with the factor of uncertainty and lack of a unified approach to the definition of the accounting system.

According to P.M. Harasym, G.P. Zhuravel and P.Ya. Khomyn, management accounting of inventories is primarily management by them. Unlike traditional accounting, when accountants' attention is focused only on providing accurate recognition and complete retention of stocks, management accounting aims at having such a functional activity of managers, which is directed to minimize the cost of the inventory maintenance at the full supply of their production needs [1]. Methodological orientation, put in this definition pushes into the foreground the needs of management. However, further specification of the given definition indicates the binding of that accounting system to minimize costs. Such approach meets the demands of economic agents and their owners to provide maximum profitability, and therefore it can be claimed that these scholars approach to the characteristics and needs justification in its use of practice quite rightly.

Another scholar, A.M. Hubachova, argues that management accounting expands and deepens the financial one and is the main system of communication within the enterprise. This accounting is internal. Its goal is to provide information to managers responsible for achieving specific production goals [2, pp.378-

382]. If you lower the binding to the production process, it can be argued that such an approach to the management accounting is quite voluminous and covers wide system objectives without detailing specific objectives and characteristics of the accounting entity. In this case, the problem of determining the specific objectives of this accounting system management and the formation of the requirements and procedures for its implementation requires the development and solving, because each accounting object requires the use of a set of tools that are often quite different in nature, way of implementation and methodology of reflection.

Perhaps because of this, some authors consider management accounting as accounting of costs and revenue, regulation, monitoring and analysis, which provides information for operational management solutions and enterprise development [6, p.184]. As a result, its main essential characteristic is offset in some way and a somewhat distorted concept is formed that is difficult to understand: «management accounting as an accounting of regulation, control and analysis». A contents filling of such a statement requires making stylistic adjustments as a rational essence to include these terms in the definition is still there. Moreover, with respect to inventory, a number of these components are really tools of management accounting.

The same researchers as P.M. Garasym, G.P. Zhuravel and P.Ya. Khomyn emphasize it: managerial accounting «more accurately can be defined as inventory management, since it is based on their planned management: the search for optimal terms of delivery, the calculation of the minimum possible lots of raw materials and goods supplies, options of their delivery to the company, concluding contracts with suppliers, methods of storing and transfer to production and also control procedures and regulation of residues: identification of stocks regulations, comparison of their correspondence to existing balances, paperwork to supply ordered lots, delivery control, monitoring compliance with actual supply order (in case of deviations – not only timely adjustment orders, but often the whole technological cycle when to change the product range delivery and raw materials supply is impossible), monitoring the timeliness and completeness of stocks recognition»[1].

Pryimak A.Yu., rightly sees in the system of management accounting the source for logistics research, but considering its specific procedures and techniques sometimes allows its consideration as a tool of logistics, which is illegal [9]. Both underlying structural components of the overall enterprise management system are characterized by the use of a number of common techniques (methods), but more acceptable is their correlation as an information source (management accounting) and process (logistics).

According to the Law of Ukraine «On Accounting and Financial Reporting in Ukraine» in the version dated 02/12/2012 managerial accounting is considered as internal business and defined as a system for processing and preparing information about the company's activities for internal users in the enterprise management [4]. This definition is the most generic and covers not only such an accounting object as inventories, but also the activities of an enterprise as a whole. That is, actually management accounting is legitimated (for internal use of its data) on all processes and phenomena that occur at the enterprise.

Despite the variety of approaches to the consideration and formulation of determining the nature of management accounting, most writers are united in their interpretation of its role and tasks to be solved due to its using at the enterprise. Basically the essence of these tasks is to ensure cost optimization and increase profits. Such an accounting object as inventories is not an exception. A large number and quite a wide range of inventories at trading companies, especially the wholesales, require a turnover divestiture of money for its formation. In this context, the conclusion of O.A. Polyana is quite fair that a key aspect of management accounting is to achieve the optimal level of inventories for each product group that would allow to minimize the costs for delivery and storage of goods at the same time to meet the demand on them [7, 8].

Accordingly, the formation of management accounting at commercial enterprises should be based on the following main reasons:

- the number of stocks should be high not to be the disruptions in meeting the need for them. That is, time lag (T) to meet the needs in inventories should be minimal;
- to provide the minimum of the floating assets divestiture for building inventories, their number (K) should be minimal;
- the amount of available working capital (KO) should be as maximum as possible.

In general, the providing of optimal ratio of these quantities, which can lead to higher performance can be achieved under the condition of the function:

$$\begin{cases} T_h \rightarrow \min; \\ K_z \rightarrow \min; \\ KO_v \rightarrow \max \end{cases} \quad (1)$$

The use of economic-mathematical modeling of processes and conditions of trading stocks formation will make possible the selection of the most optimal option that can provide a positive economic effect. In the generalized view of a model formation of management accounting inventories, as a part of an information security management it should include such elements as the analysis of environmental factors, assessment of the current practice in information support of inventory management, development of criteria for display indicators, etc. (Fig. 1).

Built in Figure 1 sequence and its structural components of managerial accounting inventories can be more adapted to the hierarchy of control system that exists at the enterprise. For this purpose, you can

make additions of the built circuits by corresponding elements after the block (2). As to the criteria and indicators of management accounting inventories (block 1), it is advisable to use an approach that is recommended by A.V. Ivanenko and A.A. Fomenko, who consider simple models of inventory management (one-product static model that assumes the deficit, the model with gradual replenishment of inventory, allowing the deficit) and present algorithms for their evaluation [5, p.109]. Having chosen the optimal inventory management model based on recommended methods of computing, it is necessary to carry out the development of accounting nomenclatures for accounting.

1. Analysis of environmental factors (internal and external)

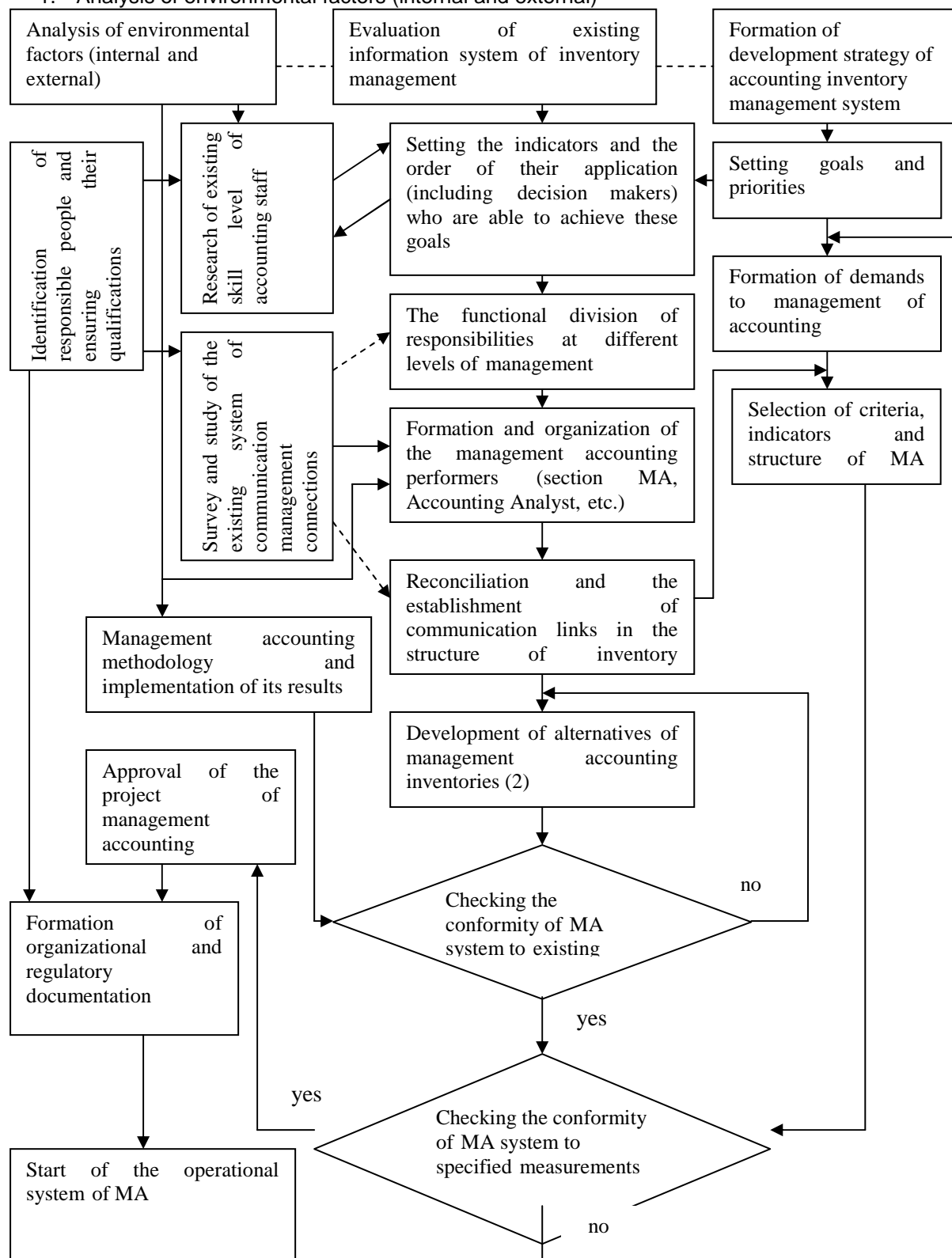


Figure 1. The sequence of forming a model of management accounting inventories
Formed by the author

The conclusions and further research. Thus, in the future, the use of the developed sequences of forming a model of management accounting requires the development of nomenclatures accounting and workflow. In addition, it is important to define rightly a model of inventory optimization and cost on them in order to achieve rationality and replenishment of inventories at the time. The reasonable choice makes it

possible to achieve economies of expenses, which require inventories storage and enhances sustainable competitive position of the trading activity subject in the market. Actually, in this context, the promising research directions are the optimization of resources, the development of communication management relations and the formation of a computerized model of accounting inventories management.

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Purpose. The aim of the article is to summarize the approaches to the definition of the term "management accounting" and build the block diagram of the sequence of model formation to optimize the development and implementation of inventories.

The Research Methodology. Theoretical and methodological basis of research are national scientists' works on the problems of management accounting introduction as well as publications on the accounting of the formation and realization of inventories, laws and regulations on accounting and accounting policies, policy documents and government regulations on economic issues, training materials.

In the research historical and logical methods have been used, methods of logical analysis, deduction, induction have been used to investigate the content of the categories "costs" and "managerial accounting", methods of analogy and systems approach are to improve the classification of costs in the system of management accounting, clarify its functions and principles of the organization. On the basis of systematic approach the place of management accounting in the information system and its tools in the costs management have been reflected.

Findings. The results of the research can be considered to be the proposed directions of nomenclature records and workflow. The developed model of management accounting reserves, as part of an information security management system should include the following elements: analysis of environmental factors, assessment of the current situation of information security of inventory management, development of criteria for display indicators.

Originality. The model of optimization of the inventory and cost amount at the enterprise to achieve the rationality of replenishment and realization of inventory at the time have been developed.

Practical value. The practical significance of the results is the ability to use the proposed in this article theoretical and practical developments in the activity of trading companies, and other companies of marketing field.

Key words: trade, accounting system, inventory, expenses, revenues, management accounting, management accounting inventory model.