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**V. A. Kolodiichuk**, Doctor of Economic Sciences, Associate Professor**В. А. Колодійчук**, д. е. н., доцент**MANAGEMENT OF LOGISTICS EXPENCES ON THE AIC ENTERPRISES****МЕНЕДЖМЕНТ ЛОГІСТИЧНИХ ВИТРАТ ПІДПРИЄМСТВ АПК**

**Urgency of the research.** Implementation of logistics functions is accompanied by a corresponding expenses and an effective system of management greatly enhances the competitiveness of the company.

**Target setting.** It is necessary to create conditions for the established system of logistics expenses management at the level of each brunch enterprise in order to reduce the share of logistics costs of enterprises in the cost of material flow.

**Actual scientific researches and issues analysis.** The issue of expense management is a part of theory of effectiveness and subject of research of many scientists in the works of fundamental and sectoral focus. However, the logistics component in the structure of expenses of the AIC enterprises is not sufficiently studied and the system of their management is not fully developed.

**Uninvestigated parts of general matters defining.** It is necessary to identify the logistics expenses and assess them by isolating them from the total amount of expenses and thus take into account the complexity of the structural-functional links in agricultural logistics in order to achieve effective management of the logistics expenses.

**The research objective.** The aim is to narrow the content and make a classification of logistics expenses and also to suggest sequential stages of the process of forming the system of logistics expenses management on the AIC enterprises.

**The statement of basic materials.** The different interpretations of the concept of logistics expenses are regarded and the author's definition is presented. The general classification of logistics expenses is suggested and the specifics of their display in the context of objective approach to the object of the research are defined. The comparative analysis of share and structure of logistics expenses of national and international economy is presented. The problems of identification and separation from the total sum and accurate measurement of the amount of logistics costs are defined, the system of their management at the level of brunch enterprises is suggested.

**Conclusions.** It is necessary to provide the realization of sequenced stages of the logistics expenses management system at the level of brunch enterprises in order to achieve effective functioning of the logistics system.

**Keywords:** management; logistics expenses; AIC enterprise; system; efficiency.

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**Urgency of the research.** Economics is the science of efficient use of limited resources and economic efficiency covers ratio "input - output", while describing the relationship between the number of units of resources used in the production process and the amount of specific products required. That is – efficiency is expenses` efficacy, energetic nature of which predetermines inevitable losses, the level of which determines the final result – the effect. Any logistics action is, first of all, a source of expenses that reduces the overall share of company profits.

**Актуальність теми дослідження.** Реалізація логістичних функцій супроводжується відповідними витратами і ефективна система їх менеджменту значно підвищує конкурентні позиції підприємства.

**Постановка проблеми.** Для зменшення частки логістичних витрат підприємств у вартості матеріального потоку необхідно створити умови для налагодженої системи їх менеджменту на рівні кожного галузевого підприємства.

**Аналіз останніх досліджень і публікацій.** Питання управління витратами є складовою теорії ефективності і предметом дослідження багатьох вчених у працях фундаментального і галузевого спрямування. Однак розгляду логістичної складової у структурі витрат підприємств АПК та системі їх менеджменту не приділено належної уваги.

**Виділення недосліджених частин загальної проблеми.** Для ефективного менеджменту логістичних витрат необхідно їх ідентифікувати та оцінити шляхом виокремлення із загальної суми витрат і при цьому врахувати всю складність структурно-функціональних зв'язків у аграрній логістиці.

**Постановка завдання.** Уточнити зміст та здійснити класифікацію логістичних витрат, а також запропонувати послідовні етапи формування системи менеджменту логістичних витрат підприємств АПК.

**Викладення основного матеріалу.** Розглянуто різні тлумачення поняття логістичних витрат та представлено їх авторське визначення. Запропоновано загальну класифікацію логістичних витрат та визначено особливості їх прояву у контексті предметного підходу до об'єкту дослідження. Проведено порівняльний аналіз частки і структури логістичних витрат національної та міжнародної економіки. Визначено проблеми ідентифікації, а також виокремлення із загальної суми і точного вимірювання обсягу логістичних витрат та запропоновано систему їх менеджменту на рівні галузевих підприємств.

**Висновки.** Для ефективного функціонування логістичної системи в АПК необхідно забезпечити реалізацію послідовних етапів системи менеджменту логістичних витрат на рівні галузевих підприємств.

**Ключові слова:** менеджмент; логістичні витрати; підприємство АПК; система; ефективність.

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**МЕНЕДЖМЕНТ**

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**Target setting.** Consideration of the efficiency of production and distribution systems requires clarification of the economic nature of the costs and management tools both in general scientific and applied aspects. We believe that the primary challenge for the improvement of the efficiency of agriculture is the lack arsenal of tools for streamlined logistics expenses management system at the level of each branch enterprise.

**Actual scientific researches and issues analysis.** The problems of the efficiency of AIC and agricultural enterprises` expenses management were studied in the works of V. I. Boiko, P. I. Haydutsky, O. P. Velichko, P. T. Sabluk, L. M. Khudoly, O. M. Shpichak etc. However, these studies mostly concern agricultural production and the fundamental works on questions of identification and accounting of logistics expenses are the studies of A. M. Hadzinsky, E. V. Krikavsky, N. K. Moiseeva, O. A. Oklander, Y. V. Ponomareva, V. I. Serheeva, Ch. Skovroneka, O. M. Sumets and others. For instance, E. V. Krikavsky [1 с. 224] defines the place of the logistics expenses in the system of accounting and structures and groups them, what creates the basis for identification of logistics expenses and their management.

**Uninvestigated parts of general matters defining.** The question of identification of logistics expenses in AIC and development of the system of their effective management at the level of an enterprise due to the complexity of structural-functional links in agricultural logistics integrating a large number of elements in the logistic chains still remains problematic.

**The research objective.** The aim of the article is to specify the definition of "logistics expenses" and make a classification of their types in the context of the objective approach to research facilities and also to form the system of logistics expenses of the AIC enterprises management.

**The statement of basic materials.** Terminology variety of interpretations of logistics expenses led to the need to clarify their content and to formulate our vision of this part of the efficiency.

The researcher M. A. Oklander notes that logistic expenses are associated with the movement and storage of inventories from the primary source to the final consumer [2, p. 211]. He states that it is a sum of expenses, the amount of which varies both in forward and reverse proportional to the size of supply:

- costs that vary directly proportional to the size of deliveries – storage costs and loss of income due to lost (unused) opportunities associated with the creation and storage of stocks;
- costs that vary inversely proportional to the size of deliveries, – transport and purchase costs [2, p. 215].

More concise definition is given by A. M. Hadzinsky [3], who considers logistics expenses costs of implementation of logistics operations.

Partial detailing can be noted in the definition, given by H. K. Moiseeva [4], who considers them monetary expression of used manpower, tools and objects of labor, financial costs and various negative consequences of force majeure events caused by the displacement of property (raw materials, goods) for the enterprise and between enterprises and maintaining reserves. Similar definition is suggested by Ch. Skovronek [5], who states that the term stands for the consumption of human labor, tools and objects of labor, financial costs and other negative consequences of extraordinary events caused by the displacement of material goods (raw materials, products) in the enterprise and between enterprises and holding stocks, expressed in money.

The scholar O. M. Sumets [6] regards logistics expenses as the reduction of economic benefits in the form of disposal of material, financial, human and information resources that provide advance of tangible assets within the logistics systems or supply chain. V. E. Krikavski [7] insists on the logistics expenses as a component of the full costs of the enterprise, adding that the value of logistics infrastructure can be considered as an investment.

Get to know the different interpretations and requirements by providing concrete scientific methodology of scientific knowledge to offer our definition of logistics expenses as follows: **logistics expenses** – a cash equivalent of the input use in the process of maintenance of inventory and movement of material flow from the primary sources of raw materials to the final consumer of finished products across functional areas of logistics in terms of concrete operations. The costs of operation of interim

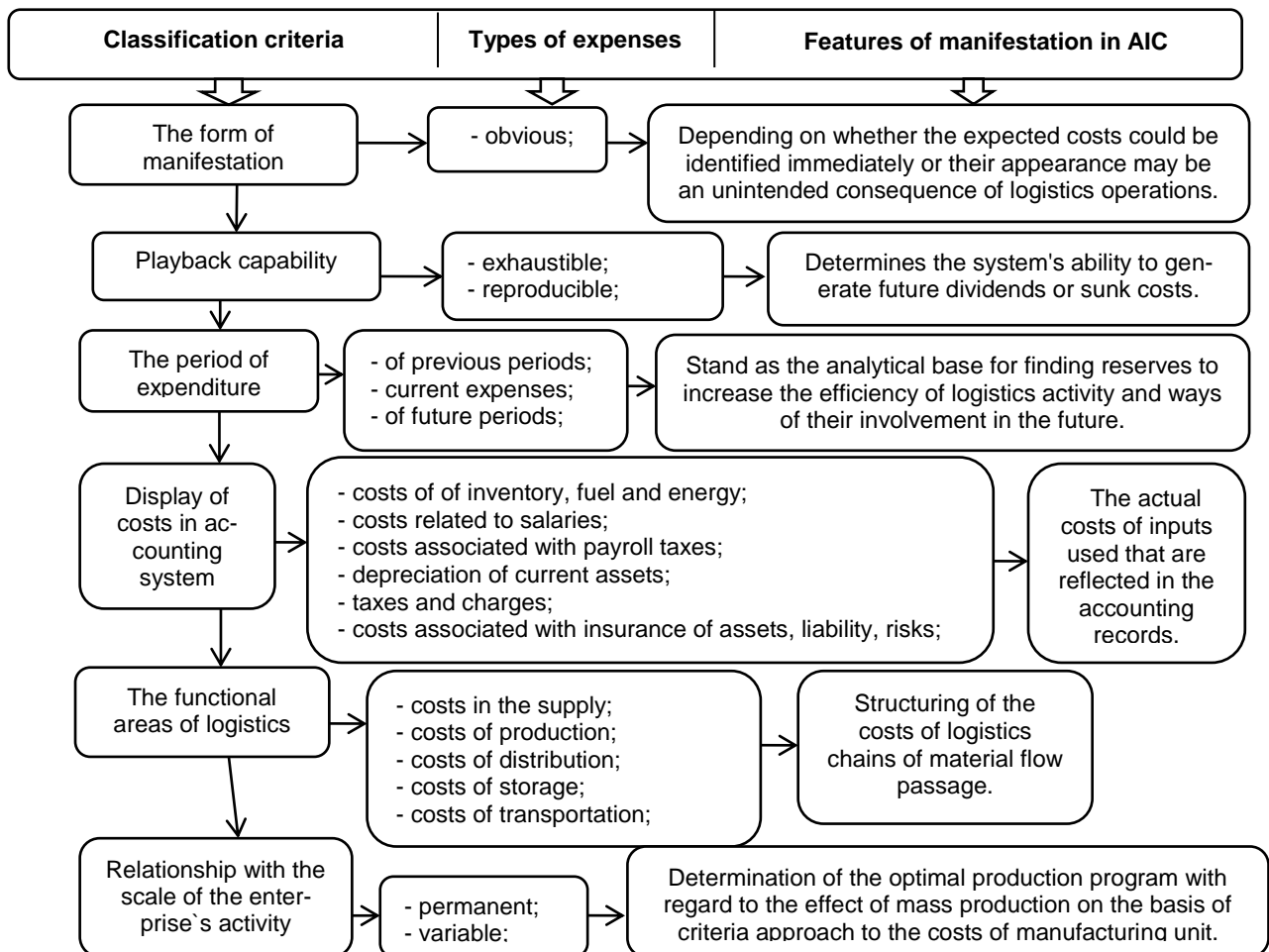
**МЕНЕДЖМЕНТ**

informational, financial and service flows in the logistics systems are also included into the overall logistics expenses.

A large variety of approaches to classification criteria and, thereafter, classification of the logistics expenses is seen in domestic and foreign educational and methodical, scientific and reference literature. We don't consider it necessary to analyze all the approaches to the classification of expenses existing, as we are interested in practical aspects of classification to provide identification of logistics expenses in agricultural sector based on existing forms of statistical, accounting and other reports. Herewith, we should mention the fact, approved by researches, that logistics expenses may be interpreted "... as untechnological expenses of spatiotemporal movement of various forms of material flows of the company, the costs associated with logistics activities and costs of alternative investment opportunities and losses due to unfavorable events which have made it impossible for an enterprise to operate according to the plan, have caused injury and / or complete loss of its assets "[1, p. 182].

To classify the logistics expenses (Fig. 1) we shall take structural-functional approach as a basis that is we shall consider expenses in respect of two components:

- 1) costs, associated with the creation and maintenance of structural elements - objects (movable and immovable property) which ensure the movement of material flow in logistics chain;
- 2) cost of the logistics functions of procurement, production, distribution, transportation, storage, etc. with granularity at the level of logistics operations.



**Fig. 1. General classification of logistics expenses in the context of objective approach to the object of the research**

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**МЕНЕДЖМЕНТ**

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One of the integral indicators that characterize logistics expenses in mega-systems in the foreign practice is their percentage of GDP or, in the case of the lower level of the hierarchy system, of sales of finished products (industry). For example, in the United States an absolute double increase in logistical expenses was observed for 1990- 2006 y. - from 659 billion US dollars to 1.305 trillion US dollars, while the relative value of the index on GDP tends to decline - from 11.4% in 1990 to 9.9% in 2006 [1, p. 178]. Among the structural trends of identified costs during the study period in the US the share of transportation costs increased, which is a natural consequence of the global changes in the world economy and the share of spending stocks decreased for lower share of administrative costs

In general, the share of logistics expenses in the US and the European Union is 12 - 16%, in China - 26%, Japan - 6%, in Ukraine - 30-35%. In the Ukraine 70% logistical expenses account for transport, 25% - in storage and about 5% -for management of logistics flows [8].

The problem of identification and accurate measurement of the amount of logistics expenses lies in the plane of their accounting. We fully agree with the opinion of M. A. Oklander [2] that the modern theory and practice of accounting "pass" such costs. There are no scientific recommendations on the structure and method of calculation, no specific reporting forms that leads to logistical expenses stay beyond the control of management. Scientist [2], stressing the need to improve information system of accounting, warns us not to construct new data (most of them already exist in one form or another), but to make the data be classified according to the needs of logistics.

Quite convincing is the claim of researchers [1, 9] that, arguing the complex nature of logistics expenses, to consider them both for process plane and the subject plane. Complexity "... in terms of process approach means taking into account all costs of flow processes. From the subject point of view logistics expenses should be considered as a reduction of assets in connection with the preparation and implementation of logistics processes" [1, p. 180].

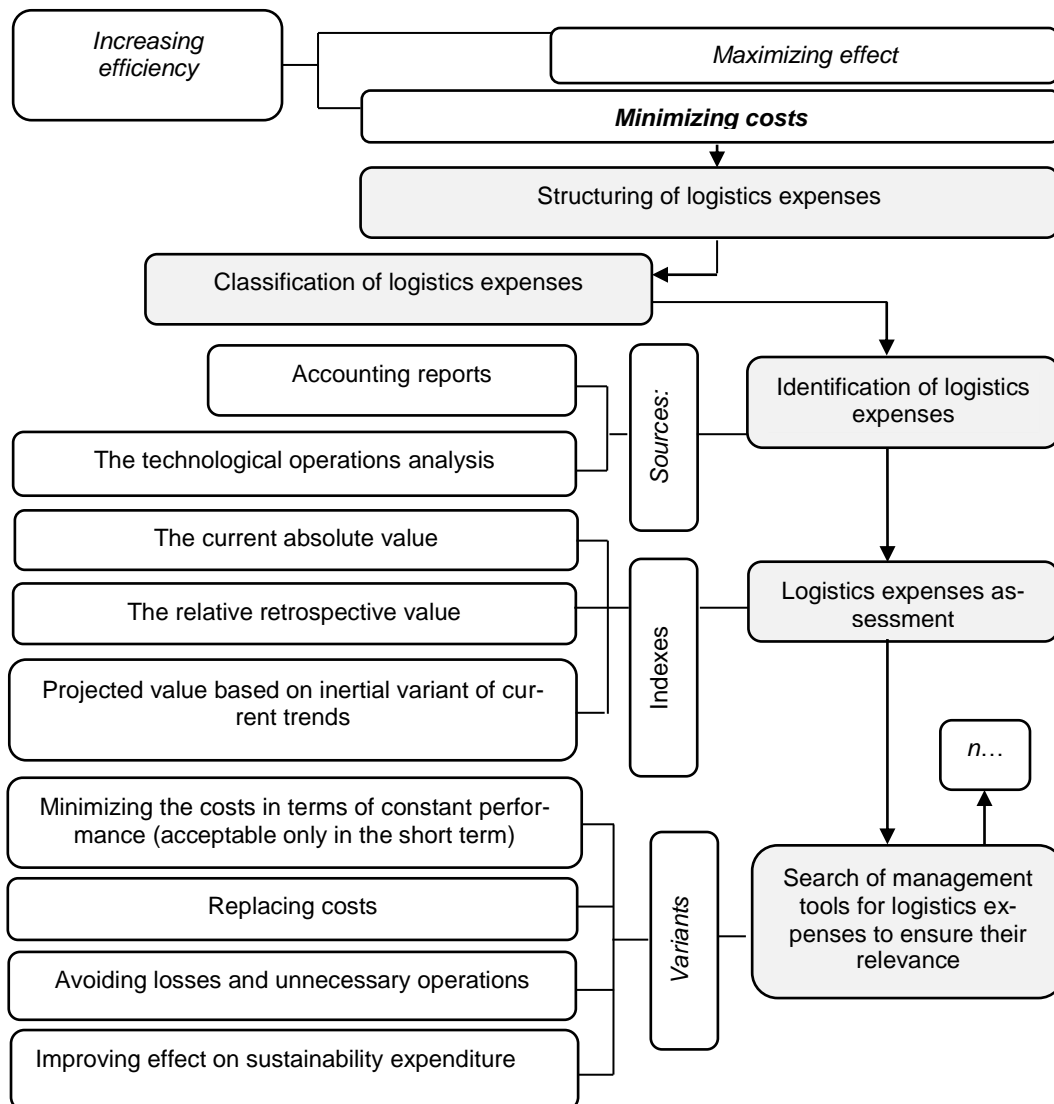
The problem of assessment of logistics expenses lies in isolating them from the total amount and this requires phased costs analysis in all functional areas of logistics, which the material flow passes through. Thus, the structuring of costs into separate functional areas of logistics precedes their management (Fig. 2) [10]. The procurement, production, distribution, transport and informational logistics are traditionally distinguished. During the next stage – classification of expenses – they can be grouped on the basis of belonging to certain areas. The process of separation of logistics costs from the overall is provided during identification by the analysis of accounting statements or empirical method of analyzing each logistics operation in the relevant functional areas of logistics. After the identification it is important to determine the absolute value of the costs in monetary units at a certain time. It is possible to analyze changes in costs during the period, using ratios or, for example, index method to clarify the dynamic state of the logistics system. The prediction upon trends in cost can be made using economic and mathematical methods for the study of relationships between the factor and performance indicators based on their assessment.

Determining the actual state of costs is the basis for management decisions that should improve the efficiency of the logistics system for such potential alternatives (Fig. 2) [11, p. 331]:

- 1) cost reduction without changing the level of efficiency of the system that is acceptable only in the short term, because this option does not promote development of the system;
- 2) substitution of some costs by the other ones, which requires the monitoring of the system for the further optimization of its functions. For example, mechanization and automation can help bring the system to a qualitative new level, leading to the emergence of new, previously not peculiar costs and avoid traditional;
- 3) avoidance of losses and unnecessary operations that will allow use inputs more rationally and which is a significant reserve for increasing efficiency in the Ukrainian economic realities;
- 4) increase of effect on the sustainability of expenditure that is sufficiently viable option for the development of systems in the short term.

Achieving maximum return on invested resources increases the temptation to increase the volume of the latter with a view to increase absolute indexes of efficiency. Therefore, this option is necessary in terms of the start of production, development of new technologies, investment funds, etc., but it should be a starting stage for other options for increasing efficiency.

**МЕНЕДЖМЕНТ**



**Fig. 2. System of logistics expenses on AIC enterprises management**

**Conclusions.** The problem of assessment of logistics expenses lies in isolating them from the total amount and this requires phased costs analysis in all functional areas of logistics, which the material flow passes through. The task of effective functioning logistics system in AIC is to reduce the share of logistics expenses of enterprises in the cost of material flow. The classification of costs, their structuring into separate logistics spheres and identification with the help of accounting reports or empirical method with subsequent use of appropriate tools to ensure their relevance precedes the expenses management.

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