

MODERN APPROACHES TO MILITARY LOGISTICS IN UKRAINE

Alexander LEVCHENKO

zvinau@ukr.net

Natalya PETRENKO

natapni@ukr.net

Yurii KORNIICHUK

korniy.yg@gmail.com

S.P. Korolov Zhytomyr Military Institute, Ukraine

Streszczenie: Proponuje się rozszerzenie sfery zastosowań logistyki, która rozwiąże szereg problemów kompleksu obronno-przemysłowego. Racjonalne wykorzystanie narzędzi logistycznych w Siłach Zbrojnych Ukrainy pozwoli wykorzystać istniejący potencjał, zwiększyć efektywność Sił Zbrojnych Ukrainy, zwiększyć bezpieczeństwo kraju i doprowadzić krajową gospodarkę wojskową do zupełnie nowego poziomu, zdefiniować pojęcie logistyki wojskowej. Określono podstawowe kompetencje organów zarządzania wojskowego i określono logistyczne podejścia do logistyki w Siłach Zbrojnych Ukrainy.

Summary: The authors suggest the extension of the logistics scope, which will solve a number of problems of the defense industry. The rational use of the logistics tools in the Armed Forces of Ukraine will allow us to use the existing potential, increase the effectiveness of the Armed Forces of Ukraine, improve the security of the country and bring the domestic military economy to a fundamentally new level. The term of military logistics is defined. The article describes basic powers and authorities of the bodies of military management and logistics approaches to logistics in the Armed Forces of Ukraine.

Słowa kluczowe: logistyka, ekonomia obronna, wydatki wojskowe, budżet obronny, wsparcie materialne i techniczne sił zbrojnych.

Keywords : logistics, defense economy, military expenses, defense budget, logistic support of the armed forces.

1 INTRODUCTION

Considering the need to provide its own military security and defense, recognizing its responsibility in maintaining international stability, being a sovereign and independent, democratic, social, law-based state, Ukraine has Armed Forces of Ukraine with the necessary level of combat readiness and combat capability [2].

Nowadays, there is a need for an urgent comprehensive reorganization and improvement of approaches to the logistics of the Armed Forces of Ukraine in order to overcome the negative effects of a long period of inventory recession of defense industry of Ukraine.

The purpose of the research is to scientifically substantiate and prove the purposefulness of using the modern paradigm of logistics and its approaches to optimizing the resource support of the Armed Forces of Ukraine.

Materials and methods. The main logistic and informational flows of the activity of the Armed Forces of Ukraine in everyday conditions and in military conflicts are used as the materials of the research. Methods of systematic approach, logistic analysis, scientific paradigm extrapolation and informational and analytical methods are under study.

PRESENTATION OF MAIN MATERIAL

The main objective of the State Program for the Development of the Armed Forces of Ukraine until 2020 [1] is to acquire the capabilities of the armed forces to effectively respond to threats to national security in the military sphere, the defense of Ukraine, the protection of its sovereignty, territorial integrity and integrity, and meeting the requirements of Euro-Atlantic standards and the criteria necessary for becoming a NATO nation. Among the ways to achieve such a goal have been mentioned the following ones:

- automation of management and accounting processes;
- unification, modernization and restoration of armaments and military equipment;
- establishment of the necessary reserves, and provision of the troops (forces) with all-round support;
- professionalization of personnel;
- use of international military technical assistance, etc.

Military logistics is comparatively a new aspect for us: the bibliography does not distinguish it as an independent field of study in the Armed Forces of Ukraine yet, it has been just paid attention to, and there are not enough domestic literary sources devoted to this problem.

In our country, there is no common opinion regarding this area of knowledge yet, and logistics is not considered as an independent field of study. Applying the principles of logistics in the Armed Forces of Ukraine raises the need to understand the essence of logistics.

There are many definitions of logistics. The authors of a number of publications consider it primarily as a science, which makes it possible to optimize cooperative ties. Others determine logistics as strategic management (management) for the purchase, supply, transportation and storage of materials, parts and finished equipment, etc. The term also includes management of relevant information flows, as well as financial flows.

Consequently, military logistics is a science which object is to organize a rational process of material flow from suppliers (the warehouses and bases of supply enterprises) to end users (the military units of the Armed Forces of Ukraine and other security structures, functioning of the supply systems of the troops (forces)) , as well as management of logistic means, creation of infrastructure of logistic support of the troops (forces).

The use of logistic tools allows you to reduce expences, increase productivity, improve logistics, and thus obtain significant competitive advantages on the domestic and foreign

markets. That is, in its turn, necessary for the Armed Forces of Ukraine, which have a powerful military potential and a lot of ways to improve it.

The structure of the defense economy of Ukraine can be considered by 4 criteria, such as: functional, sectoral, reproductive, and territorial (Fig. 1).



Fig.1 The Structure of the Defense Economy

The core of the economy of modern war is the military (defense) industry, that is rocket building, aircraft construction, shipbuilding, production of military radio electronics, armored vehicles, artillery, ammunition, rocket fuel, and others.

The central link of the economy of the Armed Forces of Ukraine requires the activities of chief and central departments, enterprises and construction organizations of central subordination. In accordance with sharing functions related to the economic security of the armed forces, the central unit carries out tasks related to the definition of the amounts of final military consumption, and the logistics of the armed forces, economic ties with the defense and other branches, as well as the solution of the principal issues of the distribution of weapons and military equipment, and the organization of activities in the manufacturing sector.

In the chain of the operational command of the Armed Forces of Ukraine economy, activities started in the central branch for the further distribution of logistics facilities and bringing them to the troops, economic ties with the purchase of certain types of military

property, food, fuel and lubricants, industrial and agricultural production and capital construction, are still going on.

The military component of the economy of the Armed Forces of Ukraine is the final stage of the movement of the military product and characterizes the activities of end-use. It is here that the operation of armaments, military equipment and military property, a combination of economic, material and personal factors of combat readiness of the troops are carried out. Economic activity of the final stage of the economy of the armed forces is represented by the military economy, relations on the exploitation of armaments and military equipment and property, and the system of material and financial support of the personnel. At the same time, the military chain also carries out production activities (maintenance and military trade).

The Law of Ukraine "On the Armed Forces of Ukraine" [2] defines the power and authority of the Cabinet of Ministers of Ukraine in relation to the Armed Forces of Ukraine. The Cabinet of Ministers of Ukraine in terms of logistics:

- organizes the preparation and implementation of nation-wide programs for the development of the Armed Forces of Ukraine, arming and military equipment, other state programs regarding the Armed Forces of Ukraine, the state defense procurement order (purchase) of products, performance of works, provision of services for the needs of the Armed Forces of Ukraine and creation of inviolable and mobilization reserves;

- ensures the supply of armaments, military equipment, energy, logistical and other resources and property to the Armed Forces of Ukraine, provision of services and their financing in the amounts necessary for effective implementation of the tasks and functions of the Armed Forces of Ukraine.

Article 10 of the Law of Ukraine "On the Armed Forces of Ukraine" defines the areas of responsibility of the Ministry of Defense of Ukraine related to the management of the Armed Forces of Ukraine, as well as to financial and economic matters, takes military, political and administrative control over the Armed Forces of Ukraine, implements national policy in the Armed Forces of Ukraine, develops the principles of their development, and directs the development of the Armed Forces of Ukraine and their training in time of peace and war.

Due to logistics approaches, the Ministry of Defense of Ukraine provides the vital functions of the Armed Forces of Ukraine, and provides their functioning, combat and mobilization readiness, combat capability, preparation for carrying out their tasks, application, manning and training, supply of weapons and military equipment, maintenance and modernization of the certain weapons and equipment, material, financial and other resources

and property in accordance with the needs determined by the General Staff of the Armed Forces of Ukraine within the funds available and provided by the State Budget of Ukraine, and controls their effective use, and organizes the execution of works and services for the benefit of the Armed Forces of Ukraine.

Information on the expenditures from the state budget by the Ministry of Defense of Ukraine is given in Table 1.

Table 1 Expenditures by the Ministry of Defense of Ukraine of the state budget funds in 2016, in thousands of hryvnias [4]

Heads of expenditures according to program classification of expenditures	Cash basis 2016
Total expenditures from the state budget by the Ministry of Defense of Ukraine, including:	58099155,1
Labour Expense	28363818,6
Accruals (Wages expenses)	5184492,0
Items, materials, equipment and accessories (Supplies expenses)	5625849,5
Medicine and first-aid material (dressing)	506523,6
Meals	2974161,7
Service fee (excluding utility bills)	884237,8
Travel and transportation expenses	240416,3
Expenditures and measures of special purposes	8395358,2
Utility bills	1667438,1
Research and study, and special measures on implementation of state(regional) programmes	387028,6
Special measures on implementation of state(regional) programmes, excluded from the list of developmental measures	10400,8
Current transfers to foreign governments and international organizations	2231,4
Retirement expenses and allowance	7646,1
Other payments for operating expenses	1628579,9
Other current expenditures	71034,6
Purchase of equipment and military durables	1044160,8
Investment building	580057,0
Extraordinary repairs	278973,0
Reconstruction and renovation	92711,0
Capital transfers to individuals	154036,1

The Department of Finance of the Ministry of Defense of Ukraine is a structural subdivision of the Department of the Ministry of Defense of Ukraine. The Department of Finance of the Ministry of Defense of Ukraine is appointed to participate in the formation and implementation of the national policy on financial support of the Armed Forces of Ukraine, perform the functions of the accounting service of the Ministry of Defense, form the common

budget of the Ministry of Defense, monitor the implementation of the Ministry of Defense estimates, and finance the troops (forces).

According to the Law of Ukraine "On the Defense of Ukraine" Art. 11 the General Staff of the Armed Forces of Ukraine in terms of logistics, determines the needs for personnel, armaments, military equipment, logistical, energy, financial, information resources, food, land and water areas, communications, funds and property necessary for the proper execution of the tasks by the Armed Forces of Ukraine and other military formations, controls completeness and quality of their receipt.

Central and other executive authorities concerning logistics organize and ensure the implementation of legislation concerning defense matters, assist the Armed Forces of Ukraine in carrying out their tasks, and provide their proper support in the areas of activity; plan, organize and control the implementation of measures for mobilizing the relevant authorities, institutions, organizations and enterprises of all forms of ownership of the relevant branches of the national economy, create and maintain the reserves of material and financial resources determined by the Cabinet of Ministers of Ukraine; organize the development and implementation of programs for the creation and modernization of existing models of weapons and military equipment, military property, creation of production facilities for their production, acquisition of experience in the field of science, and technology and its introduction into production of defense products; ensure the execution of the state defense order.

As for financial and economic issues, Article 14 of the Law "On Defense of Ukraine" determines that local authorities organize the provision, production and supply of products, electric power and heating systems to the Armed Forces of Ukraine and other military formations by contract basis by enterprises, institutions and organizations of communal services and resources.

Concerning logistics issues, Law of Ukraine "On the Defense of Ukraine" Art. 15 defines that the executive bodies of village, town and city councils relating to defense matters provide organization and participation in carrying out the activities related to mobilization training, territorial defense and civil protection in the area given, mobilization of human, transport and other resources for a special period, organization of production and supply for the troops(forces) with ordered products, energy and other resources by businesses and organizations belonging to communal ownership.

In accordance with Art.16 of the Law of Ukraine "On the Defense of Ukraine", concerning financial and economic issues, enterprises, institutions and organizations of all

forms of ownership meet state defense responsibilities, including conducting research and development performed in defense, create and maintain in readiness mobilization capacity, and take responsibility for the valuables of mobilization reserve, by contract basis carry production and delivery of goods to the Armed Forces of Ukraine and other military formations established under the laws of Ukraine and law enforcement agencies, perform other tasks, provide with municipal and other services not included in the state defense acquisition system.

Information on the expenditures from the budget of Ukraine for providing the activities of the Armed Forces of Ukraine and training of troops is given in Table 2.

Table 2 Expenditures from the budget of Ukraine for providing the activities of the Armed Forces of Ukraine and training of troops in 2016, in thousands of hryvnias [4]

Heads of expenditures according to program classification of expenditures	Cash basis 2016
Providing the activities of the Armed Forces of Ukraine and training of troops, including:	47 300 696,9
Labour expense	25 702 896,3
Accruals (Wages expenses)	4 670 949,9
Items, materials, equipment and accessories (Supplies expenses)	5 395 349,0
Medicine and first-aid material (dressing)	2 385,7
Meals	2 945 499,8
Service fee (excluding utility bills)	850 852,5
Travel and transportation expenses	213 083,2
Expenditures and measures of special purposes	3 153 189,0
Utility bills	1 644 594,4
Special measures on implementation of state(regional) programmes, excluded from the list of developmental measures	1 606,0
Current transfers to foreign governments and international organizations	2 231,4
Retirement expenses and allowance	7 623,2
Other payments for operating expenses	1 596 450,9
Other current expenditures	65 488,7
Purchase of equipment and military durables	587 781,0
Investment building	121 299,2
Extraordinary repairs	275 145,3
Reconstruction and renovation	64271,4

Current problems in accordance with “The State Program of Development of the Armed Forces of Ukraine until 2020” in terms of material and technical support are defined as follows:

- a low level of inventories of logistics;

- use of existing stock without re-replenishment;
- stock recovery requires a large amount of financial resources;
- paper accounting.

In modern conditions, in order to ensure the most effective use of material and financial resources for military purposes, it is recommended to conduct a comprehensive military-economic assessment of all measures relating to the development, production and operation of armaments and military equipment, capital construction, logistics and personnel training. When substantiating the composition of forces, monetary allocations for their formation, they always face various kinds of uncertainties: informational, technical, operational-tactical, foreign political, and socio-economic ones.

Taking into account the existing uncertainties, methods of choosing the optimal composition of forces constitute a key problem, which solution is possible by means of the theory and methodology of logistics.

The main objective of logistics in the logistics system of the Armed Forces of Ukraine is to ensure the delivery of materiel to combat units at the right time and place at the minimum possible total costs of labor, material, financial and information resources.

The aim of the logistics activity is achieved on meeting the following requirements:

- the necessary materials and their supplier are determined;
- material means of the required quality and in the required quantity are delivered to the appropriate place and at the prescribed time;
- material facilities are located in the storages;
- all listed operations are carried out at the minimum possible costs.

From the military point of view, logistics is defined as a functioning system represented by such subsystems as transport logistics, storage logistics, information logistics, and supply logistics (See Table 3).

Table 3 The Main Objectives of Logistics Subsystems

Logistics Subsystem	The Objective of the Subsystem
Transport logistics	Types of vehicles; operation of regular vehicles or their extraction from the civilian sector of the economy; combined use of all types of vehicles; organization of providing logistic support; optimization of transport tasks
Storage logistics	Construction and operation of depots and storage facilities of logistic support taking into account their specific features; lease of depot premises, in the amounts determined by the principles of adequacy and security; logistics in depots and bases; maintenance of supplies in the established amounts and their timely updating and replenishment; optimization of logistics storage
Information logistics	Establishment and maintenance of multi-level system of logistics accounting; integration of the accounting system of the system of statistical reporting on the logistic support to the troops; analysis of reporting and analytical documents in order to make suggestions as for making a decision on the material and technical armament of troops; formation of an order for the purchase and subsequent delivery of logistics to the troops in the required amounts; determining the need for budget funds necessary for all-round support of troops; control of expenditures of logistics, budget funds, as well as funds added to current assets
Supply Logistics	Analysis of the state of supply changes; establishment of supply management priorities; choice of supply management model; determination of the quantity of purchased logistics supplies

So logistics of the Armed Forces of Ukraine studies:

- ROI analysis and tasks of logistic support of the Armed Forces of Ukraine;
- logistics resources;
- military and economic bases of resource planning;
- standart regulations for the development of the plans of logistics;
- forms of economic ties for the supply of material resources;
- prices and pricing for products delivered to the armed forces;
- labor and labor logistics as for providing all necessary military forces;
- military-economic characteristics of the process of exploitation of armaments and military equipment in the troops;
- maintenance of operational characteristics of armament and military equipment in the troops, their reproduction, cost-effectiveness of repair.

Taking into account the requirements for logistics of logistic support of the Armed Forces of Ukraine, consider the principles of such provision.

Principles of timeliness, completeness and reliability assume logistic support of the Armed Forces of Ukraine in accordance with their real needs within the prescribed time limits, by guaranteed effective mechanisms.

The principle of sustainability implies that military transport systems should be constructed so that, during a threatening period and during the wartime the Armed Forces of Ukraine are provided with adequate resources and suffer minimal losses as a result of the influence of the enemy.

The principle of information security provides for the possibility to resist unauthorized access to the information resources of the Armed Forces of Ukraine.

The principle of profitability is manifested mainly in peacetime, when it is possible to search for less costly ways to perform logistics tasks.

The principle of integrity involves the functional connectivity and optimization of the elements of the logistics system of the Armed Forces of Ukraine.

The principle of hierarchy (ranking) implies that all major issues related to the logistics of the Armed Forces of Ukraine must be solved by organizing an effective interaction between the military authorities at all levels.

The principle of the system approach is to consider the issues of ensuring the Armed Forces of Ukraine as an integral part of the economic system, determining the scale and effectiveness of the activities.

The principle of universality involves the development and use of common approaches to the organization of material and technical support of the Armed Forces of Ukraine, provides methodological unity in carrying out measures on material and technical support of the Armed Forces of Ukraine as departmental units, as well as organizations of the country's economic complex.

The principles discussed prove to be significant to follow in military logistics and need to be taken into account in the course of theoretical research in the framework of solving problems of the development of modern military logistics systems.

CONCLUSIONS

Logistics of logistic support to the Armed Forces of Ukraine is transformed into a complex scheme of interaction and activity of various subjects, the integrated result of functioning of which allows to optimally cover the needs of the Armed Forces of Ukraine. An effective system of logistic support to the Armed Forces of Ukraine should be integrated with the relevant systems of other components of the defense forces and be able to work effectively with the armed forces of the NATO nations and the members of the European Union. All efforts of the military command and civilian bodies of state power should be aimed at meeting the needs of the troops during the operation (combat operations). The unified command of the processes of accumulation, storage and supply of materials should be the expected results.

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