Kyiv National University of Trade and Economics
Department of International Economic Relations

FINAL QUALIFYING PAPER
on the topic:
"FORMATION OF THE LOGISTIC SYSTEM OF THE ENTERPRISE - SUBJECT OF FEA"

(based on the data of "ZAMMLER UKRAINE" LLC, Kyiv)

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CONTENT

INTRODUCTION

Relevance of the research topic. The management of enterprises in modern conditions can not occur without the use of a logistic approach. In the sectors of the national economy, prospects for successful development are only in those enterprises that form and implement in their practical activities known as logistics systems.

In this context, the definition of the place of logistics systems in the management of domestic enterprises for the purpose of effective and efficient organization of material and information flows is very relevant. In today's conditions, it is very important to study the supply of resources, control materials and finished products, and improve the systems of material and technical and information support of enterprises based on the logistic approach.

This approach to enterprise management is based on the formation and implementation of activities based on the use of various micro-logistic systems, modern foreign concepts - Just-in-time, Kanban, and MRP for planning and controlling flow processes. They are based on an understanding of the fact that for any enterprise, the question of profitability is the central issue as a result of the best satisfaction of consumers' needs. At the same time, the main attention is directed to the client, the consumer and his requests are executed in the shortest possible time and with minimal expenses for the enterprise.

Despite the large number of research and publications on the formation and use of logistics systems in the management of the enterprise, the question of their use remains controversial. This problem has been highlighted in the writings of foreign scientists: D. Bowersox, Johnson JS, Wood D. F., Wardlove D. L., Murphy-Mol. P. R., Waters D., Michael R. Lynders, Harold E. Firone, M. Christopher, G. Sommerera, as well as in the writings of Russian researchers: A. A. Kolobov, L. B. Mirotin, V. I. Sergeeva, AA Smekhova, I. E. Tishbayeva. During the last decades, the work of domestic scientists has also appeared, in which modern problems of logistics are explored: O. Burdyak, E. Kricavsky, K. Kovtun, R. Larina, V. Nikolaichuk, M. Oklander, G. Plakhuta, B. Plotkina, V. Smirichynsky, O. Tridida and others. At the same time, a considerable

number of issues related to transport cargo-unloading works, economic-mathematical modeling to determine the efficiency of logistics flows, the use of logistics systems in the management of material and information flows is insufficient. The lack of scientific and methodological support for the use of logistics systems in enterprise management, the need to properly address the above issues and expand the range of scientific research in this area determined the relevance of the topic, identified its purpose, objectives and expected practical results.

The purpose and tasks of the study. The purpose of the work is to develop theoretical foundations and practical recommendations for the use of logistics systems in the management of the enterprise.

Achievement of the set purpose has necessitated the following tasks:

- to investigate the essence of the formation of the logistics system of the enterprise;
- to identify the features of the logistics system of enterprise development;
- characterize methodological approaches to assessing the effectiveness of the logistics system of the enterprise;
- to carry out an analysis of the general characteristics of the activity of LLC "Zammler Ukraine";
- to analyze the foreign economic activity of the enterprise;
- evaluate the existing logistics system of LLC “Zammler Ukraine”;
- to determine the need to improve the logistics system of the enterprise of foreign economic activity;
- to establish activity on optimization of logistics system of LLC "Zammler Ukraine"
- to determine the forecast changes in the economic activity of the enterprise on the basis of the proposed measures.

The object of research is the process of managing the logistics system of the enterprise.

The subject of the study is a set of theoretical and methodological principles and practical recommendations for managing the logistics system of the enterprise.

Methods of research: work is carried out using general scientific methods - observation, comparison, abstraction, combination of analysis and synthesis, induction and deduction, historical and logical approach (in the study of the structure and dynamics of export operations and trends of their development), as well as special methods - generalization, graphic, medium-sized, economic-mathematical.

The information base of the study is international and national laws and regulations regulating the procedure for the implementation of foreign economic transactions, scientific works of domestic and foreign scientists on these issues, statistical information, periodical literature, internal documentation of the research object and practical data.

The practical significance of the results of this study is that the recommendations and proposals developed to improve the management of the logistics system developed in the work can be implemented into the economic activity of enterprises. Their use will enable to optimize the indicators of the efficiency of foreign economic activity and increase the competitive advantages of the enterprise.

The structure of the thesis. The work consists of an introduction, 3 chapters, conclusions, a list of references and appendices. The volume of work is 102 pages, including 57 tables, 8 figures. The list of sources used contains 104 titles.

PART 1. THEORETICAL BASES OF FORMING OF LOGISTIC SYSTEM OF ENTERPRISE - SUBJECT OF FOREIGN ECONOMIC ACTIVITY

1.1. The essence of forming a logistics system of an enterprise

One of the basic concepts of logistics is the notion of logistics system. Different types of systems ensure the functioning of the economic mechanism. Among them, logistics should be distinguished. The concept of a logistics system must be separated from the general concept. Therefore, it is worth defining the general concept of the system, and then determine which systems belong to the group of logistics. L. Balabanova points out that the object should have six qualities (Table 1.1) so that it could be considered a system.

Table 1.1

Properties of logistics systems [7, p. 320]

№	Properties of logistics systems	Characteristic
1	2	3
1	Integral set of elements	Allocate the following elements of logistics systems: procurement, warehouses, stocks, transport, information, frames, sales. Elements of logistics systems are varied, but simultaneously compatible. Compatibility is ensured by the unity of purpose for which the operation of logistical systems is subordinated.
2	Significant connections between the elements of the logistics system	Between the elements of the logistics system there are significant links that, with a logical necessity, determine the integrational qualities of the system.
3	Ordered Links The	Links between the elements of the logistics system are in a certain order, that is, the logistics system has an organization.
4	Integration qualities The	Logistics system has integrative qualities that are not inherent in any of the elements individually. This is the ability to put the desired product in the right place of the required quality with minimal cost, as well as the ability to adapt to changing environment conditions.
5	Complexity of the logistics system	The complexity of the logistics system is characterized by such basic features as the presence of a large number of elements (links); the complex nature of the interaction between individual elements; the complexity of functions performed by the system; the presence of difficultly organized management; acting on a system of a large number of stochastic factors in the environment.

Continuation of table 1.1.

1	2	3
6	Hierarchy	The subordination of elements of the lower level (order, rank) to the elements of the highest level in terms of linear or functional logistic control.

The world practice of creating logistics management systems has revealed that the logistic principles of management of the production and operation of the enterprise - the subject of foreign economic activity in modern conditions can be regarded as one of the important main directions of the normalization of the enterprise - the subject of foreign economic activity to strengthen the modes of saving labor, money and energy resources, improving the efficiency of management at different levels, providing the right amount of consumer goods.

The system of logistics includes material means that provide the movement of goods in the logistic chain (warehouses, loading and unloading mechanisms, vehicles), production stocks and means of management of all links in the chain. Logistic system is an adaptive feedback system that performs certain logistic functions and operations. It usually consists of several subsystems and has developed connections with the external environment.

Under the logistics system is understood organizational and managerial coordination mechanism, which enables to achieve the effect due to the clear coherence in the actions of specialists of various services involved in the management of material flow [9, p. 241].

The purpose of the logistics system is to deliver, at a given location, the required quantity and range of goods and products prepared as a maximum to production or personal consumption at a given level of expenses. Along with functional subsystems, which includes procurement, production, distribution, logistics system, and providing subsystems (for example, information, legal, personnel, etc.).

The purpose of logistics - delivery of goods "just in time" (exactly in time) with minimal costs of labor and material resources. Deliveries of materials, raw materials, finished goods in the exact time period have a positive effect on the operation of the

whole logistics system, which allows to significantly reduce stocks in warehouses of production enterprises. Logistics works fully on the consumer. Therefore, it is believed that the implementation of sales functions in the field of logistics is carried out through compliance with six conditions: the availability of cargo, its quality, quantity, time of delivery, costs and destination. To achieve this, efficient logistic systems optimize material flows, facilitate the implementation of a set of measures related to the rationalization of packaging and packaging, the unification of cargo units, including packaging and containerization of transportation, establishing an efficient storage system, optimizing the number of orders and inventory levels, planning the most profitable routes for moving goods at warehouse facilities of enterprises and beyond their borders on the main transport. The basis of the construction and operation of the logistics system is the implementation of the principle of a system approach, which manifests itself primarily in the integration and clarity of the interaction of all elements of the logistics system. This principle is reflected in the development and implementation of a single technological process of the production and transport system, in the transition from certain types of equipment to the creation of production and warehouse and production and transport systems [16, p. 171].

Logistic functional systems can be classified in groups (Table 1.2.).

Table 1.2

Groups and types of logistic functional systems

No.	Identification of classification of the logistic functional systems	Group of logistic functional systems
1	Depending on the logistics chain	- direct, - flexible - echeloned
2	Depending on the scope	- material and technical provision - production, marketing
3	Depending on the presentation of materials to the place of production	- pushing - pulling

Source: [23, p. 195].

Depending on the type of logistics chains, logistic systems are divided into systems with direct links, flexible and echeloned.

Flexible logistical system (flexible logistical system) - a system in which the flow of material flow to the consumer is carried out both in direct communication, and with the participation of intermediaries. An example of the considered system can be the supply of spare parts, when the shipment of parts of episodic demand is often carried out directly from the central warehouse and sent to the address of the recipient, and the shipment of parts of standard and increased demand - from the intermediary.

Flexible logistic systems can be used in extreme and usual conditions.

In extraordinary circumstances, mechanisms of initial flexibility should apply in the event that scheduled logistics procedures do not work. For example, when a warehouse that needs to execute an order is not able to do so. In order not to break the supply, they turn to a larger warehouse where the necessary products are available.

Logistics system with direct links (direct logistical system) - a system in which the material flow is brought to the consumer without the participation of intermediaries on the basis of direct business relationships. Echelon logistical system (echelon logistical system) is a system whose peculiarity consists in the fact that the material flow on the way from the manufacturer to the consumer passes through at least one intermediary.

In direct logistics systems, as a rule, accelerated means of transportation, together with information technologies, are used to quickly process customer orders, as well as to shorten delivery times and to a large extent compensate for the geographical disarray of suppliers and consumers.

However, the possibilities of direct systems are limited by large transport costs.

The pushing logistic system involves the delivery of materials to the processing site in accordance with the approved schedule, and in the case of a dragged logistics system, the materials to the place of processing are received in accordance with the orders of these units. That is, when in the first case they are pushed to production sites, then in the second - the materials are extracted by the production units themselves.

In recent years, the western market for transport and warehouse services was characterized by a tendency of increasing the requirements for the completeness and quality of such services. This, in turn, creates the preconditions for the creation of

complex logistics systems that cover many functional tasks. The list of such tasks in a market economy is shown in Fig. 1.1.

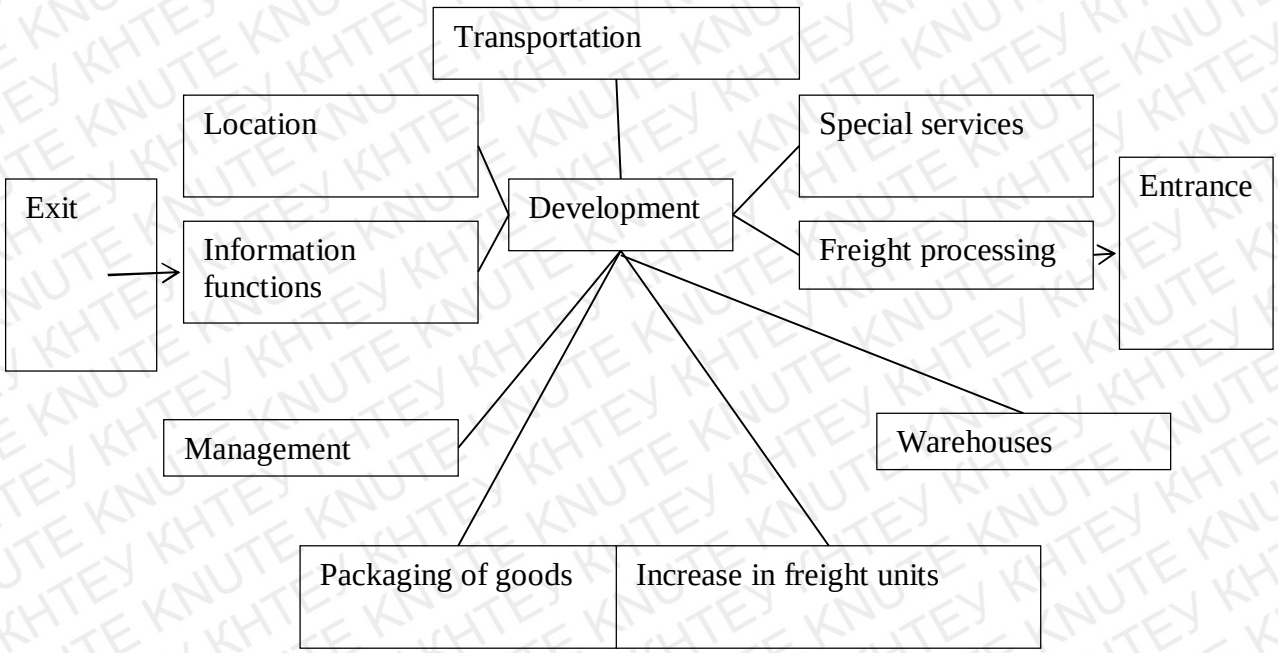

Fig. 1.1. The main tasks of logistics systems [24, p. 271]

In the performance of the functions listed above, an important role is played by indicators characterizing the processes under consideration. Some of these indicators are typical for domestic practice, and some new ones, therefore, deserve special attention. But they are all fairly general. There are a number of indicators used by the logistics service to solve specific tasks. For example, when choosing logistics systems, indicators are used that give a qualitative assessment of the entire system.

A number of these criteria are based on the selection of the type of logistics system, its strength and technical equipment. The most important of the above criteria is reliability. To summarize, the task of any logistics system is to ensure timely, reliable, minimally costly delivery to the destination of the necessary goods intact. The choice of the type of logistics system depends on the complex of functions that it performs, and a number of criteria that characterize them.

The boundaries of the logistic system are determined by the cycle of revolution of means of production. Initially, they purchase equipment. They are in the form of a material flow entering the logistics system, stored, processed, re-stored, and then

transferred from the logistics system into consumption in exchange for financial resources coming to the logistics system.

Detection of the limits of the logistics system on the basis of the cycle of turnover of means of production was called "the principle of payment of money - the receipt of money".

For a stable functioning of the system, the prioritization of production, sales and distribution planning is of primary importance. Moreover, the preference is given to strategic planning over operational. In order to achieve the high reliability of such a plan, it is necessary to study the dynamics of the external environment, first of all, the market, to identify possible situations and receive strategic answers to the questions that arise in this regard. Strategic planning, according to Western experts, is a reliable tool in the struggle of firms with their competitors, which uses the practice of military strategy, because the market situation is seen as a battlefield.The scientific forecast, which is the basis of strategic planning, uses historical data, extrapolation methods. However, such models are used to the extent that they correspond to the logic of technical progress and future transformations in the economy. Logistics also applies the principle that strategic planning is geared more towards goals than processes, based on the fact that creativity is impossible without innovations. It should be noted that logistics is a unique sphere of creative activity aimed at strategic orientation. However, the process of planning does not end with the development of a firm's behavior strategy in terms of logistics. Strategic planning generates a chain of technical plans, when goals and actions are identified in operational situations for each day [28, p. 198].

In order to determine the most optimal logistics system of the enterprise - the subject of foreign economic activity, it is necessary to develop its project. Three stages of the logistics system project should be indicated: problem identification, planning of solutions and development of proposals for project creation.

Planning of the logistics system of the enterprise - the subject of foreign economic activity should begin with a comprehensive assessment of the current situation. The aim is to understand the external environment, process and characteristics of the existing system, as well as to determine what changes are needed. This can be

provided by conducting a situational analysis, which allowsto study the internal structure of the logistics system, to assess the market and competitive environment. The entire logistical process and each logistical function separately are subject of the study. The content of the study depends on the depth of analysis required.

One of the indicators of the real effectiveness of the selected logistics system of the enterprise - the subject of foreign economic activity can be its stability, that is, the observance of accepted standards of service. These include parameters, threshold level of service in the system with minimal cost.

The threshold level of service, provided by the logistics system with minimal overall costs, sets the basis for assessing the service capabilities of the logistics system. The basic capabilities of the system may be changed in several ways:

1) by changing the number of syllables that the system uses;

2) changing the time of one or more functional cycles to increase the speed or stability of operations;

3) change in the policy of formation of reserves [30, p. 238].

Analyzing the project of the logistics system of the enterprise - the subject of foreign economic activity, determine, firstly, sufficient or insufficient reserves of improvement of logistics, which would justify detailed research and analysis. Secondly, the conceptual design of the project requires a thorough study of the facts, which helps to objectively and critically look at the existing methods of work. Thirdly, in the process of creating a conceptual scheme of the project, it is necessary to clearly identify possible options for the restructuring of the logistics system.

The process of planning a logistics project of an enterprise - a subject of foreign economic activity involves the definition of goals and constraints, the development of standards for the assessment of results, the choice of technology analysis, drafting of the project. Determining the purpose means fixing possible when converting logistics cost system and service level. In this case, it is necessary to outline the segments of the market or industry, the time limits for achieving results, specific parameters of activity, which, as a rule, are characteristics of the level of service.

Analyzing such issues as the structure of orders and their change, the organization of obtaining orders, types of information flows, types of material and transport flows, processing and storage of goods, etc should also be refered to this stage. The main thing in internal analysis is the manifestation of spheres in which significant improvement is possible.

The analysis of external factors is aimed at identifying trends in market demand and customer service needs. The main task of market evaluation is to recreate perceptions and to predict the range of consumers. To do this, it is worth conducting a customer survey or a detailed study of consumer opinion.

An important part of the analysis is technological research that helps to assess the existing and potential capabilities of technology used in all areas of logistics, including transportation, warehousing, cargo processing, planning and information support. For example, how will the intermediaries use the new technology of cargo handling on the efficiency of logistics.The tasks of technological research - the manifestation of promising directions for improving the technological process of logistics [35, p. 178].

When forecasting the technological process, it analyzes the technologies used by competitors, taking into account the processing of orders, the planning of material requirements. Particular attention is paid to technologies of cargo handling and transportation.

In operational plans, management efforts focus on actions, for example, on sales and distribution processes. In logistics, preference is given not to the economy, but to the region. Territorial specialization and rationalization are of particular importance for small and medium-sized enterprises with small cyclical flows of goods of a wide range. In connection with this, for the maintenance of material flows it is expedient to create regional distribution warehouse centers. High efficiency and stability of logistic systems can be achieved only with the use of modern technical means. The technical basis for optimal management of information flows of logistics systems is a multilevel ACS. Therefore, an essential condition for the high efficiency of logistics systems is an organic combination of logistics with cybernetics.

Thus, the logistics system includes materials that provide the movement of goods in the logistic chain (warehouses, loading and unloading mechanisms, vehicles), production stocks and means of management of all links in the chain. Under the logistics system it is understood organizational and managerial coordination mechanism, which allows to achieve an increase in the efficiency of transportation due to a clear coherence in the actions of specialists of various services involved in the management of material flow. The purpose of the logistics system is to deliver the required quantity and range of goods and products to a given place.

1.2. Features of the logistic system of enterprise development

The effectiveness of the organization of logistics in the enterprise depends on the formation of the logistics system of the enterprise - the subject of foreign economic activity. The logistics system is an important element in the organization of the enterprise. Its application allows to integrate various processes of the enterprise and organize internal processes with minimal expenses at optimal adaptation of the internal environment of the firm to the external factors influencing its activity.

The process of forming an enterprise logistics system is complicated, so it is advisable to divide it into several stages:

Stage 1 - Defining the main aspects of logistics system formation;

Stage 2 - Consideration of the main factors in the formation of the logistics system;

Stage 3 - Formation of the logistics system of the enterprise - the subject of foreign economic activity [50, p. 320].

At the first stage, the process of forming the logistics system of an enterprise, a subject of foreign economic activity, should be considered from several points of view, in particular, to take into account such spheres of influence as represented in Fig. 1.2.

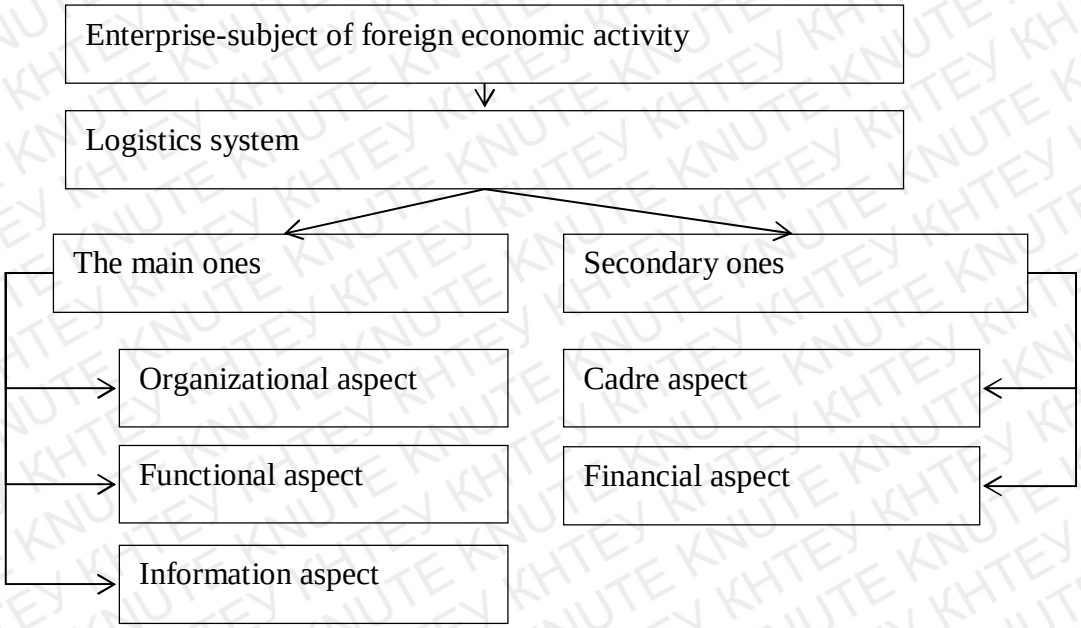

Fig. 1.2. Aspects of the formation of the logistics system of the enterprise - the subject of foreign economic activity [51, p. 15]

In our opinion, to form the system of logistics of the enterprise - the subject of foreign economic activity is necessary in terms of the main and secondary groups of factors.

The main aspects should include: organizational, functional, informational factors.

To the secondary group of factors: the formation of the logistics system of the enterprise - the subject of foreign economic activity it is appropriate to include personnel and financial factors.

Taking into account all the above-mentioned aspects the formation of the logistics system of the enterprise will ensure the versatility of logistics and confirm its universality as a science in practice. The result of this approach will be the flexibility, mobility of the system, and most importantly, its successful functioning in the future.

The basis of the second stage is to take into account the main factors in the formation of the logistics system. It is proposed to use a system of factors for the formation of the logistics system of the enterprise, which is shown in Fig. 1.3.

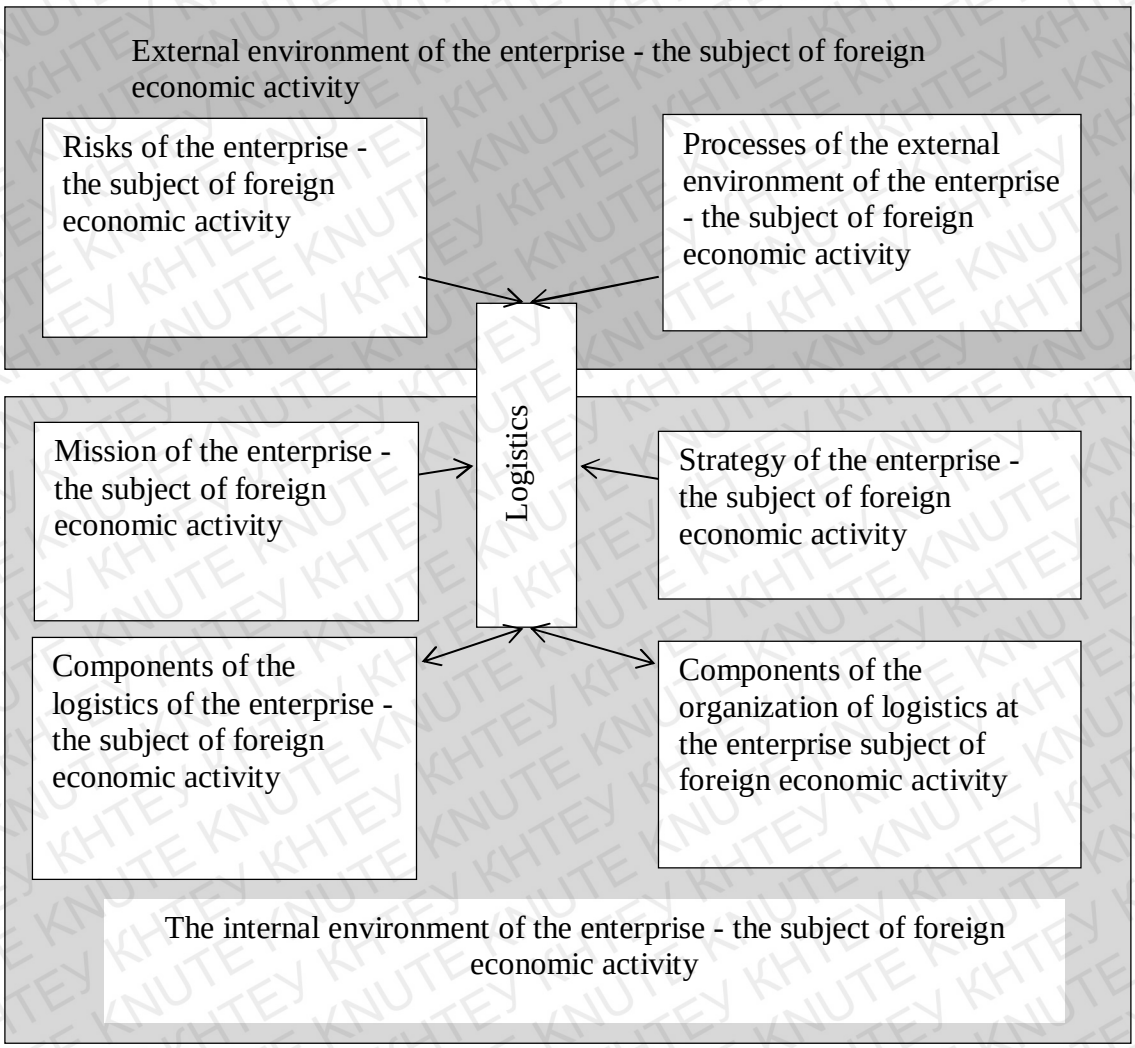

Fig. 1.3. Factors of logistic system formation of the enterprise [55, p. 73]

As can be seen from Fig. 1.3, the main factors in the formation of the enterprise logistics system should be: the mission of the enterprise; enterprise strategy; business risks; environmental factors of the enterprise; components of the logistics operation at the enterprise; constituent organizations of logistics at the enterprise.

On the formation of the logistics system, the mission of the company has a significant impact. There must be a clear relationship between these elements. The logistics system should be formed in the same direction with the mission and objectives of the enterprise. It will help to:

1. specifically and accurately calculate the efficiency of the operation of the enterprise;

2. identify actions and decisions that impede effective economic activity;

3. ensure implementation of mutually assertive (synergistic) functions of the logistics system;

4. provide a correction of the logistics system's operation in time, since all mission objectives of the enterprise have a short, medium or long term forecasting period [53, p. 111].

The strategy of the enterprise - the subject of foreign economic activity is related to the activities of the enterprise as a whole and is aimed at fulfilling its main mission. In the process of its implementation, material, labor, information, financial resources are used. Therefore, the connection of processes of formation and operation of the logistics system with the strategy of the enterprise is obvious.

The main components of the operation of logistics should be considered in the context of its main functions: supply, production, marketing, sales, warehousing, transport, personnel.

Supply ensures the flow of material flows into the logistics system. Production is a process aimed at transforming raw materials into finished products. It includes the management of material flows at the production stage. Stocks allow to optimize the functioning of the entire system and play an important role in the stages of exchange between supply, production, transportation and sales. Marketing is the identification of the requirements and preferences of consumers. In other words, this process can be characterized as market research. Sales are processes aimed at bringing finished products to consumers. Warehouses - these are special buildings and appliances, which are intended for the reception, placement, maintenance and storage of raw materials and finished products. Transport means vehicles and material and technical base, through which the transport processes within the framework of the "producer-consumer" system are implemented. Personnel is a well-organized staff who manages logistics, logistics operations and implements logistic tasks to achieve logistic goals.

All components of the logistics operation are one of the factors in the formation of the logistics system of the enterprise. The material flow passes through each of the

listed functional logistics components. During this process, the material flow is gradually transformed at different stages of its movement under the influence of other logistic flows and functions. All processes occurring in these components should be logically structured, and the basis of their functioning should be the maximum interaction between themselves and other factors of the formation of the logistics system. The sphere of interaction should be logistics at the enterprise-subject of foreign economic activity. This principle of operation will ensure efficient management of logistics flows at any stage of their movement in any functional area of logistics.

Another factor in the formation of the logistics system is the components of the organization of logistics in the enterprise - the subject of foreign economic activity, which includes the logistics information system and management (Figure 1.4).

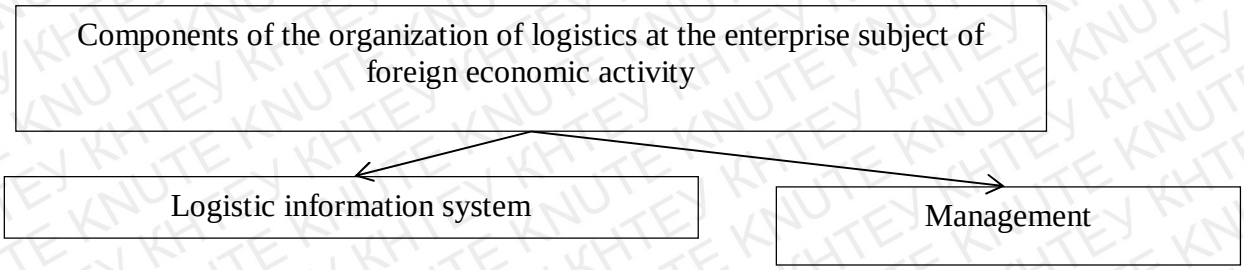

Fig. 1.4. Components of logistics organizations at the enterprise-subject of foreign economic activity [57, p. 156]

Commercial processes of a modern enterprise - a subject of foreign economic activity is difficult to imagine without computer technology and other information, electronic, technical means. In logistics it is known that from all logistic flows the information stream is the basis of the processes of transforming all other logistics flows. Therefore, the formation of a logistics system without a logistics information system is ineffective.

Managing the logistics system, like any other economic system, should be based on well-known basic principles of management in the economy. It is expedient to apply the main functions of management to manage the logistics system of the enterprise - the subject of foreign economic activity and the organization of its main processes.

The mission of the enterprise, the strategy of the enterprise, the components of the operation of logistics and the components of the organization of logistics at the

enterprise are factors of the internal environment of the formation of the logistics system of the enterprise - the subject of foreign economic activity and the enterprise, as a rule, can affect their flow. In our opinion, the factors of the formation of the logistics system of the enterprise related to the external environment should include the logistics risks of the enterprise and processes in the external environment of the enterprise that affect its activities. These factors can not affect the enterprise, but they directly or indirectly determine its activities [56, p. 227].

The processes of the enterprise's environment that affect its activities can be divided into two categories, namely, processes of direct influence and processes of indirect influence, which in turn are divided into groups.

The processes of direct influence include consumers, suppliers, intermediaries, competitors, contact audiences, and other market players. The processes of indirect influence - economic, political, law-making, science-creating, demographic, socio-cultural, technological and technological, natural resource and ecological processes. The magnitude of the influence of a factor is determined depending on the conditions of the activity of a particular enterprise: its fields of activity, magnitude, location, scale of action, etc.

The logistics system, in the course of its operation, falls under the influence of certain risks, which can change the worst side of its final result. Therefore, when forming a logistics system to avoid unforeseen circumstances, this must be taken into account.

The final stage of the formation of the enterprise logistics system - the subject of foreign economic activity is the formation of the system. In order for the logistics system to function effectively, the process of its formation should be based on the system approach, taking into account the above-described aspects and factors of its formation. The system approach is based on the principle of a consistent transition from general to partial. Such an approach to the formation of the system will ensure smoothness and non-conflict transition from one functional area of logistics to the next [58, p. 119].

The structural and organizational model of logistics system formation includes a large list of structural units of the enterprise and structural units of the market functioning, which in this case are its elements or subsystems. It is advisable to include the structural units of the enterprise: the supply department; marketing department; sales department; wholesale warehouse or distribution center; transportation department; logistics department.

To the structural units of the functioning of the market it is necessary to include:

- producers;
- intermediaries;
- transport and forwarding organizations;
- other companies;
- consumers

In practical activity, the integration of these elements form the logistics system of the enterprise - the subject of foreign economic activity. Each element has its own structure and acts in accordance with its organizational principles. The interconnection of all elements is close and inverse, which causes complexity in the isolation of each of the structures separately. Such an approach to the formation of the logistics system of the enterprise - the subject of foreign economic activity provides its flexibility. Flexibility of the enterprise logistics system - the subject of foreign economic activity is determined by its ability to respond promptly to changes in the micro and macro environment.Formation of the enterprise logistics system - the subject of foreign economic activity should be carried out at the expense of coherence and synchronization of functional areas of logistics: supply, production, marketing, transport, warehouse economy and external factors influencing the activity of the enterprise. Ignoring some factors will lead to conflicts of functional areas of the system, negative consequences in the planning process, forecasting.

The essence of the structural and organizational model of the logistics system is to orient the development of the enterprise - the subject of foreign economic activity in those areas that correspond to its interests and opportunities of organizational and

economic development, increase of efficiency of activity and competitiveness through formation of economic potential.

Thus, the formation of the enterprise logistics system will ensure a smooth transition from one internal production process to the next, it is a universal tool for increasing competitiveness, which can eliminate the obstacles to the formation of an internal commodity-information financial system for a specific enterprise - the subject of foreign economic activity and optimally adapt her to external macroeconomic systems. Due to the formation of the logistics system of the enterprise - the subject of foreign economic activity, the quality and productivity of labor of the workers increases, which indicates the motivational properties of logistics for the personnel. The operation of the logistics system allows you to combine all internal processes of the enterprise into a single whole, coordinate their activities for optimization and conflict them with the processes occurring in the external environment in order to maximize profits.

1.3 Methodological approaches to the assessment of the efficiency of the formation of the logistics system of the enterprise

Logistics operations, as a rule, are considered in two areas: in management and technology. The organization of the management of the implementation of contractual (contractual) conditions of foreign economic operations, the conclusion of agreements, promotion of financial flows, goods and raw materials, ensuring the sale of goods in the customs territory are the organizational management, and the technology of customs clearance, transport services, warehouse services, information support and optimization of costs ensuring the effective functioning of these areas of foreign economic activity - to technological management.

The central place among many logistic procedures for making transport decisions is the selection procedure for the carrier. Often this procedure rests with the logistics manager of the forwarding company, with whom the cargo owner has a long-standing business relationship. In this case, the freight forwarder is asked certain characteristics of the cargo, criteria and restrictions [98, p. 106].

In cases where the logistics manager independently solves the problem of choosing a carrier, it must be based on a defined selection scheme. If a type of transport is defined, then an analysis of a specific market for transport services should be conducted, which, as a rule, has a fairly large number of carriers with different organizational and legal forms. The motor transport market is developing especially dynamically and dynamically in Ukraine. The main criteria for the preliminary selection of carriers are the costs of cargo transportation, the reliability of the time of delivery, the safety of the cargo during transportation. O. B. Bila Tserkivsky notes that when selecting a carrier, specially designed ranks of indicators are often used (Table 1.3).

Table 1.3

Main criteria for selecting a carrier

Content of the criterion	Rank
Reliability of delivery time	1
Costs (tariffs) for transportation	2
Total delivery time	3
Readiness (flexibility) of the carrier to changes in tariffs	4
Financial stability of the carrier	5
Availability of additional cargo handling equipment	6
Availability of additional services for assembly and delivery	7
Preservation of cargo (loss, theft)	8
Forwarding	9
Personnel qualifications	10
Monitoring	11
Readiness (flexibility) of carrier to service changes	12
Flexibility of routes	13
Batching of gray axis	14
Order procedure	15
Quality of organization of sales of transport services	16
Special equipment	17

Source: [61, p. 110].

In this section a brief description of some criteria is represented, as well as the criterion, by which they will be measured.

The cost of services. This indicator is one of the main indicators by which most consumers make their choice. This, of course, is due to the fact that, in conditions of firm competition, each firm seeks ways to minimize its costs, so that the product that it will offer the buyer could compete with other similar products.

$$C = * , \quad (1.1)$$

where C - cost of transportation, UAH;

D - distance of transportation, km;

p - price of kilometer of transportation UAH / km [58, p. 228]

*Time of cargo movement.*This criterion, along with the cost of services, is almost always taken into account by consumers in deciding on the choice of carrier. This is due to the fact that most contracts stipulate terms of delivery of goods that must be clearly executed. In addition, many cargoes have a limited shelf life. Therefore, the seller must strive to accurately observe delivery terms in order to prevent losses and possible conflicts with the buyer.

A criterion in this case is the time of the journey of one car as the weighted average for each company. The indicator will be determined by the formula:

$$= / + / , \quad (1.2)$$

where ts - time of car riding, h .;

Du - distance of trip in the usual mode, km;

Dl - the path on which the car moves at a limited speed, in km;

Su - speed of the car in the usual mode, km / h.;

Sr - speed at areas with restrictions, km / h.

*Modernity of the motor transport park.*This indicator is not always taken into account by consumers, but from our point of view the modernity of the motor transport park is far from the last role in ensuring the delivery of the goods in proper condition within the specified time. It can be noted that often the most obsolete equipment in cars, as well as the very motor vehicle fleet operated for a very long period, can cause accidents, and therefore damage or loss of cargo. Although for automobiles, as well as for any other technology, there are certain established standards for the time of their operation, we will assume that the older the cars of the company, the less attractive this company for the company.

The criterion indicator is the age of cars, which is determined on average by company according to the formula:

$$B = \frac{\sum_{p=1}^{p}}{N}, \quad (1.3)$$

where Ap - age of the p-th car, years;

N - the number of cars in the company, pcs [60, p. 132].

Quality of services provided. This indicator should be taken into account when dealing with any issues related to the choice of one or another service, because the desire for low prices can very often result to significant losses in quality and losses associated with payment of penalties. Most firms put this parameter at first place, because the quality of the services provided is related to the credibility of the firm's customers. When choosing a transport company, the quality of services can not be ignored, because it characterized the transport process and it is necessary to pay increased attention to ensuring the safety of the cargo, its transport properties, the integrity of the package. In contracts, as a rule, it is also discussed the possibility of making a claim to the buyer in the event of non-compliance with the quality of the loaded specification.

Reliability of arrival time. This is an indicator that characterizes the company concerning delivery terms. Minimum delivery times, which will be determined by the flight time, are not yet a guarantee that they will be fulfilled. Therefore, it is worth paying attention to the reliability of the time of arrival. The choice of this criterion is also related to the fact that in the contracts of sale a penalty of 0,3% of the value of unloaded cargo for each day of delay, which will be obliged to pay the seller to the buyer.

Efficiency of activity. This indicator is not directly related to the conclusion of the contract of carriage and the requirements put forward by the consumer to the carrier, but it affects the decision making and this influence is strong enough. These findings are related to the fact that the high efficiency of the company's activities for consumers, its services can be an additional incentive to choose this company. Consumers tend to choose the company that works more efficiently, while the low level of this indicator will force managers to think over why this company does not increase the efficiency of

its work and whether it is worth trusting companies that are not too well organized in their activities.

As a criterion of the efficiency of the company's activity we will consider the profitability, calculated by the formula:

$$P = (-)/ * 100\%, \quad (1.4)$$

where *P* - profitability of the company,%;

I - enterprise income from foreign economic activity, ths. UAH;

E - expenses of the enterprise for foreign economic activities, ths. UAH. [99, p. 113].

Financial independence. This criterion characterizes the firm's dependence on external loans. It also does not directly affect the carriage, but attracts the attention of the consumer, because the more loans the company has, the higher the risk of insolvency. A company that is financially more dependent than others has less confidence in the consumer. Financial independence speaks of possibilities of stable work of the company in various crisis situations when it is necessary to repay loans.

Criterion indicator of financial independence is the coefficient of autonomy, which can be calculated by the formula:

$$= / , \quad (1.5)$$

where Cae - coefficient of autonomy of the enterprise, times;

P - payables, ths. UAH;

Of - own funds of the enterprise, ths.UAH [62, p. 305].

Experience. This indicator is ambiguous, because the experience does not always indicate the best work of the company, young promising companies can work much more efficiently then those who have already established their position on the market. However, experience shows that companies with a long experience of work know better the market, more firmly hold that segment and can offer the customer the best options for service delivery. Based on this situation, we take work experience as one of the criteria for choosing a carrier.

The experience of work is expressed by the criterion indicator - the market time, which is known in advance, based on information about the work of companies.

Production capacity. This criterion gives an idea of how big the company with which the consumer will work. Today, the situation is the following: the larger companies are more stable, less dependent on the ever-changing market situation and, most attractive to the consumer, can offer more favorable terms of the transaction. In addition, motor transport companies with large production facilities, in case of emergency, can reorient the free cars that they have, to the area of work where their availability may be useful.

Production capacity is estimated on the total tonnage owned by the company. This criterion is calculated by the formula:

$$= \sum_{m\ 1}^{m} (\quad * \quad), (1.6)$$

where PC - production capacity;

Nc - number of cars, units;

Lc - load-carrying capacity of the car, tone.

Popularity. This is a criterion that very often plays an important role in choosing not only the carrier, but also any services and goods. Most consumers are inclined to choose what goods they know and enjoy the majority. Undoubtedly, unknown, poorly advertised producers can produce the best goods, but many will treat them with distrust [67, p. 100].

Measuring the popularity of a company is quantitatively difficult. A criterion indicator will serve the consumer score.

The calculation of the carrier's rating for each factor is based on weighting factors derived from the calculation of the total number of factors divided by the corresponding rank.

The simplest algorithm for choosing a carrier, similar to the one discussed above, can be used for preliminary estimation.

In the analysis of the carrier, it is equally important to take into account the forwarder, who, for a fee and at the expense of the consignor or the consignee, undertakes to execute or arrange the performance of the specified services:

1. organization of transportation on the route;

2. conclusion of a contract of carriage;
3. provision of the sending and receiving of cargo;
4. receipt and registration of documents for export of import of cargoes;
5. execution of customs clearing and other formalities;
6. control over the condition and quantity of cargo;
7. control of loading and unloading works;
8. payment of duties, fees and other transportation costs;
9. control over preservation, storage, sorting, complete set of cargoes;
10. provision of information, insurance and the like [95, p. 119].

Thus, when choosing a carrier, specially designed ranking system indicators are often used: reliability of delivery time, costs (tariffs) for transportation, total delivery time, readiness (flexibility) of the carrier to changes in tariffs, financial stability of the carrier, availability of additional cargo handling equipment, availability of additional services on assembly and delivery, storage of cargo (loss, theft), forwarding, personnel qualification, monitoring, readiness (flexibility) of the carrier to changes in the service, g uchkist routes packet service, procurement procedures, quality sales organization of transportation services, special equipment.

CONCLUSIONS TO PART 1

The logistics system includes material resources that provide the movement of goods along the logistic chain (warehouses, loading and unloading mechanisms, vehicles), production stocks and management tools of all links in the chain. Under the logistics system is understood organizational and managerial coordination mechanism, which enables to achieve the effect due to clear coherence in the actions of specialists of various services involved in the management of material flow. The purpose of the logistics system is to deliver, at a given location, the required quantity and range of goods and products prepared as a maximum to production or personal consumption at a given level of expenses.

The formation of the enterprise logistics system will ensure a smooth transition from one internal production process to the next, it is a universal instrument for increasing competitiveness, which can eliminate obstacles to the formation of an internal commodity-information financial system for a specific enterprise - a subject of foreign economic activity and optimally adapt it to external macroeconomic systems. Due to the formation of the logistics system of the enterprise - the subject of foreign economic activity, the quality and productivity of labor of the workers increases, which indicates the motivational properties of logistics for the personnel. The operation of the logistics system allows to combine all internal processes of the enterprise into a single whole, coordinate their activities for optimization and conflict them with the processes occurring in the external environment in order to maximize profits.

When choosing a carrier, specially designed ranks of indicators are often used: reliability of delivery time, costs (tariffs) for transportation, total delivery time, readiness (flexibility) of the carrier to changes in tariffs, financial stability of the carrier, availability of additional cargo handling equipment, availability of additional services for the assembly and delivery, storage of cargo (loss, theft), forwarding, personnel qualification, monitoring, readiness (flexibility) of the carrier to service changes, flexibility of mar rutiv, batch service, procurement procedures, quality sales organization of transportation services, special equipment.

PART 2. ANALYSIS OF THE LOGISTIC SYSTEM OF LLC “ZAMMLER UKRAINE”

2.1. General characteristics of LLC «Zammler Ukraine»

ZAMMLER UKRAINE GROUP is an international group of logistics companies that provides services in the field of automobile, marine and air transportation, customs brokerage, as well as a full range of warehouse services. ZAMMLER UKRAINE - Ukrainian 3PL operator. The group of companies includes 6 companies, represented by 8 offices. Representative offices of ZAMMLER UKRAINE GROUP are located in Ukraine, Poland and China. The first company of the group "ZAMMER UKRAINE" LLC was founded in 2007, the central office is located in the city of Kiev (Ukraine).

ZAMMLER UKRAINE GROUP - Ukrainian logistics company, which was the first among the Ukrainian 3PL operators to open its representative offices in international markets.

Companies in ZAMMLER UKRAINE Group provide a full range of services for the transportation of goods of any complexity in the main areas of Europe, Asia and America, as well as warehouse, logistics, customs brokerage and export-import services:

- air freight;
- container shipping;
- carriage of goods (regional and international);
- transportation of dangerous and oversized cargo;
- consolidation of cargoes;
- towing and forwarding in ports;
- certification and insurance;
- brokerage services;
- search for manufacturers in target markets;
- organization of business tours;
- inspection of the manufacturer;
- customs brokerage services;

- warehouse storage;
- Export-Import Services (NVOCC Statutory Carrier in China).

The results of the horizontal analysis of resources of LLC "ZAMMLER UKRAINE" in 2013 - 2017 are presented in the table. 2.1.

Table 2.1

Horizontal analysis of assets of LLC "ZAMMLER UKRAINE" in 2013 - 2017, ths. UAH.

Indicators	As of 31.12					Absolute deviation, ths. UAH			
	2013	2014	2015	2016	2017	2014/ 2013	2015/ 2014	2016/ 2015	2017/ 2016
I. Non-current assets									
Incomplete capital investments			14,10			0,00	14,10	-14,10	0,00
Fixed assets	401,70	382,50	410,80	1525,60	2047,20	- 19.20	28.30	1114.80	521.60
initial value	1788.30	1386.60	1414.90	2940.80	3462.40	-401.70	28.30	1525.90	521.60
depreciation	1386.60	1004.10	1004,10	1415,20	1415,20	-382,50	0,00	411,10	0,00
Long-term financial investments:									
accounted for using the equity method of other enterprises	5957,00	5228,00	6998,60	8178,00	5180,30	- 729.00	1770.60	1179.40	-2997.7
Total for Section I	**6358.70**	**5610.50**	**7423.50**	**9703.60**	**7227.50**	**-748.20**	**1813.00**	**2280.10**	**-2476.1**
II. Current assets									
Stocks	8293,50	7277,60	3346,90	1939,20	4873,30	- 1015,90	- 3930,70	-1407,7	2934,10
Accounts receivable for products, goods, works, services	12246,3	12638,8	12570 , 4	12761,1	12530,20	392,50	-68,40	190,70	-230,90
Accounts receivable by calculation:									
with the budget	70,30	152,70	98,60	0,10		82,40	-54,10	-98 , 50	-0,10
Other current receivables	1670,00	2041,00	1792,30	1760,50	1639,90	371,00	-248,70	-31,80	-1,20,60
Cash andequivalents	cash206 3,50	1938,10	2161.00	1730.10	2051.70	-125.40	222.90	-430.90	321.60
Other current assets	21.70	15.20	16.80	17.40	18.30	-6.50	1.60	0, 60	0.90
Total for Section II	**24365.3**	**24063.4**	**19986.0**	**18208.4**	**20113.4**	**-301.90**	**-4077.4**	**-1777.6**	**2905.0**
III. Non-current assets held for sale and disposal groups									
Balance	**30724.0**	**29673,9**	**27409,5**	**27912,0**	**28340,90**	**-1050,1**	**-2264,4**	**502,50**	**428,90**

Source: conducted by the author on the basis of the enterprise data.

Thus, according to Table. 2.1, one can conclude that the value of non-current assets in 2016 compared to 2015 has increased by 2280.10 thousand UAH, in 2017

compared to 2016 it decreased by 2,476.10 thousand UAH. by reducing long-term financial investment.

The value of current assets in 2016 compared to 2015 decreased by 1777.6 thousand UAH. %, due to a decrease in the balance of stocks, in 2017 compared to 2016 increased by 2905 thousand UAH. % due to increase of stock balance.

The results of the horizontal analysis of sources of resource generation in 2013 - 2017 are presented in Table. 2.2.

Table 2.2

Horizontal analysis of the sources of assets formation of LLC "ZAMMLER UKRAINE" in 2013 - 2017, ths. UAH.

Indicators	As of 31.12					Absolute deviation, ths. UAH			
	2013	2014	2015	2016	2017	2014/ 2013	2015/ 2014	2016/ 2015	2017/ 2016
I. Equity									
Registered capital	7716,60	7716,60	7716,60	7716,60	7716,60	0,00	0,00	0,00	0,00
Retained earnings (uncovered loss)	-1920,6	-4031,80	-3301,60	-1714,20	-1009,30	-2111,2	730,20	1587,40	704,90
Total for Section I	**5796,00**	**3684,80**	**4415,00**	**6002,40**	**6707,30**	**-2111.2**	**730.20**	**1587.40**	**704.90**
III. Current liabilities and provision									
Current payables for:									
goods, works, services	16920,9	17538,2	16753,0	12073,8	11920,7	617,30	-785,20	-4679,2	-153,1
calculations with budget	10 , 10	30.00	11.40	134.80	187.60	19.90	-18.60	123,40	52,80
payments	2.30	3.00	3.50	3.90	4.20	0.70	0, 50	0.40	0,30
payroll calculations	1.10	2.70	1.00	0.00	0.00	1.60	-1.70	-1.00	0.00
Other current liabilities	7993.60	8415, 20	6225,60	9697,10	9521,10	421,60	-2189,6	3471,50	-176,0
Total according to Section III	**24928,0**	**25989,1**	**22994,5**	**21909,6**	**21633,6**	**1061,10**	**-2994,6**	**-1084.9**	**-276.0**
IV. Liabilities related to non-current assets held for sale and disposal groups									
Balance	**30,724.0**	**29673,9**	**27409,5**	**27912,0**	**28340,9**	**-1050,1**	**-2264,4**	**502,50**	**428,90**

Source: conducted by the author on the basis of the enterprise data.

Consequently, according to Tabl. 2.2, it can be concluded that the amount of equity capital increased in 2016 compared to 2015 by UAH 1587,40 thousand, due to the reduction of the uncovered loss, in 2017 compared with 2016 it increased by UAH 704,90 thousand. by reducing unpaid capital.

Long-term liabilities and provisions during the period of 2013-2017 were not observed at the enterprise.

The amount of current liabilities and provisions in 2016 compared to 2015 decreased by UAH 1084.9 thousand, due to a decrease in current payables for goods, works and services, in 2017, compared with 2016, it decreased by UAH 276 thousand. by reducing other current liabilities.

The results of the vertical analysis of ZAMMLER UKRAINE LLC resources in 2013-2017 are presented in Table. 2.3.

Table 2.3

Vertical analysis of assets LLC «ZAMMLER UKRAINE» in 2013 - 2017, %

Indicator	As of 31.12					Deviation			
	2013	2014	2015	2016	2017	2014/ 2013	2015/ 2014	2016/ 2015	2017/ 2016
I. Fixed assets									
under capital investments	0.00	0.00	0 , 05	0,00	0,00	0,00	0,05	-0,05	0,00
Fixed assets	1,31	1,29	1,50	5,47	7,22	-0,02	0,21	3,77	1, 76
initial cost	5.82	4.67	5.16	10.54	12.22	-1.15	0.49	5.37	1.68
depreciation	4.51	3.38	3.66	5.07	4.99	-1,13	0.28	1.41	-0.08
Long-term financial investments:									
accounted for using the equity method of other enterprises	19.39	17.62	25.53	29.30	18.28	-1.77	7.92	3.77	-11.02
Total for Section I	**20.70**	**18.91**	**27.08**	**34.76**	**25.50**	**-1.79**	**8.18**	**7.68**	**-9.26**
II. Current assets									
Inventories	26.99	24.53	12.21	6.95	17.20	-2.47	-12.31	-5.26	10.25
Accounts receivable for products, goods, works and services	39.86	42.59	45 86	45.72	44.21	2.73	3.27	-0.14	-1.51
Receivables calculations,									
the budget	0,23	0,51	0,36	0,00	0,00	0,29	-0, 15	-0.36	0.00
Other current receivables	5.44	6.88	6.54	6.31	5.79	1.44	-0.34	-0.23	-0.52
Money and cash equivalents	6.72	653	7.88	6.20	7.24	-0.18	1.35	-1.69	1.04
Other current assets	0.07	0.05	0.06	0.06	0.06	-0.02	0.01	0,00	0,00
Total section II	**79,30**	**81,09**	**72,92**	**65,24**	**74,50**	**1,79**	**-8,18**	**-7,68**	**9,26**
Non-current assets held for sale and retirement groups									
Balance	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**0,00**	**0,00**	**0,00**	**0,00**

Source: conducted by the author on the basis of the enterprise data.

Thus, the largest share in the assets of the company in 2013 - 2017 The fixed assets occupy current assets at the level of 62.54 - 81.09%, the largest share in non-current assets was long-term financial investments at the level of 17.62% - 29.30%, the largest share in current assets took receivables for goods and services at the level of 39.86% - 45.86%.

The results of the vertical analysis of sources of resource generation by LLC ZAMMLER UKRAINE in 2013-2017 are presented in Table. 2.4.

Table 2.4

The vertical analysis of sources of formation resources LLC «ZAMMLER UKRAINE» in 2013 - 2017 years,%

Indicator	On 31.12					Deviation			
	2013	2014	2015	2016	2017	2014/ 2013	2015/ 2014	2016/ 2015	2017/ 2016
I. Equity									
The registered capital	25.12	26 00	28.15	27.65	27.23	0.89	2.15	-0.51	-0.42
Retained earnings (uncovered loss)	-6.25	-13.59	-12.05	-6.14	-3.56	-7.34	1.54	5.90	2.58
Total for Section I	**18.86**	**12.42**	**16.11**	**21.50**	**23.67**	**-6.45**	**3.69**	**5.40**	**2.16**
III. Current liabilitiesand provision									
Current payables for:									
goods, work, services	55.07	59.10	61.12	43.26	42.06	4.03	2.02	-17.86	-1.19
calculations with the budget	0.03	0.10	0,04	0,48	0,66	0,07	-0,06	0,44	0,18
insurance calculations	0,01	0,01	0,01	0,01	0,01	0,00	0,00	0,00	0 00
estimated to pay	0.00	0.01	0.00	0.00	0.00	0.01	-0.01	0.00	0.00
Other current liabilities	26.02	28.36	22.71	34 74	33.59	2.34	-5.65	12.03	-1.15
Total according to Section III	**81.14**	**87.58**	**83.89**	**78.50**	**76.33**	**6.45**	**-3.69**	**-5.40**	**-2.16**
IVth. Liabilities related to non-current assets held for sale and disposal groups									
Balance	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**0,00**	**0,00**	**0,00**	**0,00**

Source: conducted by the author on the basis of the enterprise data.

Thus, the most significant weight in the sources of the company's assets formation in 2013-2017 is current liabilities which collateral at the level of 76.33% - 87.58 %%, with the highest share in equity capital holding the authorized capital at the level of 25.12% - 28, 15 %%, the current portion of current liabilities and provisions was at the current level of 42.06%, 61.12%, of goods, work and services.

The estimation of income, expenses and profit for LLC "ZAMMLER UKRAINE" in 2013 - 2017 is presented in the table. 2.5.

Table 2.5

Estimation of income, expenses and profit for LLC ZAMMLER UKRAINE in 2013 - 2017, ths. UAH.

Indicator	For the year					Relative deviation,%			
	2013	2014	2015	2016	2017	2014/ 2013	2015/ 2014	2016/ 2015	2017/ 2016
Net income from sales of products (goods and services)	14930.4	14278.5	15735.9	22126.0	25197.4	-4.37	10.21	40.61	13.88
Cost of products (goods and services)	4,510.60	4,317.70	5,792.70	8,130.70	10,505.30	-4.28	34.16	40.36	29.21
Gross profit	**10,419.8**	**9960 80**	**9,943.20**	**13,995.3**	**14,692.10**	**-4.41**	**-0.18**	**40.75**	**4.98**
Other operating income	5,480.10	5,521.10	5,987.70	2,623.10	3,801.50	0.75	8.45	- 56,19	44,92
Other operating expenses	14731,6	14280,3	14986,6	15346,4	15742,10	-3,06	4,95	2,40	2,58
Financial result of operating activities	**1168,30**	**1201,60**	**944, 30**	**1272.00**	**2751.50**	**2.85**	**-21.41**	**34.70**	**116.3**
Other income	156.70	20.20	41.30	664.00	851.6 0	-87.1	104.4	1507.7	28.25
Other expenses	5.20	6.90	5.80	0.00	0.00	32.69	-15.94	-100.00	-
Financial result before tax	**1319.80**	**1214,90**	**979,80**	**1936,00**	**3603,10**	**-7,95**	**-19,35**	**97,59**	**86,11**
Income tax expense (income)	237,60	218,70	176,70	348,70	648,60	- 7.95	-19.20	97.34	86.01
Net financial result	**1082.20**	**996.20**	**803.10**	**1587.30**	**2954.50**	**-7.95**	**-19.38**	**97.65**	**86.13**

Source: conducted by the author on the basis of the enterprise data.

So, with the table. 2.5, it can be concluded that net income in 2016 compared with 2015 increased by 40.61%, in 2017, compared to 2016, it increased by 13.88%. Net profit in 2016 compared to 2015 increased by 97.65%, in 2017, compared to 2016, it increased by 86.13%.

Profitability is defined as the ability to achieve profit by using various resources. Profitability indicators form one group of financial analysis, which are used to evaluate profitability and efficiency of the company management, i.e. the company's ability to produce maximum output (i.e. margin or profit), ideally with minimal inputs.

The results of the profitability analysis of "ZAMMLER UKRAINE" LLC in 2013-2017 are summarized in Table. 2.6.

According to the Table. 2.6, the profitability of assets during 2013-2017 has increased, in 2016 compared to 2015 it has increased by 3%, in 2017 compared to 2016 it increased by 5%.

Table 2.6

Analysis of profitability evaluation indicators of "ZAMMLER UKRAINE" LLC. in 2013 - 2017

Indicators	Formula	Years					Growth rate, %		Absolute deviation, to the previous year	
		2013	2014	2015	2016	2017	2016	2017	2016	2017
Return on assets	Net profit / Average assets	0.04	0.03	0.029	0.057	0.104	94.2	83.3	0.03	0.05
Profitability coefficient equity	Net profit / Average equity	0.19	0.21	0.182	0.264	0.440	45.4	66.6	0.08	0.18
Profitability coefficient	(Financial results of operating activities + Other operating expenses - Other operations no revenue) / (Cost + Administrative expenses + Sales costs)	2.31	2.31	1.72	1.72	1.40	0.3	-18.7	0.00	-0.32

Source: conducted by the author on the basis of the enterprise data.

The return on equity expanded during 2013-2017, in 2016 compared to 2015 it increased by 8%; in 2017 it grew by 18% compared to 2016.

The profitability of the operation during 2013-2017 has increased, in 2016 compared to 2015 it has increased by 2%, in 2017 compared to 2016 it increased by 5%.

The profitability of products during 2013-2017 has decreased, in 2016, compared to 2015, it did not change, in 2017, compared with 2016, it decreased by 32%.

Calculation of indicators of business activity of LLC "ZAMMLER UKRAINE" in 2013 - 2017 is summarized in the table. 2.7.

Table 2.7

Analysis of "ZAMMLER UKRAINE" LLC business activity indicators in 2013-2017

Indexes	Years					Chain growth rate %		Absolute deviation to the previous year	
	2013	2014	2015	2016	2017	2016	2017	2016	2017
Turnover rate of accounts receivable	1,07	0,97	1,09	1,52	1,78	40,02	16,71	0,44	0,25
Period of turnover of accounts receivable, days	340,21	375,26	335,44	239,56	205,26	-28,58	-14,32	-95,88	-34,29
Turnover rate of accounts payable	0,18	0,17	0,25	0,37	0,49	47,31	30,85	0,12	0,11
Period of turnover payable, days	2017,19	2197,01	1448,89	983,56	751,65	-32,12	-23,58	-465,33	-231,91
Coefficient of inventory turnover	0,54	0,59	1,73	4,19	2,16	142,25	-48,59	2,46	-2,04
Period of inventory turnover, days	671,11	615,22	210,89	87,05	169,32	-58,72	94,50	-123,84	82,27
Ratio of assets turnover	0,49	0,48	0,57	0,79	0,89	38,08	12,16	0,22	0,10
Ratio of own capital turnover	2,58	3,87	3,56	3,69	3,76	3,42	1,91	0,12	0,07

Source: conducted by the author on the basis of the enterprise data.

Based on the calculations 2.7, it can be concluded that:

- the return on capital in 2016 compared with 2015 it decreased by 3.60 thousand UAH. / ths. UAH, in 2017 compared with 2016 it decreased by UAH 0.25. / UAH;
- the turnover rate of accounts receivable in 2016 compared to 2015 is increased by 0,44 times, in 2017 compared with 2016 increased by 0,25 times;
- the period of turnover of accounts receivable in 2016 compared with 2015 decreased by 96 days, in 2017 compared with 2016 decreased by 34

days;

- the change in the turnover rate of payables tends to increase in 2016 compared with 2015 by 0.12 times, in 2017, compared to 2016, it increased by 0,11 times;
- the period of turnover of accounts payable tends to decrease in 2016 compared with 2015 for 465 days, in 2017 compared with 2016 it decreased by 231 days;
- the turnover of stocks increased in 2016 compared to 2015 by 2.46 times, in 2017, compared with 2016, it decreased by 2.04 times;
- the period of turnover of stocks in 2016 compared with 2015 decreased by 124 days, in 2017, compared with 2016 increased 82 days;
- the turnover of assets in 2016 compared to 2015 increased by 0.22 times, in 2017, compared with 2016, it increased by 0.10 times;
- the turnover of equity in 2016 compared to 2015 increased by 0.12 times, in 2017, compared with 2016, increased by 0.07 times.

The results of calculating financial stability indicators of LLC "ZAMMLER UKRAINE" in 2013 - 2017 are presented in the table. 2.8.

Table 2.8

Analysis of financial sustainability indicators of ZAMMLER UKRAINE LLC in 2013 - 2017

Indicators	Formula	On 31.12					Chain growth rate,%		Absolute deviation, to the previous year	
		2013	2014	2015	2016	2017	2016	2017	2016	2017
Solvency ratio (autonomy)	Equity / Capital	0.19	0.12	0.16	0.22	0.24	33.51	10.05	0 , 05	0.02
Financing ratio	Loan capital/ equity	4.30	7.05	5.21	3.65	3.23	-29.92	-11.64	-1.56	-0.42
Ratio of its own working methods	(Current assets - current liabilities) / assetsCurrent	-0.02	-0.08	-0.15	-0.20	-0.02	35.04	-87.88	-0.05	0.18
Maneuverability ratio of equity	(Negotiable assets - current liabilities) /equity	-0.10	-0.52	-0.68	-0.62	-0.08	-9.51	-87.42	0.06	0.54

Source: conducted by the author on the basis of the enterprise data.

Financial autonomy in 2015 was 16%, in 2016 it was 22%, in 2017 it was 24%, which indicates that the financing of the enterprise at the expense of its own funds was not at the proper level, which is negative in the activity of the enterprise .

The type of current financial solvency of LLC "ZAMMLER UKRAINE" in 2013 - 2017 is presented in the table. 2.9.

Table 2.9

Type of current financial solvency of LLC “ZAMMLER UKRAINE” in 2013 - 2017

Indicators	2013	2014	2015	2016	2017
Stocks, ths. UAH.	8293.5	7277.6	3346.9	1939.2	4873.3
Normal sources of stock financing, ths. UAH	-562.7	-1,925.7	-3,008.5	-3,701.2	-520.2
Type of current financial stability	3 – financial not stable	3 – financial not stable	3 – financial not stable	3 – financial not stable	3 – financial not stable

Source: conducted by the author on the basis of the enterprise data.

Financial in 2013 - 2017, the company “ZAMMLER UKRAINE” LLC had a fragile financial condition. The results of calculation of liquidity and solvency of LLC ZAMMLER UKRAINE in 2013-2017 are systematized in the table. 2.10.

Table 2.10

Analysis of liquidity and solvency of LLC "ZAMMLER UKRAINE" in 2013 - 2017

Indicators	On 31.12					Chain growth rate, %		Absolute deviation, to the previous year	
	2013	2014	2015	2016	2017	2016	2017	2016	2017
Coverage ratio	0,98	0,93	0,87	0,83	0,98	-4,38	17,43	-0,04	0 ,14
Quick liquidity ratio	0,64	0,65	0,72	0,74	0,75	2,62	1,09	0,02	0,01
Absolute liquidity ratio	0,08	0,07	0,09	0,08	0,09	-15,98	20,10	-0, 02	0,02
Net working capital	-562,7	-1925,7	-3008,5	-3701,2	-520,2	23,02	-85,95	-692,70	3181,0

Source: conducted by the author on the basis of the enterprise data.

With the help of its liquid assets, the company is able to pay off its current liabilities by 87% in 2015, by 83% in 2016, by 98% in 2017.

With its fast liquid assets, the company is able to pay off its current liabilities by 72% in 2015, by 74% in 2016, by 75% in 2017.

With the help of its most liquid assets, the company is able to pay off its current liabilities by 9% in 2015, by 8% in 2016, by 9% in 2017.

Net working capital in 2015 is -3008 thousand UAH, in 2016 -3701 thousand UAH, in 2017 -520 thousand UAH, which is evidenced by the excess of current assets over current liabilities in 2013-2017.

2.2 Analysis of foreign economic activity of LLC «Zammler Ukraine»

Dynamics structure of net income LLC «Zammler Ukraine» in general and in particular of FEA in 2013 - 2017 are given in Table. 2.11.

Table 2.11.

Dynamics of the net income structure of LLC “Zammler Ukraine” in 2013 - 2017.

Indicator	Years					Chain growth rate, %		Absolute deviation to the previous year	
	2013	2014	2015	2016	2017	2016	2017	2016	2017
Net income, ths UAH	14930,4	14278,5	15735,9	22126,0	25197.4	40.6	13.9	6390.1	3071,4
Net income from foreign trade, ths UAH	12707,26	12707.26	12011.07	13874.34	18395.56	32.6	18.2	4521.2	3342.2
Share of net income from FEA to net income, %	85.11	84.12	88.17	83.14	86.3	-5.7	3.8	-5.0	3.1
Net income from internal displacement, ths UAH	2223.14	2267.43	1861.56	3730,44	3459.6	100.4	-7.3	1868.9	-270.8
Share of net income from internal movement in net income, %	14.89	15.88	11.83	16.86	13.7	42.5	-18.6	5.0	-3.1

Source: compiled and calculated by the author according to LLC "Zammler Ukraine"

Based on the table. 2.11, it can be concluded that net income from foreign economic activity in the company grew over 2013-2017, in 2016, compared to 2015, it increased by 32.6%, in 2017, compared to 2016, it increased by 18, 2%.

The share of net income from foreign direct investment in net income is within the range of 83.14% - 88.17% during 2013-2017, which indicates the direction of the enterprise to foreign economic activity.

The geographic structure of foreign economic operations of LLC "Zammler Ukraine" in 2013 - 2017 is shown in the table. 2.12.

Table 2.12

Dynamics of geographic structure of foreign economic operations of LLC Zammler Ukraine in 2013 - 2017

	2013	2014	2015	2016	2017	Chain growth rate,%		Absolute deviation, to the previous year	
Country	thousand UAH.					2016	2017	2016	2017
Foreign trade, incl.	12707.3	12011.1	13874.3	18395.6	21737.8	32.6	18.2	4521.2	3342.2
Russia	1906.1	1741.6	1803.7	919.8	239.1	-49.0	-74,0	-883.9	-680.7
Belarus	1172.9	1094.2	1325.0	1875.5	2431.4	41.5	29.6	550.5	555.9
United Kingdom	1,099.2	1,025.7	1,201.5	1,710.2	2,226.3	42.3	30.2	508.6	516.1
Germany	921.3	868.4	1,001.7	1,442.6	1,894.3	44.0	31.3	440.9	451.7
Poland	808.2	762.7	878.2	1,277.3	1,689.1	45.4	32.2	399.0	411.9
Moldova	810.7	759.1	894.9	1,299.6	1,716.8	45.2	32.1	404.7	417.2
Georgia	768.8	721.9	847.7	1,236.4	1,638.4	45.8	32.5	388.7	402.0
Latvia	782.8	745.9	846.3	1,234.5	1,636.1	45.9	32.5	388 2	401.6
Lithuania	654.4	616.2	718.7	1,063.6	1,424.0	48.0	33.9	344.9	360.4
Estonia	658.2	625.8	709.0	1,050.6	1,407.9	48 2	34.0	341.6	357.3
Kazakhstan	280.8	278.7	323.3	534.1	767.0	65.2	43.6	210.8	232.9
Other	2,843.9	2,771.0	3,324.3	4751, 5	4667,3	42,9	-1,8	1427	-84,2

Source: compiled and calculated by the author according to LLC "Zammler Ukraine"

The largest volume of foreign economic operations Zammler Ukraine LLC has been operating with counterparties from Russia, Belarus and the United Kingdom. In 2015, the volume of operations with residents of Russia amounted to 1803 thousand UAH, since 2016 began a recession, in 2017 - the decline to 239 thousand UAH.

In 2015, the volume of operations with residents of Belarus amounted to 1325 thousand UAH, in 2017, 2431 thousand UAH. The role of Great Britain in 2017 has significantly increased by 2226 thousand UAH. against 1099 thousand UAH in 2019 The most rapidly growing volume of operations with counterparties from the respective countries in 2013, which is due to the revival of economic relations at the exit from the global economic crisis.

The geographic structure of foreign economic operations of LLC Zammler Ukraine is given in the table. 2.13.

Table 2.13

Geographical structure of foreign economic operations of LLC “Zammler Ukraine” in 2013 - 2017

	2013	2014	2015	2016	2017	Chain growth rate, %		Absolute deviation to the previous year	
Country	%					2016	2017	2016	2017
Russia	15	14,5	13,0	5,00	1,10	-61,5	-78,0	-8,0	-3,9
Belarus	9,23	9,11	9,55	10,2	11,19	6,8	9,7	0,6	1,0
United Kingdom	8,65	8.54	8.66	9.30	10.24	7.4	10.2	0.6	0.9
Germany	7.25	7.23	7.22	7.84	8.71	8.6	11.1	0.6	0 , 9
Poland	6.36	6.35	6.33	6.94	7.77	9.7	11.9	0.6	0.8
Moldavia	6.38	6.32	6.45	7.06	7.90	9.5	11 , 8	0.6	0.8
Georgia	6.05	6.01	6.11	6.72	7.54	10.0	12.1	0.6	0.8
Latvia	6.16	6.21	6.10	6.71	7,53	10.0	12.2	0.6	0.8
Lithuania	5.15	5.13	5.18	5.78	6.55	11.6	13.3	0.6	0.8
Estonia	5.18	5.21	5 , 11	5.71	6.48	11.8	13.4	0.6	0.8
Kazakhstan	2.21	2.32	2.33	2.90	3.53	24.6	21 5	0.6	0.6
Other	22.38	23.07	23.96	25.83	21.47	7.8	-16.9	1.9	-4.4

Source: compiled and calculated according to the author of LLC «Zammler Ukraine "

The largest share of net income from foreign economic activity of the company in 2013 - 2017 was formed by operations with Russia, Byelorussia and Great Britain. According to their share, respectively, 15%, 9.23% and 8.65% in 2013, 1.1%, 11.19% and 10.24%in 2017.

The structure of the foreign economic operations of LLC “Zammler Ukraine” in 2013 - 2017 is shown in the table. 2.14.

Table 2.14

Dynamics of FEA by type of foreign economic operations of “Zammler Ukraine” LLC in 2013 - 2017

Index	2013	2014	2015	2016	2017	Chain growth rate,%		Absolute deviation to the previous year	
			thousand UAH			2016	2017	2016	2017
Integrated cargo	2325.43	2234.06	2566.75	3458.36	4108.44	34.74	18.80	891.6	650.1
Ordinary cargo	3087.87	2930.70	3357.59	4249.37	5260.55	26,56	23,80	891,8	1011.2
Cargoes with valuable things	2223,77	2186,02	2663,87	3164,04	3825,85	18,78	20,92	500,2	661,8
Cargo with special temperature regime	2363, 55	2089,93	2372,51	3568,74	4238,87	50,42	18,78	1196,2	670,1
Clothing and textiles	2706,65	2570,37	2913,61	3955,04	4304,08	35,74	8,83	1041 4	349.0
Total FEA	12,707.26	12,011.07	13,874.34	18,395.56	21,737.80	32.59	18.17	4521.2	3342.2

Source: compiled and calculated according to the author of LLC «Zammler Ukraine»

Basing on Tabl. 2.14, we can conclude that the largest amount of net income from FEA of LLC "Zammler Ukraine" will be obtained from the carriage of ordinary goods 3087 thousand UAH in 2013 and UAH 5260 thousand in 2017. The structure of the net income received from foreign economic operations of LLC “Zammler Ukraine” by type of services rendered in 2013-2017 is shown in Fig. 2.1.

The largest share of net income from foreign economic activity of the enterprise is observed in the transportation of ordinary cargoes in 2015 - 24,20 %, in 2016 - 23,10%, in 2017 - 24,20%.

ЗАПОВНИТИ ТЕКСТОМ

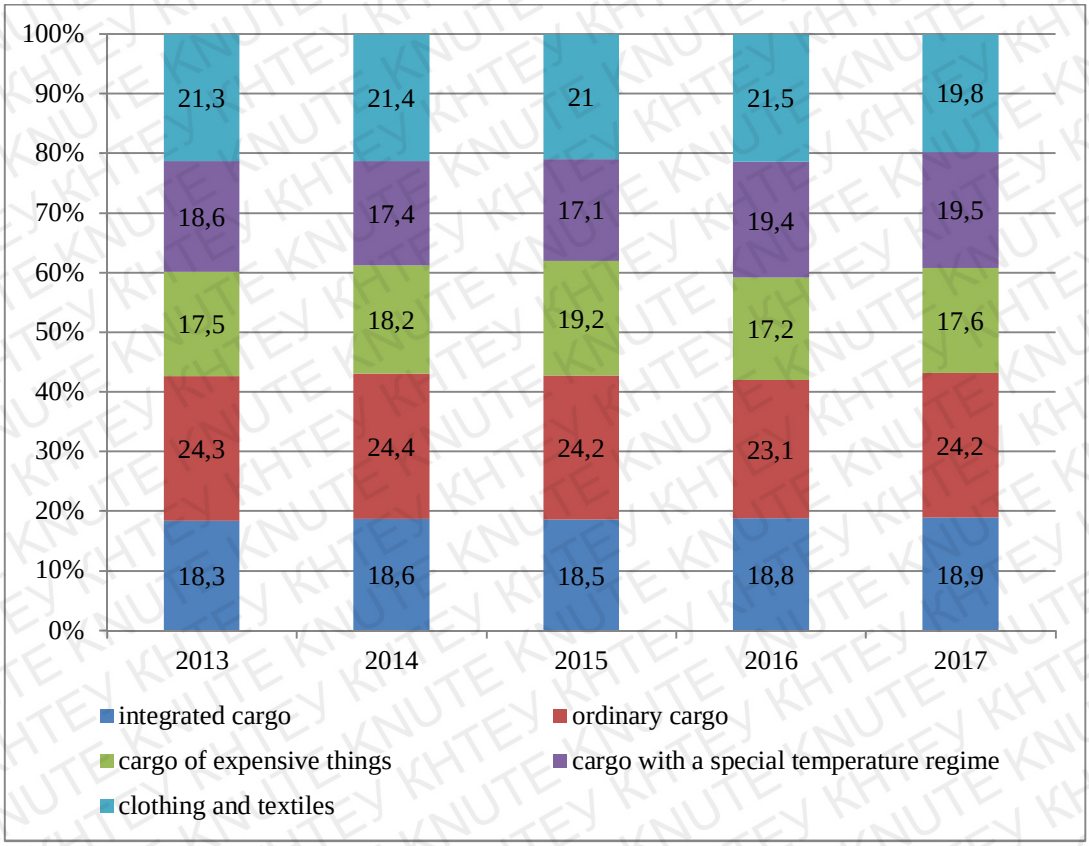

Fig. 2.1. Commodity structure of goods in the implementation of foreign trade transport of LLC “Zammler Ukraine” in 2013 – 2017, %

Source: constructed by the author according to LLC Zammler Ukraine

The estimation of the contribution of net income from foreign economic activity to the net profit of the enterprise of LLC "Zammler Ukraine" in 2013 - 2017 is shown in the table. 2.15.

Table 2.15.

Dynamics of the efficiency of international transport services of “Zammler Ukraine” LLC in 2013 – 2017

Indicator	2013	2014	2015	2016	2017	Chain growth rate,%		Absolute deviation to the previous year	
						2016	2017	2016	2017
1	2	3	4	5	6	7	8	9	10
Net income from international logistics services, incl.	12707.26	12011.07	13874.34	18395.56	21737.80	32.59	18.17	4521.21	3342.24
Full costs for providing international logistics services	11727.52	11102.60	12789.13	16850.30	20152.79	31.75	19.60	4061.17	3302.48

Continuation of table 2.15.

1	2	3	4	5	6	7	8	9	10
Effect, ths UAH	979.75	908.47	1085.21	1545.25	1585.01	42.39	2.57	460,04	39,76
Efficiency	1.08	1.08	1.08	1.09	1.08	0.63	-1.20	0.01	-0.01

Source: compiled and calculated according to the author of LLC «Zammler Ukraine».

Consequently, the effect of foreign economic activity increased over the period from 2013 to 2017 by 606 thousand UAH and efficiency has increased by 0.01 times, which indicates on improvement of foreign economic activity at the enterprise.

Distribution of net income from foreign economic activity for ABC - the method is shown in Fig. 2.2. The essence of this method is to identify and evaluate a small number of quantitative values that are most valuable and have the largest share in the aggregate of cost indicators.

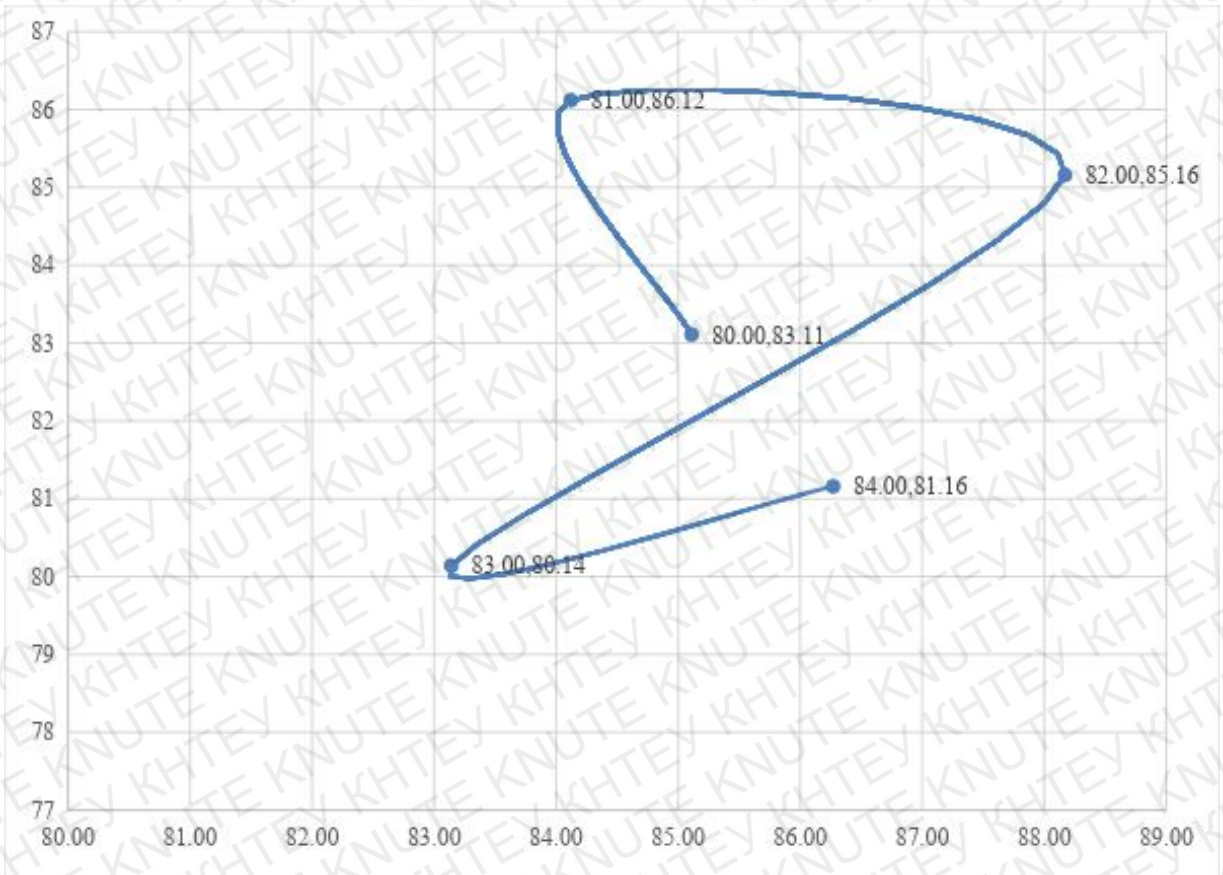

Fig. 2.2. Distribution of net income from foreign trade activity of Zammler Ukraine LLC for ABC-method

Source: conducted by the author according to LLC Zammler Ukraine.

Basing on Figure. 2.2, we see that with an increase in the share of international transport services in the total number of operations of the company, the share of net income from foreign economic activity in net income is increasing. The largest share in net income and in the number of transactions for international transport services is observed in 2015.

Another tool for analyzing the results of foreign economic activity is the XYZ analysis method that evaluates the stability of certain objects or processes.

The distribution of international transport services of Zammler Ukraine LLC by the ABC and XYZ method in 2013 - 2017 is shown in the table. 2.16.

Table 2.16

MatrixResults distribution of international transport services

LLC «Zammler Ukraine» Techniques ABC and XYZ in 2013 - 2017 rr.

Average international transport services for XYZ - method of	distribution of international transport services for ABC - method			
		A	B	C
	H	Transportation conventional cargo	transportation of ready made garments and textiles	-
	Y	Transportation of cargoes requiring special temperature regime of storage and transportation	Transportation of complete cargoes	-
	Z	-	Transportation of goods with valuable things	-

Source: compiled by the author.

Transportation of ordinary goods - the most expensive and valuable services, the demand for which is uniform or may slightly fluctuate. The carriage of ready-made clothing and textiles is an average service cost, the demand for which is uniform, or may vary slightly. Transportation of goods requiring a special temperature regime of storage and transportation - the most expensive services and services that are consumed in volatile volumes. Carriage of complete cargoes is the average cost of services and services that are consumed in volatile volumes. Transportation of goods with valuable things – the average service cost and the demand that occurs only occasionally, there are no trends.

Net income and full expenses for foreign economic activity according to the geographic structure of foreign economic activity in 2013 - 2017 are presented in Table. 2.17.

Table 2.17.

Total expenses for foreign economic activity
of "Zammler Ukraine" LLC according to the geographical structure in 2013-2017

Indicator	2013	2014	2015	2016	2017	Chain growth rate, %		Absolute deviation to the previous year	
						2016	2017	2016	2017
Total costs for the provision of international logistics services, incl.	**11727.52**	**11102.60**	**12789.13**	**16850.30**	**20152.79**	**31.75**	**19.60**	4061.17	3302.48
Russia	1837.05	1681.23	1767.59	870.11	231.94	-50.77	-73,34	-897.48	-638.17
Belarus	1120.75	1046.79	1258.75	1800.50	2334.18	43.04	29.64	541.75	533.68
United Kingdom	1029.56	964.20	1117.41	1607.55	2114.95	43.86	31.56	490.14	507.40
Germany	846.55	796.03	911.57	1341.63	1723.81	47.18	28.49	430.06	382.18
Poland	751.61	709.31	825.55	1,175.08	1,570.89	42.34	33.68	349.53	395.81
Moldova	774.69	726.21	859.10	1,234.58	1,648.12	43.71	33.50	375.48	413.54
Georgia	703.87	661.71	771.43	1,137.47	1,507.34	47.45	32.52	366.05	369.87
Latvia	738.41	701.13	804.02	1,160.45	1,521.58	44.33	31.12	356 44	361.12
Lithuania	615.89	581.25	668.38	1,010.41	1,352.82	51.17	33.89	342.03	342.40
Estonia	608.50	577.80	652.26	977.05	1295.25	49, 79	32,57	324,79	318,20
Kazakhstan	258,05	255,44	294,18	496,69	697,98	68,84	40,53	202,52	201,29
Other	2442,58	2401,49	2858,89	4038 ,77	4153.93	41, 27	2.85	1179.88	115.16

Source: compiled and calculated by the author according to LLC Zammler Ukraine.

The largest share of expenditures in 2017 accounted for operations with counterparties from Belarus (2334 thousand UAH) and Great Britain (2114 thousand UAH). At the same time, the political and economic instability in relations with Russia has been marked by a sharp decrease in the share of its residents in the structure of expenses of LLC Zammler Ukraine.

The dynamics of the effect and efficiency of foreign economic activity according to the geographical structure in 2013 - 2017 are shown in Table. 2.18.

Table 2.18.

Dynamics of the effect and efficiency of foreign economic activity of "Zammler Ukraine" LLC according to the geographic structure of foreign economic activity in 2013-2017

Indicator	2013	2014	2015	2016	2017	Chain growth rate,%		Absolute deviation to the previous year	
						2016	2017	2016	2017
Effect, ths UAH	**979,75**	**908,47**	**1085.21**	**1545.25**	**1585.01**	**42.39**	**2.57**	**460.04**	**39.76**
Russia	69.04	60.38	36.07	49.67	7.17	37.69	-85.56	13.59	-42, 49
Belarus	52.13	47.42	66.25	75.02	97.26	13.24	29.64	8.77	22.24
United Kingdom	69.61	61.54	84.11	102.61	111.31	22.00	8, 48	18.50	8.70
Germany	74.73	72.37	90.16	100.98	170.49	12.01	68.83	10.83	69.50
Poland	56.57	53.39	52.69	102.18,	118 24	93.91	15.72	49.49	16.06
Moldova	36.03	32.89	35.80	64.98	68.67	81.52	5.68	29.18	3.69
Georgia,	64.92	60.16	76 30	98.91	131.07	29.64	32.52	22.62	32.16
Latvia	44.36	44.75	42.32	74.07	114.53	75.04	54.62	31.75	40.46
Lithuania	38.54	34.92	50.31	53.18	71.20	5.71	33.89	2.87	18.02
Estonia	49.73	47.98	56.72	73.54	112.63	29.66	53.15	16.82	39.09
Kazakhstan	22.78	23.22	29.09	37.39	69.03	28.50	84.65	8.29	31.65
Others	401.30	369.46	465.40	712.72	513.41	53.14	-27.97	247.32	-199, 32
Efficiency	**1.08**	**1.08**	**1.08**	**1.09**	**1.08**	**0.63**	**-1.20**	**0.01**	**-0.01**
Russia	1.04	1.04	1.02	1.06	1.03	3.59	-2.47	0.04	-0.03
Belarus	1.05	1.05	1.05	1.04	1.04	-1.04	0.00	-0.01	0.00
United Kingdom	1.07	1.06	1 08	1.06	1.05	-1.06	-1.05	-0.01	-0.01
Germany	1.09	1.09	1.10	1.08	1.10	-2.15	2.20	-0.02	0.02
Poland	1.08	1.08	1.06	1.09	1.08	2.17	-1.08	0.02	-0.01
Moldova	1.05	1.05	1.04	1.05	1.04	1 , 05	-1.04	0.01	-0.01
Georgia	1.09	1.09	1.10	1.09	1.09	-1.09	0.00	-0.01	0.00
Latvia	1.06	1.06	1.05	1.06	1.08	1.06	1.08	0.01	0.01
Lithuania	1.06	1.06	1.08	1.05	1.05	-2.11	0.00	-0.02	0 00
Estoniya	1.08	1.08	1.09	1.08	1.09	-1.08	1.09	-0.01	0.01
Kazakhstan	1.09	1.09	1.10	1.08	1.10	-2 15	2,20	-0,02	0,02
Other	1,16	1,15	1,16	1,18	1,12	1,18	-4,49	0,01	-0,05

Source: compiled and calculated by the author according to LLC Zammler Ukraine.

In 2017, the highest performance indicators of foreign economic activity (more than 1,1 times) LLC "Zammler Ukraine" had from operations with counterparties from Germany, Kazakhstan, Others (located in the order of decreasing value of the indicator). The lowest is the efficiency of operations with Russia. It should be noted that in 2017,

the efficiency of operations slightly decreased compared to the results in 2016, and for Germany, Latvia, Estonia, Kazakhstan and others, there was an increase.

As for the effect of foreign economic activity, it should be noted that its growth rate in 2017 is rather insignificant (1%). The most negative effect was the reduction of the effect of transactions with non-residents from Russia (-3%), which in 2017 amounted to -39.76 thousand UAH. This indicates the ineffectiveness of such operations.

The largest effect from foreign economic operations of LLC “Zammler Ukraine” was in 2017 in the amount of 1585 thousand UAH, and efficiency - at the level of 1,08 times. The smallest effect was observed in 2014 - 908 thousand UAH, efficiency - 1,08 times.

The results obtained regarding the effectiveness of foreign economic operations of LLC Zammler Ukraine indicate the need to analyze the efficiency of management of the existing logistics system.

2.3. Estimation of the existing logistics system of LLC “Zammler Ukraine”

The transport services user may choose a carrier based on many criteria. Each criterion will have a certain specific weight in determining the rating of carriers companies. The more criteria will be taken into account when choosing, the more precisely this choice. However, an excessive number of criteria can only lead to a loss of time, since many criteria will have a minimal (virtually negligible) effect on the result. Therefore, we selected the criteria that, in our opinion, can affect the rating of the carrier and the decision-making by the consumer.

The main competitors of “Zammler Ukrain”e LLC are: TENT-TRANS, LLC, MM-TRANS, LLC, RABEN UKRAINE, LLC, because these enterprises provide such services for transportation in foreign markets.

These competitors are selected to evaluate the effectiveness of “Zamler Ukraine” logistics management system on the following grounds:

- all companies work with counterparties from the CIS and the EU;
- companies have long been operating in the international transportation market;
- companies employ up to 50 people.

We will evaluate the effectiveness of the logistics system of LLC "Zammler Ukraine", comparing the indicators with its main competitors.

The cost indicators of "Zammler Ukraine" LLC and its main competitors are shown in the table. 2.19.

Table 2.19

The indicator of the cost of services for LLC "Zammler Ukraine" and its main competitors in 2017

Company	C, UAH.	D, km	P, UAH / km
1. TENT-TRANS, LLC	2860	1300	2.2
2. «Zammler Ukraine»	2990	1300	2.3
3 MM-TRANS, LLC	2730	1300	2.1
4. RABEN UKRAINE, LLC	3120	1300	2.4

Note: C - the cost of transportation, UAH; S - distance of transportation, km; P - price of kilometer of transportation UAH / km

Source: compiled and calculated by the author according to LLC "Zammler Ukraine".

This indicator is one of the key indicators to which most consumers choose. Companies are interested in choosing a carrier that will provide them with services at a minimum price.

2. Time of movement of goods. "Zammler Ukraine" LLC carries out foreign economic operations with various products, including those unstable to external influences, which can be damaged with long transportation and storage on unsuitable areas. Sales contracts specify the term for which "Zammler Ukraine" LLC is obliged to place the goods, indicating the need to take into account this criterion.

The criterion in this case is the time of carriage in one car, as the weighted average value for each company.

The results of calculations will be presented in the table. 2.20.

Table 2.20

Indicator of cargo movement time abroad of “Zammler Ukraine” LLC and its main competitors in 2017

Company	Du, km.	Dl, km.	Su, km. / year	Sr km. / year	tc, year
1. TENT-TRANS, LTD.	550	100	80	20	12
2. "ZAMMERL Ukraine"	550	100	60	20	17
3 MM-TRANS, LLC	550	100	70	30	14
4. RABEN UKRAINE, LLC	550	100	70	20	15

Note: tc - time of the car's train, a year .; Du - distance of trip in the usual mode, km; Dl - the path on which the car moves at a limited speed, in km; Su - speed of the car in the usual mode, km / h .; Sr - speed at areas with restrictions, km / h.

Source: compiled and calculated by the author according to LLC “Zammler Ukraine”

The smallest time of moving goods from companies TENT-TRANS, LLC and MM-TRANS, LLC, and the largest one - LLC “Zammler Ukraine”.

3. Modernity of the motor-vehicle park. Determine the age of cars on average for each motor company. The results of calculations will be presented in the table. 2.21.

Consequently, the most modern cars belong to the company "Zammler Ukraine", because the average age of the car is 3.5 years, which is much better than the nearest competitor MM-TRANS, LLC - 4.2 years.

Table 2.21

The current fleet of LLC “Zammler Ukraine” and its main competitors in 2017

Company	Aca, year	Ac1, year	N1, pcs.	Ac2, year	N1, шт.	Ac3, year	N3, шт.
1.TENT-TRANS, LTD	5,0	5	7	4	7	1	2
2.Tov «Zammler Ukraine»	3,5	3	7	3	4	1	2
3 MM-TRANS, LTD	4.2	4	7	3	4	1	2
4. РАВЕН UKRAINE, LLC	6,4	6	7	4	4	3	2

Note: Aca - average weighted age of the company's cars, Ac1 - age of the first car, N1 - number of cars in the company with age Ac1, Ac2 - age of n-th car, N2-quantity cars in company with age Ac2, Ac3 - age of k-th car, N3 - quantity of cars in company with age Ac3 [60, c. 132].

Source: compiled and calculated by the author according to LLC Zammler Ukraine.

4. Quality of services rendered. This indicator, in our opinion, must be taken into account when dealing with any issues related to the choice of one or another service, because the desire for low prices can very often result in significant losses in quality and losses associated with payment of penalties. Therefore, enterprises of consumers of services of LLC "Zammler Ukraine" as a criterion of choice put forward the quality of services provided. The criterion indicator of the quality of services is the proportion of cases of damage to cargo during delivery. The indicator of the quality of services provided to LLC Zammler Ukraine and its main competitors is given in Table. 2.22.

Table 2.22

The indicator of quality of services provided by LLC “Zammler Ukraine” and its main competitors in 2013 - 2017

Company	The share of cases of damage to shipments at delivery (%)		
	2015	2016	2017
1. TENT-TRANS, LLC	1.2	1.4	1.3
2. "ZAMMER UKRAINE"	1.9	2.1	2
3 MM-TRANS, LLC	2.3	2.7	2.5
4. RABEN UKRAINE, LLC	2	1.6	1.9

Source: compiled and calculated by the author according to LLC Zammler Ukraine

In 2013-2017, for Zammler Ukraine LLC, the corresponding quality indicator was at 2%, which provides him with the third position among competitors. The lowest part of the cases of damage to the cargo during delivery is TENT-TRANS, LLC.

5. Reliability of arrival time. This indicator characterizes motor transport companies in terms of delivery terms. Minimum delivery times, which will be determined by the flight time, are not yet a guarantee that they will be fulfilled. Therefore, it is worth paying attention to the reliability of the time of arrival. Therefore, enterprises of consumers of services of LLC "Zammler Ukraine" enter into the criteria of efficiency - reliability of arrival time.

The criterion indicator of the reliability of the time of arrival will be considered as the percentage of cases of late delivery. The dynamics of the corresponding results is given in the table. 2.23.

The least cases of untimely delivery in 2017 are typical of TENT-TRANS, LLC (1.2%), while for Zammler Ukraine LLC this figure is 2.6%.

Table 2.23

Indicator of reliability of time of arrival to a counterparty to “Zammler Ukraine” LLC and its main competitors in 2013 - 2017,%

Company	Share of untimely delivery (%)		
	2015	2016	2017
1. TENT-TRANS, LLC	1.1	1.3	1.2
2.Tov « Zammler Ukraine »	2.0	2.4	2.1
3 MM-TRANS, LLC	2.3	2.5	2.6
4. RABEN UKRAINE, LLC	1.9	1.6	1.8

Source: compiled and calculated by the author according to LLC “Zammler Ukraine”

6. Experience. Experience does not always indicate the company's best work is sometimes young and prospective, but experience shows that companies with a long experience of work know the market better, hold that segment more solidly and can offer the customer the best services. Experience is expressed by criterion indicator - time of work in the market. TENT-TRANS, LLC and RABEN UKRAINE, LTD work 7 years, MM-TRANS, LTD. - 10 years, LTD. «Zammler Ukraine» - 11 years, which is the highest indicator.

7. Production capacity. This criterion gives an idea of how big the company with which the partnership will work.

The results of calculations will be presented in the table. 2.24.

Table 2.24

Production capacities at "Zammler Ukraine" LLC
and its main competitors in 2017

Company	Pe	Qc_1, pc.	Lc_1, t.	Qc_2, pcs.	Lc_2, t.
1.TENT-TRANS, TOV	125	5	15	5	10
2.Tov «Zammler Ukraine»	175	5	20	5	15
3 MM-TRANS, TOV	110	5	12	5	10
4. RABEN UKRAINE, TOV	135	5	15	5	12

Note: Pe - production capacity of the enterprise; Qc_1 - quantity of cars with load-carrying capacity Lc_1, pcs .; Lc - load-carrying capacity of the car of the r-th car, t; Qc_2 - quantity of cars with load-carrying capacity Lc_2, units; Lc_2 - load-carrying capacity of the car of the k-th car, t.

Source: compiled by the author according to LLC “Zammler Ukraine”.

Consequently, the largest production facilities for international transport services are LLC Zammler Ukraine and TENT-TRANS LLC.

The criterion indicators of the efficiency of the logistics system of companies are summarized in the table. 2.25, based on Table.2.19. - 2.24. The rank is determined by each criterion, the best value is assigned rank - 1, the worst, rank - 4.

Заповнити текстом до кінця сторінки

Table 2.25

Criterion performance of the logistics system

Company	Service cost (UAH)	Rank	Travel time (year)	Rank	Age of the vehicle (years)	Rank	Crash failure rate (%)	Rank	case of late delivery (%)	Rank	of Age (years)	Rank	Total tonnage (t)	Ranked
1.TENT-TRANS, Ltd.	2.2	2	12	1	5	3	1.3	1	1.2	1	1	3	125	2
March. LLC "Zammler Ukraine"	2.3	3	17	4	3.5	1	2	3	2.1	3	11	1	175	1
3 MM-TRANS, LLC	2.1	1	14	2	4.2	2	2.5	4	2.6	4	10	2	110	4
4. RABEN UKRAINE, LLC	2.4	4	15	3	6.4	4	1.9	2	1.8	2	7	4	135	2

Source: compiled and calculated by the author according to LLC Zammler Ukraine.

Having calculated the criterion indicators, we will establish the importance of the criteria for consumers of LLC Zammler Ukraine.

For the criteria of the choice of the carrier, we use the following symbols: K1 - the cost of the service; K2 - time of cargo movement; K3 - the modernity of the motor transport park; K4 - quality of services rendered; K5 - reliability of arrival time; K6 - work experience; K7 - production capacity.

In order to determine the relative importance of each criterion, we will compile a table into which the coefficients of the relative importance of one criterion in comparison with the other $a_{ij \text{ will be applied}}$. These coefficients are determined by the analyst of the enterprise on a scale: 1 - equal importance of the criteria; 3 - moderate advantage over one another; 5 - a significant advantage; 7 is a significant advantage; 9 - a very big advantage; 2,4,6,8 - intermediate (compromise) judgments.

Coefficients of relative importance are presented in Table. 2.26.

Table 2.26

Coefficients of relative importance of criteria for choosing a carrier in 2017

	K1	K2	K3	K4	K5	K6	K7
K1	-	1	7	3	3	7	6
K2	1	-	2	1	1/2	2	3
K3	1/7	1/2	-	1/5	1/3	2	3
K4	1/3	1	5	-	2	5	7
K5	1/3	2	3	1/2	-	4	6
K6	1/7	1/2	1/2	1/5	1/4	-	3
K7	1/6	1/3	1 / 3	1/7	1/6	1/3	-

Source: [6, p. 211]

So, proceeding from the table. 2.26 it can be concluded that: K1 is the cost of the service and K2 - the time of movement of the goods is equivalent to the customer, K1 - the cost of the service and K7 - the production capacity is not equivalent, and therefore the weight of the criterion K1 exceeds the weight of the criterion K7 6 times, K6 - experience and K7 - production capacity is not equivalent, and therefore, the weight of the criterion K6 exceeds the weight of the criterion K7 in 3 times.

Let's briefly consider some comparable pair of criteria:

1. The cost of services and time of movement of goods (K1, K2). Since the products are different, the time of movement of goods and the cost of services plays the same role for the consumer, he seeks to minimize his costs and increase the competitiveness of his product. Therefore, we can say that the importance of the criteria is equal.

2. The cost of services and the modernity of the motor transport park (K1, K3). Since the products transported by "Zammler Ukraine" LLC are a cargo that does not require special equipment for transportation, the modernity of the motor-vehicle park is offset by the cost of services. In this case, the cost of services has a significant advantage.

3. The cost of services and the quality of services rendered (K1, K4). For the consumer of transportation services, the cost is a priority criterion, but the quality of services also affects the choice of the carrier, because in most cases, under the terms of the contract, the seller is responsible to the buyer for the safety of the cargo. In this

regard, the cost of services only moderately exceeds the quality of services rendered in its value.

4. Cost of services and reliability of arrival time (K1, K5). Under the terms of sales contracts, the seller may be fined for failure to fulfill the delivery terms. However, the possible amount of this fine is much lower than the possible cost of transportation. Therefore, the cost of services gains a moderate advantage over the reliability of the time of arrival.

5. Cost of services and work experience (K1, K6). Of course, consumers of Zammler Ukraine LLC attach great importance to the experience of the company, which speaks in favor of this company; at the same time, the market dictates its conditions and the consumer is ready to work with a lesser-known company if it provides favorable terms of payment for transportation. It turns out that the cost of services far exceeds the work experience by its importance.

6. Cost of services and production capacities (K1, K7). In the majority of cases, the company's significant production capacity allows us to say that Zammler Ukraine LLC is more successful in the market. But, if ZAMMER UKRAINE LLC, for some reason, gives way to its competitors in terms of the cost of services, then the consumer prefers the company to provide minimal costs. Consequently, the cost of services plays a much more important role than production capacity.

7. Time of cargo movement and modernity of transport (K2, K3). These two criteria are practically equal in their importance, because both of them make a definite interest to the consumer. But nevertheless, the time of cargo movement has a slight advantage in connection with the existence of certain delivery dates.

8. Time of cargo movement and quality of services rendered (K2, K4). Since delivery terms are set in contracts, and the quality of services provided is also an important criterion when choosing a shipping company because delivery can lead to a claim by the buyer. Therefore, we can say that these criteria are equally important.

9. Time of cargo movement and reliability of arrival time (K2, K5). The criteria in this pair are quite close in value because they are too interdependent. However, the terms of delivery of cargo are discussed in the contract less clearly than sanctions in

case of late delivery. Therefore, the reliability of the arrival time slightly exceeds the time of movement of the cargo.

10. The modernity of the motor transport park and the quality of services rendered (K3, K4). The quality of services plays an important role for the consumer, which is connected both with the terms of the contract, and with the possible loss of the client in case of delivery. The modernity of cars does not have such an effect on the choice of the carrier by the consumer, because the products can be transported and cars outdated. Consequently, the quality of the services rendered significantly exceeds the modernity of the motor transport park in its value.

11. The modernity of the motor-vehicle park and the reliability of the arrival time (K3, K5). Timely delivery of the goods to the buyer - the condition that the seller will not be fined, and the customer will be satisfied with the seller. The present state of transport in the given case has no such significance. Therefore, the moderate advantage is the reliability of the arrival time.

12. Quality of rendered services and reliability of arrival time (K4, K5). These two criteria can be considered practically equal in value to consumers of LLC Zammler Ukraine. However, the quality of services still has a negligible priority, because it provides consumer satisfaction with the quality of goods, and hence the lack of claims and denials of cargo, which can lead to significant damage to the seller. The reliability of the arrival time in this case is less significant for both contracting parties.

13. Work Experience and Production Capacity (K6, K7). Consumers generally assume that experience in road transport plays a more important role than production capacity, since the company with market experience will be more flexible in different situations, and the availability of capacities does not yet provide the basis for fully relying on the company. Hence, the work experience is moderately superior to such a criterion as the production capacity of significance.

On the basis of this comparison, we perform the calculation of the weight of the criteria. To do this, we first determine the mean geometric by the formula:

$$= \sqrt{K1 * K2 * \ldots * K}, (2.1)$$

where n - the number of criteria;

wc - weight of the criteria.

Using the obtained data, we define the specific gravity of each criterion by the formula:

$$= \frac{}{\sum_{1}}, (2.2)$$

where gc - the specific gravity of the criterion.

The results of calculations will be presented in the table. 2.27.

Table 2.27

Results of calculations of weight and specific gravity of weight of criteria for choosing a carrier in 2017 for LLC Zammler Ukraine

Criterion	B	Y
K1 - cost of service;	3,08	0,3321
K2 - time of cargo movement;	1,29	0,1392
K3 - modernity of the motor transport park;	0,60	0,0648
K4 - quality of services rendered;	1,97	0,2126
K5 - reliability of arrival time;	1,57	0,1696
K6 - experience;	0,47	0,0510
K7 - production capacity;	0.28	0.0305
Total	9.28	

Source: calculated by the author according to LLC Zammler Ukraine

As a result of calculating the weight of the criteria, it is established that the greatest value for consumers of LLC Zammler Ukraine has the cost of services. This result can be called logical, since under the pressure of competitors and the struggle for the consumer, the final price of the product plays a decisive role, which could not but affect the benefits of consumers of LLC Zammler Ukraine in the matter of defining priorities.

Quite far behind this criterion are the quality of the services provided and the reliability of the arrival time, but they are quite significant among all the criteria. This is due to the fact that in its work LLC "Zammler Ukraine" focuses on the delivery of goods to customers on time and in proper condition.

Another couple of weighty criteria are the time of cargo movement and the modernity of the fleet of vehicles. These criteria determine the carrier's rating to a much lesser extent than the previous, but also affect the choice.

Other criteria do not play a significant role, which is due to the indirect effect on the carrier's choice. But taking into account these criteria will allow to make a more complete picture and choose a carrier, taking into account the varying degrees of influence of the criteria.

In order to calculate the ratings of companies, it is necessary to carry out the procedure of valuation of coefficients, since all criterion indicators have different dimensions. This procedure consists in the fact that for indicators:

- for which the minimum is the optimal one, the unit is assigned a minimum, while the others are calculated by dividing the value of the minimum index by the corresponding indicator.
- for which the maximum is the maximum value, the unit is assigned a maximum score, while others are calculated by dividing their value by the value of the maximum value.

An increase in the value of services negatively affects the rating, since its increase is negatively reflected in the benefits of the consumer. The lower the cost of services, the higher the rating of the carrier, therefore the best value is minimal.

The transport time is optimal when its value is minimal, because the faster the load is delivered, the better.

The age of cars affects the rating of the applicant company negatively, as with its increase, the consumer's interest in the services of this company is reduced.

Cases of non-delivery with their increase reduce the likelihood that the consumer will choose this company. Therefore, the best we consider the minimum value. Cases of untimely delivery indicate the unreliability of the carrier, their large number reduces the rating of the company.

The time at the market indicates the experience of the company, that is, the more it is, the higher the company's rating. The total tonnage increases its rating by increasing the carrier's rating.

The assessment of consumers determines the popularity of the company, the higher it is, the more likely the choice of this carrier. The optimal value is the

maximum. The results of calculation for all criterion indicators are presented in Table. 2.28.

Table 2.28

The weight of the criteria for the selection of the carrier, points

Company	K1	K2	K3	K4	K5	K6	K7
1.TENT-TRANS, LLC	0.95	1.00	0.70	1.00	1.00	0.64	0.71
2.Tov «Zammler Ukraine »	0,91	0,71	1,00	0,65	0,57	1,00	1,00
3 MM-TRANS, LLC	1,00	0,86	0,83	0,52	0,46	0,91	0,63
4 RABEN UKRAINE, LLC	0.88	0.80	0.55	0.68	0.67	0.64	0.77

Thus, the lowest cost of service is on MM-TRANS, Ltd., the time of the shipment is the smallest in TENT TRANS, Ltd., the most modern cars in LLC "Zammler Ukraine", the best quality of services in TENT-TRANS, LLC, the reliability of the time of arrival is the best in TENT-TRANS, LLC, the largest experience in the market of international transport of LLC "Zammler Ukraine", the most Zamler Ukraine LLC has larger production facilities.

The next step is to calculate the ratings of potential carriers by the formula (2.3):

$$= \quad * \quad , (2.3)$$

1

where Rk - the rating of the k-th carrier;

vic-value of the i-th criterion for k-th carrier;

gc - specific gravity of the criterion.

Calculation of the rating of companies in 2017 in the transportation market will be presented in tab. 2.29.

Table 2.29

Rating of LLC "Zammler Ukraine" and its main competitors in 2017

Company	Rk1	Rk2	Rk3	Rk4	Rk5	Rk6	Rk7	Total rating	
								Mark	Rank
1. TENT-TRANS, LLC	0.317.0	0.192	0.0454	0.2126	0.1696	0,0325	0,0218	0,9382	1
2. "Zammler Ukraine"	LLC	0.3033	0.0982	0.0648	0.1382	0.0969	0.0510	0.77831	2
3 MM-TRANS, LLC	0, 3321	0,1193	0,0540	0,1106	0,0783	0,0464	0,0192	0,7599	3
4. RABEN UKRAINE, LLC	0,2906	0,1113	0,0355	0,1455	0,1131	0,0325	0,0236	0.7520	4

Weaknesses of LLC Zammler Ukraine are: transportation time, untimely delivery. The strengths are: the cost of service and the modernity of vehicles. The obtained results testify that the highest rating was received by TENT-TRANS, LLC (0.9382), and LLC Zammler Ukraine (0.77831). Thus, it is these companies that are the best in terms of evaluated criteria. Thus, based on the analysis of logistics system of LLC "Zammler Ukraine", we can conclude that the logistics system is almost all criteria effective. In order to increase the efficiency of the logistics system it is nessesary to reduce the time of movement of goods, improve the quality of service, reliability of arrival time. When choosing a carrier, consumers of transport services in foreign markets are most likely, based on criterion indicators, choose LLC "Zammler Ukraine" or TENT-TRANS, LLC.

CONCLUSIONS TO PART 2

ZAMMLER UKRAINE GROUP - an international group of logistics companies that provides services in the field of road, sea and air transportation, customs brokerage, and also - a full range of warehouse services. ZAMMLER UKRAINE - Ukrainian 3PL operator. The group of companies includes 6 companies, represented by 8 offices. Representative offices of ZAMMLER UKRAINE GROUP are located in Ukraine, Poland and China. The first company of the group "ZAMMER UKRAINE" LLC was founded in 2007, the central office is located in the city of Kiev (Ukraine). ZAMMLER UKRAINE GROUP - Ukrainian logistics company, which was the first among the Ukrainian 3PL operators to open its representative offices in international markets. ZAMMLER UKRAINE Group companies provide a full range of services for the transportation of goods of any complexity in the main areas of Europe, Asia and America, as well as warehouse, logistics, customs brokerage and export-import services. Net income in 2016 compared to 2015 increased by 40.61%, in 2017, compared to 2016, it increased by 13.88%. Net profit in 2016 compared to 2015 increased by 97.65%, in 2017, compared to 2016, it increased by 86.13%. The profitability of the

operation during 2013-2017 has increased, in 2016 compared to 2015 it has increased by 2%, in 2017 compared to 2016 it increased by 5%. Financial autonomy in 2015 was 16%, in 2016 it was 22%, in 2017 it was 24%, which indicates that the financing of the enterprise at the expense of its own funds was not at the proper level, which is negative in the activity of the enterprise.

In the period from 2013 to 2017, net income from foreign economic activity grew, in 2016 compared to 2015 it increased by 32.6%, in 2017 it grew by 18.2% compared to 2016. The largest volume of foreign-economic operations of LLC Zammler Ukraine was carried out with contractors from Russia, Belarus and the United Kingdom. In 2015, the volume of operations with residents of Russia amounted to 1803 thousand UAH, since 2016 began a recession, in 2017 - the decline to 239 thousand UAH. The largest share of net income from foreign economic activity of the company in 2013 - 2017 was formed by operations with Russia, Byelorussia and Great Britain.They accounted for 15%, 9.23% and 8.65% respectively in 2013, 1.1%, 11.19% and 10.24% respectively in 2017, respectively. The largest amount of net income from ZED is Zammler Ukraine LLC "We will receive from the carriage of ordinary goods 3087 thousand UAH. in 2013 and UAH 5260 thousand. in 2017 the largest share of net income from foreign economic activity of the enterprise is observed for the carriage of ordinary goods in 2015 - 24,20%, in 2016 - 23,10%, in 2017 - 24,20%. The effect of foreign economic activity increased over the period of 2013-2017 by 606 thousand UAH. and efficiency has increased by 0.01 times, which indicates improvement of foreign economic activity at the enterprise.

The weak sides of LLC Zammler Ukraine are: transportation time, untimely delivery. The strengths are: the cost of service and the modernity of vehicles. The obtained results testify that the highest rating was received by TENT-TRANS, LLC (0.9382), and LLC Zammler Ukraine (0.77831). Thus, it is these companies that are the best in terms of evaluated criteria. Thus, based on the analysis of logistics system of LLC "Zammler Ukraine", we can conclude that the logistics system is effective for almost all criteria.

PART 3. IMPROVING THE LOGISTIC SYSTEM OF LLC ZAMMERLER UKRAINE

3.1. The reserves of improving the logistics system of the foreign trade enterprise.

Measures to optimize the structure of the logistics system at ZAMMLER UKRAINE LLC:

1 - planning the budget of the logistic system, planning the transportation routes, planning the separation of cargoes into safe and unsafe , planning of the structure of the organization of logistics system, planning of the number of vehicles in the enterprise and carrying capacity of cars;

2 - organization of the logistics system, separation of goods for safe and non-secure, organization of routes, organization of the logistics department;

3 - development of the motivational policy of the employees of the enterprise, including employees of the logistics department, development of the motivational policy for the clients of the transport enterprise in foreign economic activity, introduction of a system of discounts for foreign economic counterparties;

4 - control over the implementation of the budget of the logistics system, control of transportation routes, control of the separation of goods for safe and non-secure, monitoring the system of motivation of employees, monitoring the system of incentive policy for counterparties, control the number of employees of the logistics department;

5 - regulation of the logistics department in conjunction with other departments of the enterprise, control of horizontal and vertical links in the logistics department.

The factors that influence the decision on choosing their own or hired vehicles include the following:

- investment in equipment, which includes the cost of lost opportunities, the risk of physical losses and depreciation of the property;
- direct operating costs for drivers, maintenance and fuel;
- taxes on the use of roads and payment of registration;
- investment in premises and expenses for their maintenance, storage of equipment and fuel;

- the cost of working staff for sending, servicing and overseeing;
- Administrative expenses.

The basis for choosing the type of transport, optimal for a particular carriage, is the information on the characteristics of different modes of transport.

Delivery by one mode of transport is typical for unimodal (single-mode) transportation. However, in practice, when making transport decisions, it is necessary to take into account the complicated compromises between different modes of transport, for which mixed - intermodal transportation is used.

Intermodal transportation is a carriage in two or more different ways. The purpose of intermodal transportation - to get a combination of the benefits of several separate methods, while avoiding their shortcomings. This allows for integrated transport services at the lowest cost, for example, by combining the low cost of water transportation with the flexibility of motor transport or the high speed of air transportation with the cost of road transport.

When choosing the means of delivery of a particular product, senders account for up to six factors at a time. So, if the sender is interested in speed, his main choice is focused on air or road transport. If its purpose is minimal expenses, the choice is limited to water and pipeline transport. The greatest advantages are connected with the use of motor transport, which explains the growth of its share in the volume of traffic. However, the final conclusion on the option of delivery of goods is based on technical and economic calculations.

According to international consulting companies that provide services for optimizing transport and logistics processes, the use of specialized software helps reduce transportation costs by 15%. In addition to computer simulation, the main methods of routing transportation include such analytical methods as: the method of the north-west corner, the simplex method, the method of potentials, the net method, the task of salesman, etc.

Consequently, the need for transport of enterprises is a consequence of the impossibility of carrying out their production and commercial activities without the

physical movement of goods from one place to another, and in the case of sales of goods - from the seller-to-buyer enterprise.

It is advisable to highlight four directions of improvement of the logistics system of the enterprise "ZAMMLER UKRAINE" Ltd:

1st direction:

- provision of transport enterprises and subdivisions by transport and loading and unloading facilities under different schemes (purchase, credit, leasing, etc.);

- creation and modernization of repair and service base for maintenance, repair and storage of rolling stock.

2nd direction:

- improvement of monitoring of the road network and its infrastructure;
- optimization of the location of cargo and cargo receiving points, their capacities, etc.

3rd direction: the

- expanded application of new technologies for the preparation of goods for transportation;

- provision of containers for the purpose of increasing the transportability of cargoes.

4th direction:

- formation of transport-logistic systems of enterprises;
- improvement of economic relations between participants in the logistics process, etc.

Transport is one of the decisive elements of the production and commercial process. The transportation process is one of the key logistics functions associated with the movement of a vehicle's products to a specific technology in the supply chain and consists of logistics operations and functions. Increasing transport costs, inefficient use of the fleet, expansion of distribution and the need for continuous monitoring of the efficiency of suppliers, forces transport departments of enterprises to constantly solve

problems related to the increase of efficiency and controllability of the transportation process.

In this regard, a number of measures are proposed to reduce transport and logistics costs, namely:

- optimization of placement and fastening of cargoes;
- selection of optimal types of vehicles;
- selection of optimal options for placing points of loading and unloading;
- selection of optimal loading and unloading equipment and warehouse equipment;
- application of advanced warehouse technologies (cross-docking, etc.);
- selection of optimal logistic schemes, carriers, forwarders, logistic providers;
- optimization of routes and technology of export of products to end users;
- increasing the level of control over the location of vehicles with the help of modern information technology.

The improvement of the logistics system occupies a central place in the logistics administration of “ZAMMLER UKRAINE” LLC along with corporate marketing and production strategies and the establishment of a mission, that is, that initial foundation, which answers the two main questions: what the firm is currently and where it seeks ? The proposed sequence of development of the transport strategy of LLC "ZAMMLER UKRAINE" is shown in Fig. 3.1.

The basis of logistic analysis is the following principles, such as scientific, system approach, dynamism, allocation of priority directions, complexity completeness and reliability of the information base, etc. The methods and techniques used in this process are typical for the general technical and economic analysis of production and economic activity.

After logistic analysis, a logistic strategic plan is developed that involves developing measures to improve the logistics system of the enterprise.

Among the measures to improve the management of the logistics system, we proposed the following:

1. improving the organization of logistics management;

2. restructuring of the logistics department;
3. introduction of new staff units;
4. motivational program of logistics department employees;
5. improvement of inventory management system based on ABC and XYZ optimization of transport traffic analysis.

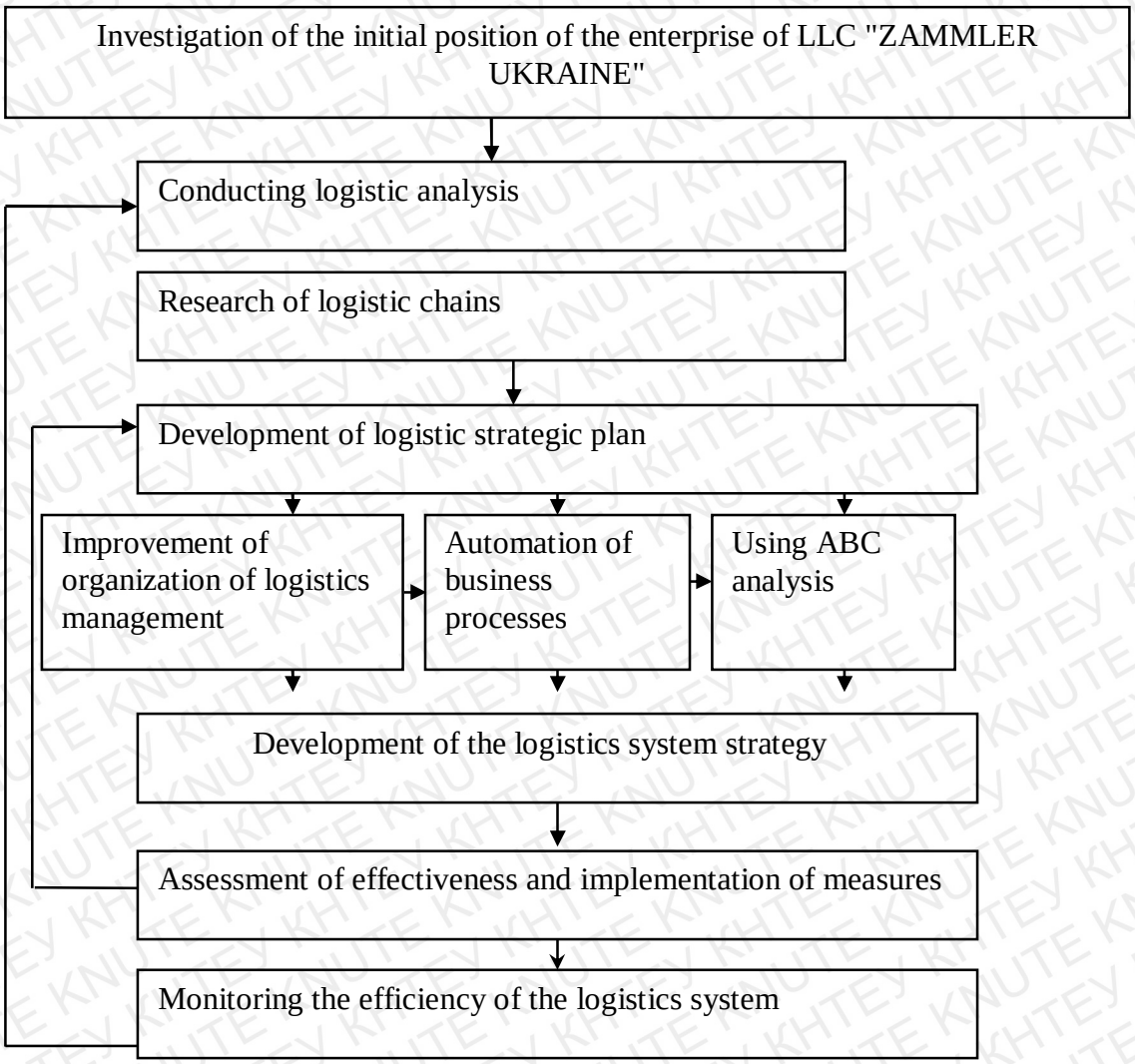

Fig. 3.1. Recommended algorithm for logistics strategy development of LLC "ZAMMLER UKRAINE"

The next step is to evaluate the effectiveness of the proposed measures. In case the measure is cost-effective, it should start its implementation.

The final stage is the monitoring of the logistics system (Table 3.1).

Table 3.1

Indicative indicators for monitoring the quality of logistics system management of ZAMMLER UKRAINE Ltd.

№	Monitoring parameters	Limit deviation, %	Monitoring frequency
1	Delivery termsDelivery	24 hours	Weekly
2	Completeness of orders	-	Daily
3	Terms	3 year	Daily

To implement the strategy of transport, department logistics needs to be fully restructured. The issue of management is important in determining the approaches to the reorganization of logistics at an enterprise. For the enterprise of "ZAMMLER UKRAINE" LLC, a centralized management system is appropriate.

The centralization of logistics management involves the presence of a logistics service subordinated directly to the top management of the enterprise.

The advantages of this approach in logistics management include the possibility of using highly effective information systems, which radically changes the relationship between the functional units of the enterprise and gives the maximum effect in the management of supply chains. The reorganization of logistics implies the output of logistics into a separate structural unit with the introduction of new staff units (Fig. 3.2.)

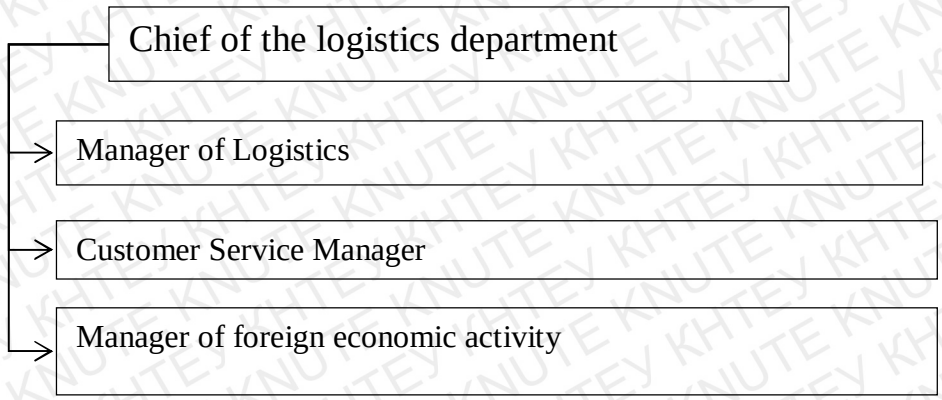

Fig. 3.2. Recommended structure of the logistics department of “ZAMMLER UKRAINE” LLC

The costs of LLC “ZAMMLER UKRAINE” in 2018 are related to the introduction of the position of the logistics manager in the table. 3.2.

Table 3.2

Total costs for the organization of labor of logistics manager at LLC ZAMMLER UKRAINE

Costs	Amount of expenses, UAH.
Maintenance Costs	**20220**
Computer	10200
Fax	800
Modem	500
Copier	3500
Printer	2500
Scanner	2200
Phone	520
Software	**7200**
Office Furniture Costs	**6280**
Writing Desk	2100
Chair	620
Cabinet	3560
Organizational Expenses	**2000**
Job Design Guide	700
Selection of Frame	1300
Other	**240**
Total	**35940**

Thus, the cost of technical support is UAH 20220, software costs amount to 7200 UAH, office furniture cost is 6280 UAH. and organizational expenses are 2000 UAH. Consequently, the total cost of organizing the work of the logistics manager at ZAMMLER UKRAINE LLC is 35,940 UAH.

3.2. Activities to optimize logistic system of LLC “ZAMMERLER UKRAINE”

Implementation of TMS-system at ZAMMLER UKRAINE LLC. The TMS system is a system module that supports the planning, monitoring and calculation of transportation costs in the delivery schemes of loads of varying complexity. Optimal route planning, congestion and traffic consolidation, as well as many other features, make the TMS module a powerful vehicle automation tool not only for controllers. Tracking consignments of goods in the supply chain and expanded pricing options are

just the basic features of the TMS transport management system, the so-called automation of transport and logistics. Transport logistics based on the TMS module has a close relationship with other modules of the TMS system. In the presence of integration, the automation of transport and warehouse logistics is obtained.

According to international consulting companies that provide services for the optimization of transport and logistics processes, the use of TMS-system will help reduce transportation costs by almost 15%. As you know, delivery of goods is one of the most important components of logistics service. Such service allows LLC ZAMMLER UKRAINE to provide full logistic service. However, with the obvious advantages of this kind of services, LLC "ZAMMLER UKRAINE" has to struggle with their high cost, both financial and resourceful. To date, in the conditions of continuous growth of transportation costs, it is possible to optimize these costs by means of automation of planning and organization of effective automated control of transportation.

But, as with any other automation project of LLC "ZAMMLER UKRAINE", first of all, it is necessary to determine the logistics strategy in transportation, since this strategy is the basis of the configuration of the transport management system.

In the further study, it is necessary to determine the value of TMS-solutions, which can be demonstrated by simulating the existing MM TRS LLC ZAMMLER UKRAINE and the "if-if" scenario analysis. In the process of modeling and optimizing according to different criteria, it is possible to analyze various scenario plans for transporting and making economically determined solutions in the best possible way.

It is worth paying attention to the complexity of the TPC, which greatly increases the simulation period and the cost of script analysis and optimization. However, practice confirms that it has a short payback period. For example, transport losses are usually 10% of turnover. An analysis of the TRS model indicates that the company could potentially reduce transportation costs by 5 - 15%. Such a reduction in losses within a few months will cost the cost of simulation and analysis.

Script-analysis "if-if" considers potential alternatives for new objects: it allows you to manage existing objects in the TPC, change the graph and type of their work, and

dynamically select variants from potentially specified objects. This feature allows traffic logic operators to effectively use MM grids, taking into account business constraints. In addition, scenario analysis can identify potential risks and weaknesses that will help detect and trace when modeling the relevant TRS or its modifications. With TMS solutions, abnormal or extraordinary market situations can be assessed and solved by the time the plan of transportation is implemented on the ZAMMLER UKRAINE LLC.

Consequently, the advantages of TMS tactical decision are:

- reduction of transport losses demonstrated on the basis of scenario analysis "if-if" of the corresponding MM TPC before and after its optimization;
- revealing of weaknesses in the corresponding MM TPC and development of recommendations for their elimination;
- maximally rational use of the existing objects of the MM TPC taking into account existing business restrictions;
- improvement of service;
- increase of storage of imported goods;
- transparency MM TPC.

In the subsequent study, it is necessary to determine the planning directions of the TMS transport planning and management system, such as strategic (from month to year); tactical (from week to month), operational (from minute to day) to LLC “ZAMMLER UKRAINE”.

Strategic planning addresses global challenges such as choosing the best place to open a new warehouse terminal under existing business constraints, in order to minimize investment and improve service solutions at “ZAMMLER UKRAINE” LLC.

Tactical planning is the modeling of the distribution network and the analysis of "what-if", that is, the programming of business scenarios according to different optimization algorithms, when the values of the parameters set according to the purpose of choosing tactics of actions with minimal transport costs by LLC “ZAMMLER UKRAINE”.

Operational planning is the simulation of the chosen tactics of planning at the operational level. The optimal scenario is played in real time. When interacting with

different participants (cargo carriers, shippers, consignors) there is a traceability of door delivery to door delivery.

When implementing TMS, processes themselves do not change globally. Only the goals and the time required to perform the specified tasks change. So, the time for construction of routes, distribution of cargoes, the choice of necessary vehicles and much more is reduced. In logistics there is an opportunity to model and compare different options criteria, changing various conditions and factors of route optimization and obtain the necessary delivery plan. As a result, logistics spends most of the time not on the compilation of routes, but on their analysis.

“ZAMMLER UKRAINE” LLC should clearly demonstrate the economic benefits of the introduction of TMS: eliminate simple transport and theft, reduce the number of empty runs and mileage, reduce vehicle fleet depreciation, react quickly to unexploded situations, optimize routes and the number of vehicles, increase speed and Cargo deliveries without expansion of fleet. Therefore, before deciding to implement the TMS system, you should analyze the business processes of the company and only then choose the solution you need based on GPS analysis, fuel sensors, maps, product presentation on the market, prices, etc.

The next direction of this study is the diagnosis of “ZAMMLER UKRAINE” LLC in order to identify important issues that directly affect its final financial result. The most important problems of LLC "ZAMMLER UKRAINE" are: interaction with other divisions of the company; non-optimal route, lack of priority accounting when constructing a route; car fleet; operational response to force majeure circumstances; delivery; optimal distribution of goods between cars; analysis of transportation costs.

An important element in the study of existing problems at LLC ZAMMLER UKRAINE is the development of recommendations for their elimination. Therefore, the use of modern specialized tools such as TMS was proposed, which would enable to solve existing problems (Table 3.3).

Table 3.3

Mechanism for solving problems of ZAMMLER UKRAINE LLC based on TMS solutions

Problem	Remedy	Result
1. Interaction with other departments of the company	Implementation of the CRM system or description of business processes of the responsible parties and terms of execution	The program complex integrates with any specialized programs (accounting, warehouse)
2. Nonroute, lack of accounting priority when constructing routes	Optimization based on ERP-system, automatic planning of optimal flights and automatic route development movement of cars, preparation of accompanying documents.	The choice of the route, according to which the "nearest car" gets to the "alien" area; exclusion of extra flights; replacement of the optimal car by capacity and load capacity.
	GPS / GPS devices	Ensure control of vehicle movement on the route; execution of schedule and conditions of carriage
3. Vehicle fleet	Installing TMS system software	Possibility to provide several route models with different optimization criteria (number of cars, time, profitability of transportation); an alternative to choosing - selling excess cars or increasing the volume of traffic.
4. Rapid response to force majeure	New adjustments to the program.	Getting new route sheets.
5. Delivery termination.	Using the program of mathematical algorithms for simulation.	Optimal result taking into account the of roads, allowable speed for them, time for loading and unloading, waiting in delivery points
6. Optimal distribution of goods between cars	Using software system	Specifies limits traffic so that the car performed with minimal congestion
7. Analysis of costs for the transportation	System TMS Software	Estimation of return transportation products, the introduction of alternative options for the delivery

Source: conducted by the author

Thus, the cost reduction for TMS can reach 25% (and they represent a significant part of the cost of operation of the fleet), the load factor can be ensured at 98 - 99% and shorten the time of construction of the route to 10 - 20 minutes for 500 - 1000 applications. The system, depending on its value, is paid for up to six months.

The introduction of TMS - the system of LLC "ZAMMLER UKRAINE" is UAH 26910, and every year UAH 4000 for service.

In modern conditions of globalization, there is an improvement and expansion of the portfolio of transport services by transport and logistics operators, namely the

introduction of modern specialized software tools such as TMS. In general, the value of TMS solutions can be demonstrated by simulating the existing MM TRS LLC “ZAMMLER UKRAINE” and "what-if" scenario analysis. Carrying out the diagnostics of a transport company can reveal problems and develop recommendations for their elimination on the basis of the TMS-system.

Implementation of software for logistics warehouse modeling. To organize the efficient work of ZAMMLER UKRAINE LLC, a complete integration of the employees of the company, its materials, resources and facilities is required. It is a complex working environment with certain parameters, system dependence, product range, with various components of the system (conveyors, automatic placement and transfer systems, robotics, warehouse management software, etc.). Using modern tools, methods and techniques of system modeling, specialists can accurately predict the behavior and operational characteristics of complex systems before they are implemented.

The choice of modeling software at ZAMMLER UKRAINE LLC should be carried out in two stages. The first step, which can be done before any problems are encountered, is intended to preview software options that are suitable for the user and the capabilities of existing computers. The second stage relates to a specific problem or class of problems that need to be addressed. To this stage you need to move after the problem has been identified and formulated.

In the first stage of the selection process, it is necessary to decide which type of software for general-purpose or specialized modeling is necessary for the user and the economic task. In this case, products for which there is insufficient experience of use or sufficient support, should be rejected. To this end, the following issues need to be addressed:

- to determine the compatibility of software with existing computers and the operating system;
- define the type of video animation and set the need for 3D video animation;
- to establish the possibility of using foreign experience;
- to define new possibilities of modeling and implementation of its results;

- to establish the telephone hotline of the technical support of the software;
- to study the cost of software, its installation and training to work with it;
- to investigate the value of analog software;
- to determine the number of studies using simulation to make its value pay off.

The management of LLC ZAMMLER UKRAINE must instruct the heads of all departments to calculate the approximate cost of solving these issues in the first stage.

At the second stage, you need to define the characteristics of a particular problem. At this stage, you need to choose a specific type of security to solve the problem on a particular computer. Therefore, it is necessary to consider the following issues:

- to establish the essence of the problem, the requirements for the model, the need for using general-purpose modeling language or specialized software packages;
- to determine the possibility of entering information into the computer and the ability to transfer information and import for video sampling;
- to determine the possibilities of information output;
- to study the special possibilities of developing the coding logic (or programming), or difficult to write in the coding logic, if there is such a necessity;
- to establish an interactive program for debugging the model to confirm the logic used;
- to determine the necessary configuration of the computer hardware and the amount of memory required for efficient operation;
- determine the type of video-animation capabilities and the need for precise 3D video animation;
- to set the type of data structure;
- to determine whether the model can easily interact and exchange data with other applications such as databases and spreadsheets.

The management of LLC "ZAMMLER UKRAINE" should instruct the heads of all departments to calculate the approximate cost of solving these issues in the second stage.

Appendix B presents the characteristics of the simulation software of two categories: general-purpose modeling languages; packages of specialized modulated programs. The analysis found that although differences may be minor in some cases, however, general purpose simulation languages include AweSim !, Extend, GPSS / PC, GPSS / H, Simple ++, and Siman (part of the Arena software).

Packages of specialized modular programs include Arena (delivery, production, sales, warehousing, transportation, call center, business processes), Automod (applications for production and processing of materials), Factor (production), Micro Saint (production), ProModel (production, business processes), Quest (production), Simprocess (business processes), Taylor II (production), ithink (business processes) and Witness (production, business processes).

The analysis of the types of simulation software shows that almost all types have a video animation. In some - AutoMod and Quest - there is an exact volumetric graphical graphics. Most types also have different levels of business graphics to automatically create formatted charts of required variables that are time-dependent. Several types of software have a data entry processor that allows a user to analyze a sample of data or observations in order to determine the best standard statistical distribution for use. Most software packages have built-in support for the simulation of general statistical distributions [7, p. 54].

There is a tendency to transition to genuine object-oriented languages that use a new software development technique. The advantages of using object-oriented languages are a significant reduction in development time and the ability to reuse code. Examples of such languages are Simplified ++ and ModSim.

Modeling is a conceptual way of reflecting the activities of enterprises in the real world in the basic language. By using specific software, the user must necessarily set limits on the scope of this security. There are the following types of software orientation:

- orientation to events;
- scanning activity;
- process orientation.

When using a event driven system, the simulation system is described in terms that violate the order of events. An analyst will be able to build an imitation model only under the following conditions:

- Defining each event that may occur in the system;
- Clarifying the causes and consequences of each event;
- creating mechanisms for changing events inside the simulation model;
- Logically combining events;
- Updating time and statistics.

Such types of software as Siman and AweSim! allow you to build models using event orientation.

In some simulation models, events known to be happening can not be displayed graphically, but you can define the mechanisms of these events. The mechanisms by which such events are observed are called scanning activities that can occur directly or indirectly.

Using process orientation, the modeling language consists of a sequence of events occurring in a certain order. AutoMod, Taylor II, AweSim !, ProModel and Siman are built using process orientation. The fundamental and direct influence of this view is the ability to model complex systems in non-programmed conditions.

Imitation models are divided into two categories:

- the models of continuous changes use premature mechanisms with a fixed increase. They apply when the analyst considers the investigated system, which consists of a continuous flow of information or elements counted aggregate, rather than individual elements;
- models of discrete changes. The analyst studies what happens to the individual elements of the system. Most models are models of discrete changes, so the type of timing is "such an event". Some problems are better described by a particular type, while both types can be used to describe complex problems. Some general-purpose simulation languages allow the creation of combined discrete-continuous models. AweSim! and Siman provide such an opportunity [10, p. 12].

Having determined the need for modeling the composition, you need to get an idea not only about the available alternatives - when referring to professional consultants and the choice of software simulation - but also about the overall process of implementing a successful design project. It is necessary to carefully consider the decision when to consult consultants, and when investing in your own software and training. When solving some problems, specialized modeling packages (if they are rightly selected) can be used without requiring significant computer programming effort and completing work in a few hours or days. To solve many warehouse problems where more details and accuracy are needed, you need to use more powerful general-purpose modeling languages, you need to define and develop a special logic. Requires an experienced analyst to build and test the model. Simulation in modern conditions is perceived as a powerful tool for system analysis. It should also be noted that, based on experience in modeling material processing and storage systems, the AGVS, ASRS, MINI-LOAD models or their combination can be effectively used in solving complex problems. For detailed models, there are options in an unprogrammed environment. In particular, detailed modeling of the long operation of the conveyor, complex models with mutual influence, the logic of selection of orders, the interaction of systems with automatic placement of conveyors often requires additional programming [14, p. 122].

The management of "ZAMMLER UKRAINE" LLC offers software, considering the cost and requirements for implementation: Extend - 13 thousand dollars. USA. (at the rate of the NBU on 08.10.2018 28.08 UAH / USD - 365 040 UAH).

Expenditures for personnel training for the year = 5 * 5840 = 29200 UAH.

Maintenance costs for the year = 4000 UAH.

Thus, the management of "ZAMMLER UKRAINE" LLC offers software, considering the cost and requirements for implementation: Extend - 13 thousand dollars USA (at the rate of the NBU on 08.10.2018 28.08 UAH / USD - 365 040 UAH). Implementation of the warehouse management automation system at "ZAMMLER UKRAINE" LLC in most cases does not begin without compelling reasons and solves specific practical tasks. The ultimate goal of any improvement is to generate profits, so the result of the implementation of the warehouse information system is expected to

result in the next step in achieving the goal. Accordingly, before starting the implementation project, it is necessary to calculate the benefits that this solution will bring to the company, whether the investment will be repaid, or whether automation should be carried out. Subsequent research is subject to the impact of the proposed measures on the main indicators of the enterprise.

3.3 Forecast changes in the economic activity of the enterprise on the basis of the proposed measures

In order to determine the possible amount of income, we will calculate the planned amount of income from operating activities at LLC ZAMMLER UKRAINE in 2019 on the basis of the economic-statistical method and the method of the average moving (tab. 3.4, tab. 3.5).

The revenue for 2019 (plan), calculated on an annual average, is defined as the product of the income of 2017 and the average annual growth rate:

Table 3.4.

Forecasting of the possible volume of income on ZAMMLER UKRAINE LLC (economic and statistical method) for 2018-2020, ths. UAH.

Indicators	Value
Net income (revenue) from sales of goods (works, services) for 2017	25197.40
Index of inflation,%	1.14
Net income for 2018 (plan) calculated as the average annual rate in 2017 prices	28719,50
Net income by 2019 (plan), calculated as the average annual rate in 2017	32733,91
Net income for 2020 (plan) calculated as the annual average rate in 2017	37309,46

Average difference between the value of income is:

22126,00 - 15735,90 = 6390,10 thousand UAH,

25197,40 - 22126,00 = 3071,40 thousand UAH.

The change in the average sliding is defined as the average value between the average sliding:

(6390,10 + 3071, 40) / 2 = 4730.75 thousand UAH.

Income for 2019 will be determined as the income of 2018 to add a change in the average sliding

25197.40 + 4730.75 = 29928.15 thousand UAH.

29928,15 +4730,75 = 34658,90 thousand UAH.

The forecast of a possible net income on ZAMMLER UKRAINE Ltd by the method of the average - sliding in 2018-2020 is presented in the table. 3.5.

Table 3.5

Forecasting of the possible net income for ZAMMLER UKRAINE LLC (medium-moving) by 2018 -2020

Periods	Net income from sales of products, thousand UAH	Average rolling, thousand UAH	Change sir sliding ths. UAH	Plan	Net income from sales, ths UAH
2015	15735.90		4730,75	2018	29928,15
2016	22126,00	6390,10		2019	34658,90
2017	25197,40	3071,40		2020	39389,65

An integral estimate is defined as the average of the two methods.

(28719,50+ 29928,15) / 2 = 29323,82 тис. грн.

In the form of tabl. 3.6 will submit the results of the integrated estimation of planned income for ZAMMLER UKRAINE LLC for 2018-2020.

Table 3.6

Integrated estimation of planned net income at ZAMMLER UKRAINE Ltd by different planning methods for 2018-2020

Indicators	2018	2019	2020
Possible volume of net income calculated by the economic and statistical method, thousand UAH	28719,50	32733,91	37309,46
Possible volume of net income is calculated by the method of average - sliding, thousand UAH	29928,15	34658,90	39389,65
Possible amount of net income - average, thousand UAH	29323,82	33696,40	38349,55

As can be seen from tabl. 3.8, according to the integral estimation at LLC "ZAMMLER UKRAINE", in 2018 income can be provided in the amount of 29323 thousand UAH.

Planning of the cost of sold products (goods, works, services) is carried out on the basis of the formation on the planned volume of proceeds from the sale of products (goods, works, services) and the level of cost of production (goods, works, services) to LLC ZAMMLER UKRAINE. 3.7. and 3.8.

Table 3.7.

The level of cost of sold products (goods, works, services) in 2013 - 2017, times

Indicators	2013	2014	2015	2016	2017
Level of cost of sales of goods	0,30	0,30	0,37	0,37	0,42

In our case we will use the average value (2018) of the cost price of the sold products (goods, works, services):

Table 3.8

Planning of the cost price of sold products (goods, works, services) for 2018-2020

Indicators	fact	plan		
	2017	2018	2019	2020
Average cost of sales, times	0,35			
Cost of sold products, ths. UAH	10304,47	11841,00	13476,13	10304,47:,

Planning of gross profit or loss (Table 3.9) is carried out according to the formula

$$GP_{pp} = NP_{pp} – C \quad (3.1)$$

where GP_{pp} - gross profit in the planned period.

NP_{pp} – net profit in the planned period.

C – cost.

For LLC ZAMMLER UKRAINE, the gross profit in 2018 will be:

GPpp = 29323 - 10304 = 19019,36 thousand UAH.

Table 3.9

Planning of gross profit or loss for 2018 -2020 years, ths. UAH.

Indicators	fact	plan		
	2017	2018	2019	2020
Gross profit	14692,10	19019,36	21855,40	24873,42

The level of operating income and expenses is shown in the table. 3.10.

Table 3.10

The level of operating income and expenses in 2013 - 2017, times

Indicators	2013	2014	2015	2016	2017
Operating income level	0.37	0.39	0.38	0.12	0.15
Operating expenses level	0.99	1.00	0, 95	0.69	0.62

In our case, we use the average (2018) level of operating costs.

The planning of operating expenses is shown in the table. 3.11.

Table 3.11

Operational Expenditure Planning for 2018-2020

Indicators	fact	plan		
	2017	2018	2019	2020
Operating Income level	0.28			
Operating Income, ths. UAH.	3801,50	8232,07	9459,58	10765,86
Operating expenses level	0,85			
Other operating expenses, ths. UAH	15742,10	24969,45	28692,73	32654,92

Planning financial results of operating activities (Table 3.12) is carried out as follows

$$FROApp = GP_{pp} + OOR_{pp} – AX_{pp} – SC_{pp} – OOE_{pp} \quad (3.2)$$

where $FROA_{pp}$ - financial result of operating activities in the planned period;

OOR_{pp} - other operating revenues in the planning period.

AX_{pp} - administrative expenses in the planned period.

SC_{pp} - sales costs in the planned period.

OOE_{pp} - other operating expenses in the planned period.

Table 3.12

Planning of the financial result of operating activity for 2018-2020, ths. UAH.

Indicators	fact	plan		
	2017	2018	2019	2020
Financial result of operating activities	2751,50	2281,98	2622,26	2984,36

Planning of financial results from ordinary activities before taxation (Table 3.13) is carried out according to the formula:

$$FROA_{bt} = IPC_{pp} + OFI_{pp} + OI_{pp} - FE_{pp} - LPC_{pp} - OE_{pp} \quad (3.3)$$

where $FROA_{bt}$ - financial result from ordinary activities before taxation;

IPC_{pp} - income from participation in capital in the planned period;

OFI_{pp} - other financial income in the planned period;

OI_{pp} - other income in the planned period;

FE_{pp} - financial expenses in the planned period;

LPC_{pp} - losses from participation in capital in the planned period;

OE_{pp} - other expenses in the planned period.

Table 3.13

Planning of the financial results before taxation for 2018-2020, ths. UAH.

Indicators	Fact	Plan		
	2017	2018	2019	2020
Income from equity participation	-	-	-	-
Other financial income	-	-	-	-
Other income	851,60	851,60	851,60	851,60
Financial expenses	-	-	-	-
Losses from equity participation	-	-	-	-
Other expenses	-	-	-	-
Financial results before tax:	-	-	-	-
Profit	3603.10	3133.58	3473.86	3835.96

Planning for income tax (tab. 3.14) is as follows:

$$IT_{pp} = (FROA_{bt} * R_{it}) / 100. \quad (3.4)$$

where IT_{pp} - income tax planning period;

R_{it}- the rate of income tax.

Planning of net financial result (tab. 3.14) is as follows:

$$FROA = FROA_{pp} - IT_{pp}. \quad (3.5)$$

whereFROA - financial result from ordinary activities.

Table 3.14

Planning of the net financial result for 2018-2020, ths. UAH.

Indicators	Fact	Plan		
	2017	2018	2019	2020
Profit	3603,10	3133,58	3473,86	3835,96
Income tax expense (income)	648,60	564,04	625,29	690,47
Net financial result:	-	-	-	-
profit	2954,50	2569,54	2848,56	3145,49

Since the probability of emergencies (accident, natural disasters) can not be predicted practically, for ZAMMLER UKRAINE LLC in 2018, the amount of financial result from ordinary activities will be a sum of net profit = 2569 thousand UAH

For planning, information form №2 was used. The resulting planning results are summarized in Table 3.15.

Table 3.15

"ZAMMLER UKRAINE" income and expense Plan for 2018-2020, ths. UAH.

Indicators	Fact	plan			Absolute deviation			Relative deviation		
	2017	2018	2019	2020	2018	2019	2020	2018	2019	2020
Net income from sales of products (goods, works, services)	25197.40	29323,82	33696,40	38349,55	4126,42	4372,58	4653,15	16.38	14.91	13.81
Cost of products (goods and services)	10,505.30	10,304.47	11,841.00	13,476.13	-200.83	1,536.54	1,635.13	-1.91	14.91	13 81
Gross profit	14,692.10	19,019.36	21,855.40	24,873.42	4,327.26	2,836.05	3,018.02	29.45	14.91	13.81
Other operating income	3,801.50	8,232.07	9,459.58	10,765.86	4430, 57	1227.51	1306.28	116.55	14.91	13.81
Other operating expenses	15742.10	24969.45	28692.73	32654.92	9227.35	3723.29	3962.19	58.62	14.91	13.81
Financial result from operating activities	2751,50	22 81.98	2622.26	2984.36	-469.52	340.27	362.11	-17.06	14.91	13.81
Other income	851.60	851.60	851.60	851.60	0.00	0.00	0 , 00	0.00	0.00	0.00
Financial result before tax	3603.10	3133.58	3473.86	3835.96	-469.52	340.27	362.11	-13.03	10.86	10.42
Expenses (income) income tax	648.60	564.04	625.29	690.47	-84.56	61.25	65.18	-13.04	10.86	10.42
Net financial result	2954.50	2569.54	2848.56	3145 49	-384.96	279.03	296.93	-13.03	10.86	10.42

Consequently, net income in 2018 compared to the year 2017 will decrease by 384 thousand. UAH. or by 13.03%, in 2019, compared to 2018, it will increase by UAH

279 thousand, or by 10.86%, in 2020, compared to 2019, it will increase by UAH 296 thousand, or by 10.42% .

The analysis of profitability of LLC ZAMMLER UKRAINE in 2018-2020 is presented in the table. 3.16

Table 3.16

Analysis of indicators of profitability estimation of ZAMMLER UKRAINE Ltd. in 2018 - 2020, %

	Fact	Plan			absolute deviation		
Indicator	2017	2018	2019	2020	2018	2019	2020
Return on sales	11.73	8.76	8.45	8.20	-2.96	-0.31	-0.25
Return on costs	28.12	24.94	24.06	23,34	-3,19	-0,88	-0,72

We will evaluate the efficiency of the logistics system of LLC ZAMMLER UKRAINE in the planned period, comparing the indicators with its main competitors. Calculate benchmarks for each company.

The indicators of the cost of services provided by ZAMMLER UKRAINE Ltd and its main competitors are shown in the table. 3.17.

Table 3.17

Indicator of cost of services of LLC ZAMMLER UKRAINE and its main competitors in 2020

Company	C, UAH.	D, km	P, UAH / km
1. TENT-TRANS, LLC	5512,74	1300,00	4,24
2. "ZAMMLER UKRAINE"	5122,95	1300,00	3,94
3 MM-TRANS, LLC	5262,16	1300,00	4.05
4. RABEN UKRAINE, LLC	6013,89	1300,00	4,63

Note: C - the cost of transportation .; D - distance of transportation; P - price of kilometer transportation.
Source: calculated by the author according to LLC ZAMMLER UKRAINE.

The lowest cost of transportation in 2020 will be at ZAMMLER UKRAINE, due to the creation of a logistics department at ZAMMLER UKRAINE LLC, and therefore more efficient logistics planning for cargo transportation and the corresponding reduction of transportation costs.

Indicator of the time of cargo moving abroad ZAMMLER UKRAINE Ltd. and its main competitors in 2020 are shown in the table. 3.18.

Table 3.18

Indicator of time of cargo moving abroad ZAMMLER UKRAINE Ltd.
and its main competitors in 2020

Company	Du, km.	Dl, km.	Su, km. / year	Sr km. / year	tc, year
1. TENT-TRANS, LLC	550	100	80	20	12
2. "ZAMMLER UKRAINE"	550	100	60	20	17
3 MM-TRANS, LLC	550	100	70	30	14
4. RABEN UKRAINE, LLC	550	100	70	20	15

Note: tc - time of the car's train, a year .; Du - distance of trip in the usual mode, km; Dl - the path on which the car moves at a limited speed, in km; Su - speed of the car in the usual mode, km / h .; Sr - speed at areas with restrictions, km / h.

Source: calculated by the author according to LLC ZAMMLER UKRAINE.

The smallest time of moving goods from companies in 2020 is expected in TENT-TRANS, LLC and MM-TRANS, LLC, due to the creation of a new staff unit, as a logistics manager, which will control the timely delivery of goods to counterparties.

The indicator of cars age at ZAMMLER UKRAINE LLC and its main competitors in 2020 is shown in the table. 3.19.

Table 3.19

The indicator of cars age at ZAMMLER UKRAINE LLC
and its main competitors in 2020

Company	Awc, year	Ac1, year	N1, pcs.	Ac2, year	N1, шт.	Ac3, year	N3, шт.
1. TENT-TRANS, TOV	11	12	7	11	7	8	2 2.
Tov «ZAMMLER UKRAINE»	10	10	7	10	4	8	2
3 MM-TRANS, TOV	10	11	7	10	4	8	2
4. RABEN UKRAINE, TOV	12	13	7	12	4	11	2

Note: Awc - average weighted age of the company's cars, Ac1 - age of the car, N1 - the number of cars in the company with age Ac1, Ac2 - age of the n-th car, N2- the number of cars in the company with the age of Ac2, Ac3 - age of k-th car, N3 - number of cars in company with age Ac3.
Source: calculated by the author according to LLC ZAMMLER UKRAINE.

The most up-to-date cars will be owned by ZAMMLER UKRAINE Ltd and MM-TRANS, LLC because the average age of the car is 10 years.

The dynamics of service quality indicators for ZAMMLER UKRAINE Ltd and its main competitors is shown in the table. 3.20.

Table 3.20

Indicator of quality of international transport services to ZAMMLER UKRAINE LLC and its main competitors in 2018-2020

Company	Share of cases of damage to cargo at delivery (%)		
	2018	2019	2020
1. TENT-TRANS, LLC	1.3	1.3	1 , 3
2. "ZAMMLER UKRAINE"	1.9	1.8	1.5
3 MM-TRANS, LLC	2.5	2.5	2.5
4. RABEN UKRAINE, LLC	1.9	1.9	1.9

Source: calculated by the author according to LLC ZAMMLER UKRAINE.

Consequently, the least cases of damage to cargo during delivery will be observed in 2020 at TENT-TRANS, LLC and LLC ZAMMLER UKRAINE.

The dynamics of indicators of reliability of arrival time at "ZAMMLER UKRAINE" Ltd. and its main competitors are shown in the table. 3.21.

Table 3.21

Indicator of reliability of arrival time for a counterparty to ZAMMLER UKRAINE LLC and its main competitors in 2018-2020,%

Company	Share of untimely delivery (%)		
	2018	2019	2020
1. TENT-TRANS, LLC	1,2	1,2	1 , 2
2. "ZAMMLER UKRAINE"	2,0	2,0	1,9
3 MM-TRANS, LLC	2,6	2,6	2,6
4. RABEN UKRAINE, LLC	1,8	1,8	1,8

Source: calculated by the author according to LLC "ZAMMLER UKRAINE".

Thus, the least cases of untimely delivery will be observed in 2020 by the company TENT-TRANS, LLC.

The largest experience in the international transport market will be in 2020 by LLC ZAMMLER UKRAINE (14 years old) and MM-TRANS, LLC (13 years old). The experience of TENT-TRANS, LLC and RABEN UKRAINE, LLC will be 10 years old.

Production capacities for LLC ZAMMLER UKRAINE and its main competitors in 2020 will be presented in the table. 3.22.

Table 3.22

Production capacities at ZAMMLER UKRAINE Ltd

and its main competitors in 2020

Company	Pe	Qc1, pc.	Lc1,	Qc2, pcs.	Lc2, t.
1.TENT-TRANS, TOV	125	5	15	5	10
2.TOV "ZAMMLER UKRAINE"	245	5	25	5	24
3 MM-TRANS, TOV	110	5	12	5	10
4. RABEN UKRAINE, TOV	135	5	15	5	12

Note: Pe - production capacity of the enterprise; Qc_1 - quantity of cars with load-carrying capacity Lc_1; Lc_1 - load-carrying capacity of the car of the r-th car; Lc_2 - number of cars with load carrying capacity Qc_2; Lc_2 - payload of car of k-th car.

Source: calculated by the author.

The largest production capacity for international transport will be in 2020 by LLC ZAMMLER UKRAINE. The criterion indicators of the efficiency of the logistics system of companies are summarized in the table. 3.23, based on Table. 3.17 -3.22. The rank is determined by each criterion, the best value is assigned rank - 1, the worst, rank - 4.

Table 3.23

Criterion performance of the logistics system

Company	Service cost (UAH)	Rank	Travel time (year)	Rank	Age of the vehicle (years)	Rank	Crash of unhaped delivery (%)	Rank	Untimely delivery(%)	Rank	Age of the company (years)	Rank	Total tonnage (t)	Rank
rates1. TENT-TRANS, LLC	4.24	3	12	1	11.06	3	1.3	1	1.2	1	10	3	125	3
2. "ZAMMLER UKRAINE"	3.94	1	17	4	9.69	1	1.5	2	1.9	3	14	1	245	1
3 MM-TRANS, LLC	4.05	2	14	2	10.23	2	2.5	4	2.6	4	13	2	110	4
4. РАБЕН УКРАЇНА, ТОВ	4,63	4	15	3	12,38	4	1,9	3	1,8	2	10	4	135	2

Source: compiled and calculated by the author according to LLC ZAMMLER UKRAINE

Based on the ratios of relative importance, presented in Table. 2.26 and the calculations of weight and specific gravity of the criteria of selection of the carrier, listed in Table. 2.27.

Determine the weight of the criteria for choosing a carrier in 2020 (Table 3.24).

Table 3.24

The weight of the criteria for the selection of the carrier, marks

Company	K1	K2	K3	K4	K5	K6	K7
1.TENT-TRANS, LLC	0.93	1.00	0.91	1.00	1.00	0.71	0.51
2. "ZAMMLER UKRAINE" »	1,00	0,71	1,00	0,87	0,63	1,00	1,00
3 MM-TRANS, LLC	0,97	0,86	1,00	0,52	0,46	0,93	0,45
4 RABEN UKRAINE, LLC	0.85	0.80	0.83	0.68	0.67	0.71	0.55

Thus, the cost of the service in 2020 will be the lowest LLC "ZAMMLER UKRAINE", the time of shipment is the smallest in TENT TRANS , LTD., The most modern cars in LLC "ZAMMLER UKRAINE", the best quality of services in TENT-TRANS, LLC, the reliability of the time of arrival is the best in TENT-TRANS, LLC, the largest experience in the market of international transport of LLC ZAMMLER U KRAINE ", ZAMMLER UKRAINE LLC will have the largest production capacity.

The calculation of the companies' rating in 2020 in the transport market will be presented in the table. 3.25.

Table 3.25

Rating of LLC "ZAMMLER UKRAINE" and its main competitors in 2020

Company	Rk1	Rk2	Rk3	Rk4	Rk5	Rk6	Rk7	Total rating	
								Bal	Rang
1. TENT-TRANS, LLC	0,3086	0,1392	0,0589	0,2126	0,1696	0,0365	0,0156	0,9411	1
2. "ZAMMLER UKRAINE"	LLC	0,3321	0,0982	0,0648	0,1843	0,1071	0,0510	0,0305 0,8682	2
3 MM-TRANS, LLC	0, 3231	0,1193	0,0648	0,1106	0,0783	0,0474	0,0137	0,7572	4
4. RABEN UKRAINE, LLC	0,2826	0,1113	0,0540	0,1455	0,1131	0,0365	0,0168	0,7599	3

Source: compiled and calculated by the author

Weakness of the "ZAMMLER UKRAINE" LLC will have transportation time. However, such positions as the cost of services, total tonnage.

The obtained results testify that the highest rating in 2020 will be received by TENT-TRANS, LLC (0.9491), and LLC ZAMMLER UKRAINE (0.8862). Thus, it is these companies that are the best in terms of evaluated criteria. Consequently, the rating of LLC ZAMMLER UKRAINE in 2020 will increase by 10.9% compared to 2017 (from 0.77831 in 2016 to 0.8682 in 2020), which is positive in the logistics system of the enterprise in the planned period.

Thus, ZAMMLER UKRAINE LLC optimizes the management of the transport system by increasing its competitive advantage and maintaining its second position in the ranking of its main competitors. In this case, net profit in 2018 compared with 2017 will decrease by 384 thousand UAH. or by 13.03%, in 2019, compared to 2018, it will increase by UAH 279 thousand, or by 10.86%, in 2020, compared to 2019, it will increase by UAH 296 thousand, or by 10.42% . The largest rating in 2020 will be TENT-TRANS, LLC (0.9491), and LLC ZAMMLER UKRAINE (0.8862). Thus, it is these companies that are the best in terms of evaluated criteria. Consequently, the rating of LLC ZAMMLER UKRAINE in 2020 will increase by 10.9% compared to 2017 (from 0.77831 in 2016 to 0.8682 in 2020), which is positive in the logistics system of the enterprise in the planned period.

CONCLUSIONS TO PART 3

Measures to optimize the structure of the transport system at ZAMMLER UKRAINE LLC: budget planning of the transport system, planning of transportation routes, planning of separation of cargoes into safe and non-secure, planning of the structure of the organization of the system of transport, planning of the number of vehicles at the enterprise and carrying capacity of cars; organization of the system of transport, separation of cargoes into safe and non-secure, organization of routes, organization of the logistics department; development of the motivational policy of the

employees of the enterprise, including employees of the logistics department, development of the motivation policy for the clients of the transport enterprise in the course of foreign economic activity, introduction of a system of discounts for foreign economic counterparties; control over the implementation of the budget of the system of transport, control of transportation routes, control of the division of cargos into safe and non-secure, monitoring the system of motivation of employees, monitoring the system of incentive policy for counterparties, control the number of employees of the logistics department; the regulation of the logistics department in conjunction with other departments of the enterprise, the control of horizontal and vertical links in the logistics department.

The management of LLC "ZAMMLER UKRAINE" the implementation of TMS - system of LLC "ZAMMLER UKRAINE" is UAH 26910, and every year UAH 4000 for service. In modern conditions of globalization, there is an improvement and expansion of the portfolio of transport services by transport and logistics operators, namely the introduction of modern specialized software tools such as TMS. In general, the value of TMS solutions can be demonstrated by simulating the existing MM TRS LLC ZAMMLER UKRAINE and "what-if" scenario analysis. Carrying out the diagnostics of a transport company can reveal problems and develop recommendations for their elimination on the basis of the TMS-system.

The management of "ZAMMLER UKRAINE" Ltd. offers software, considering the cost and requirements for implementation: Extend - 13 thousand dollars. USA. (at the rate of the NBU on 08.10.2018 28.08 UAH / USD - 365 040 UAH). Implementation of the warehouse management automation system at "ZAMMLER UKRAINE" LLC in most cases does not begin without compelling reasons and solves specific practical tasks. The ultimate goal of any improvement is to generate profits, so the result of the implementation of the warehouse information system is expected to result in the next step in achieving the goal. Accordingly, before starting the implementation project, it is necessary to calculate the benefits that this solution will bring to the company, whether the investment will be repaid, or whether automation should be carried out. Subsequent

research is subject to the impact of the proposed measures on the main indicators of the enterprise.

Optimization of transport system management ZAMMLER UKRAINE LLC provides strengthening of its competitive advantages and maintaining the second position in the rating of major competitors. In this case, net profit in 2018 compared with 2017 will decrease by 384 thousand UAH. or by 13.03%, in 2019, compared to 2018, it will increase by UAH 279 thousand, or by 10.86%, in 2020, compared to 2019, it will increase by UAH 296 thousand, or by 10.42% . The largest rating in 2020 will be TENT-TRANS, LLC (0.9491), and LLC ZAMMLER UKRAINE (0.8862). Thus, it is these companies that are the best in terms of evaluated criteria. Consequently, the rating of LLC ZAMMLER UKRAINE in 2020 will increase by 10.9% compared to 2017 (from 0.77831 in 2016 to 0.8682 in 2020), which is positive in the logistics system of the enterprise in the planned period.

CONCLUSIONS

The logistics system includes materials that provide the movement of goods in the logistic chain (warehouses, loading and unloading mechanisms, vehicles), inventories and means of management of all links in the chain. Under the logistics system is understood organizational and managerial coordination mechanism, which enables to achieve the effect due to clear coherence in the actions of specialists of various services involved in the management of material flow. The purpose of the logistics system is to deliver, at a given location, the required quantity and range of goods and products prepared as a maximum to production or personal consumption at a given level of expenses.

The formation of the enterprise logistics system will ensure a smooth transition from one internal production process to the next, it is a universal instrument for increasing competitiveness, which can eliminate obstacles to the formation of an internal commodity-information financial system for a specific enterprise - a subject of foreign economic activity and optimally adapt it to external macroeconomic systems. Due to the formation of the logistics system of the enterprise - the subject of foreign economic activity, the quality and productivity of labor of the workers increases, which indicates the motivational properties of logistics for the personnel. The operation of the logistics system allows you to combine all internal processes of the enterprise into a single whole, coordinate their activities for optimization and conflict them with the processes occurring in the external environment in order to maximize profits.

When choosing a carrier, specially designed ranks of indicators are often used: reliability of delivery time, costs (tariffs) for transportation, total delivery time, readiness (flexibility) of the carrier to changes in tariffs, financial stability of the carrier, availability of additional cargo handling equipment, availability of additional services for the assembly and delivery, storage of cargo (loss, theft), forwarding, personnel qualification, monitoring, readiness (flexibility) of the carrier to service changes, flexibility of mar rutiv, batch service, procurement procedures, quality sales organization of transportation services, special equipment.

ZAMMLER UKRAINE GROUP - an international group of logistics companies that provides services in the field of automobile, maritime and air transportation, customs brokerage, as well as a full range of warehousing services. ZAMMLER UKRAINE - Ukrainian 3PL operator. The group of companies includes 6 companies, represented by 8 offices. Representative offices of ZAMMLER UKRAINE GROUP are located in Ukraine, Poland and China. The first company of the group "ZAMMER UKRAINE" LLC was founded in 2007, the central office is located in the city of Kiev (Ukraine). ZAMMLER UKRAINE GROUP - Ukrainian logistics company, which was the first among the Ukrainian 3PL operators to open its representative offices in international markets. ZAMMLER UKRAINE Group companies provide a full range of services for the transportation of goods of any complexity in the main areas of Europe, Asia and America, as well as warehouse, logistics, customs brokerage and export-import services. Net income in 2016 compared to 2015 increased by 40.61%, in 2017, compared to 2016, it increased by 13.88%. Net profit in 2016 compared to 2015 increased by 97.65%, in 2017, compared to 2016, it increased by 86.13%. The profitability of the operation during 2013-2017 has increased, in 2016 compared to 2015 it has increased by 2%, in 2017 compared to 2016 it increased by 5%. Financial autonomy in 2015 was 16%, in 2016 it was 22%, in 2017 it was 24%, which indicates that the financing of the enterprise at its expense was not at the proper level, which is negative in the company's activity.

In the period from 2013 to 2017, net income from foreign economic activity grew, in 2016 compared to 2015 it increased by 32.6%, in 2017 it grew by 18.2% compared to 2016. The largest volume of foreign-economic operations of LLC Zammler Ukraine was carried out with contractors from Russia, Belarus and the United Kingdom. In 2015, the volume of operations with residents of Russia amounted to 1803 thousand UAH, since 2016 began a recession, in 2017 - the decline to 239 thousand UAH. The largest share of net income from foreign economic activity of the company in 2013 - 2017 was formed by operations with Russia, Byelorussia and Great Britain. They accounted for 15%, 9.23% and 8.65% respectively in 2013, 1.1%, 11.19% and 10.24% respectively in 2017, respectively. The largest amount of net income from ZED is

Zammler Ukraine LLC "We will receive from the carriage of ordinary goods 3087 thousand UAH. in 2013 and UAH 5260 thousand. in 2017 the largest share of net income from foreign economic activity of the enterprise is observed for the carriage of ordinary goods in 2015 - 24,20%, in 2016 - 23,10%, in 2017 - 24,20%. The effect of foreign economic activity increased over the period of 2013-2017 by 606 thousand UAH. and efficiency has increased by 0.01 times, which indicates improvement of foreign economic activity at the enterprise.

The weak sides of LLC Zammler Ukraine are: transportation time, untimely delivery. The strengths are: the cost of service and the modernity of vehicles. The obtained results testify that the highest rating was received by TENT-TRANS, LLC (0.9382), and LLC Zammler Ukraine (0.77831). Thus, it is these companies that are the best in terms of evaluated criteria. Thus, based on the analysis of logistics system of LLC "Zammler Ukraine", we can conclude that the logistics system is effective for almost all criteria. Necessary to increase the efficiency of the logistics system is to reduce the time of movement of goods, improve the quality of service, reliability of arrival time. When choosing a carrier, consumers of transport services in foreign markets are most likely, based on criterion indicators, choose LLC "Zammler Ukraine" or TENT-TRANS, LLC.

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