

INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

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Faculty of Administrative and Financial Sciences - E - Marketing and Social Communication, Department of International Marketing Economics, Irbid National University, Irbid Amman International Road - Near Naima Triangle, 21110 Irbid, Jordan, hassan_ababneh@inu.edu.jo (corresponding author)

Svitlana Popova

Faculty Economics and Management Otto von Guericke University of Magdeburg, Universitätsplatz 2, 39106 Magdeburg, Germany, EU, olha.popova@web.de

Tatyana Ibragimkhalilova

Faculty of Economics, Department - Marketing and Logistics, Donetsk National University, Universitetskaya street 24, Donetsk, 283001, Ukraine, itv2106@mail.ru

Elena Tomashevskaya

Department of Control and Analysis of Economic Activity Donetsk National University of Economics and Trade named after Mikhail Tugan-Baranovsky, Shchorsa street 31, Donetsk, 83050, Ukraine, elena.tomashev@gmail.com

Olha Popova

Department of Management and Financial and Economic Security, Donetsk National Technical University, Shybankova Square 2, Donetsk region, 85300, Ukraine, olha.popova@donntu.edu.ua

Myroshnychenko Ganna

Department of Management and Financial and Economic Security, Donetsk National Technical University, Shybankova Square 2, Donetsk region, 85300, Ukraine, hanna.myroshnychenko@donntu.edu.ua

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Abstract: The main theoretical aspects of the features of the formation of the logistics activities of organizations in the modern conditions of the transformation of the world market are considered. The conceptual necessity of using an integration approach in organizing logistics activities, taking into account the influence of factors of the macroeconomic environment, has been substantiated. The main aspects and features of intrafirm and interfirm logistic integration of organizations are interpreted and reasoned, which, in contrast to existing approaches, makes it possible to distinguish this process from its influence on the main activity, taking into account the risk factors. The conceptual factors contributing to the formation of integration processes in the organization in modern conditions of the transformation of the world market are highlighted. It is argued that the modern realities of doing business, regardless of the type of economic activity, necessitate the use of an integrated approach in management when organizing logistics activities. With the help of economic and statistical analysis of the logistics services market in the world, the intensity and need for the use of intrafirm logistics integration are substantiated. The developed theoretical and methodological approach of the integration organization of logistics activities can be applied in practice, taking into account the peculiarities of the economic activities of organizations in modern conditions.

1 Introduction

The globalization processes of the global economy intensify the need to search for innovative ways and forms of business organization. These processes greatly complicate the relationship, between participants in the processes of production, distribution and exchange as a result of a number of systemic changes and trends in the global economy, which necessitates the application and use of more innovative approaches to management. Logistic activity is no exception and requires the use of an integrated approach in its functionality, which involves combining various functional areas and their participants within a single logistics network in order to optimize it.

It is worth noting that it is the desire to unite in a holistic process: supply, production, distribution, is the only possible prospect in solving the issues of achieving goals

within the logistics system at the micro level, and managing end-to-end material flow, starting from the end user and covering all suppliers of goods, services and information that add value to consumers and other interested parties, at the macro level. It should be noted that all macroeconomic imbalances and trends in changing the global economy affect the development of logistic detail, which in turn leads to a reduction in the product life cycle and decision-making time, which determines the relevance of the integrated approach to organizing the logistics activities of organizations.

INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

1.1 Theoretical aspects of the development of an integration approach in the organization of logistics activities of organizations

The relevance and need to study this issue have been observed for many years. The main theoretical aspects of the application of the logistic approach in managing the organization are considered in the writings of the group of the following scholars such as: [1-6], which distinguish logistics as a separate science of management and consider the basic conceptual provisions of its effective organization. However, the presented views do not quite correspond to modern realities and take into account all the main challenges that top-management companies face in modern business conditions and require more detailed analysis and research. Particular attention in the basic principles of organizing logistics activities deserves the approach of a group of scientists: [7-14], which consider the principles of organizing the logistics of organizations based on the basis of an integrated approach to management based on institutionalism. This approach is fundamental in this direction but does not take into account the whole range of factors affecting the management process and requires a more in-depth study. There is a fairly large number of studies in the field of logistics and its organization in various aspects and types of economic activity, we consider the main approaches in these studies.

The main aspects of ensuring the effectiveness of the logistics of organizations are considered in the scientific works of scientists: [15,16], who believe that the organization of logistics activities of organizations should always be effective, which will ensure the competitiveness and profitability of the organization. Features of the impact of information technology in integrated logistics are given attention in the works [17], and the study of integrated logistics strategies [18], the relationship of strategies, structure, process and performance in integrated logistics as an integrated production process [19-21]. These approaches conceptualized the main aspects of the use of logistics in economic sectors and its main features, but do not take into account the volatility of the environment, which has a significant impact on the logistics process of the organization.

The development of integration processes in logistics activities contributed to the selection of research topics regarding relations with integrated logistics and customer service by the following group of scientists: [22-25], which made it possible to determine the need for building the logistics process as an inextricable process of organization, which is quite relevant in modern business conditions. Outsourcing of integrated logistics functions was considered by scientists: [26-28], who believe that the effective organization of logistics is the use of outsourcing services, but in modern conditions this does not always allow achieving the strategic goals of the organization. The main issues of improving third-party logistics through integrated management are considered in the work of a

group of scientists: [24,26,29], which highlight the need to use an integrated logistics management approach for an organization, but not a unified approach to this process. However, despite numerous scientific studies, many vague and debatable issues remain within the framework of organizing an efficient organization logistics process and the key specifics of an integrated approach in logistics, which helps to unify functional different areas and their participants within a single logistics system in order to optimize it, which requires more in-depth analysis and research.

One of the main economic trends is the formation of new factors in the effectiveness of logistics, the transformation of its traditional areas of application and the emergence of a qualitatively new strategic innovation system. It should be noted that in economically developed countries, logistics has long been considered a strategically important component of the economy, which is quite reasonable, since the resource model and fragmented logistics have been replaced by innovative, which is based on information, organizational and infrastructure integration in supply chains. Long-term success in the market and increased competitiveness is facilitated by the integration of logistics at various management levels. Integration as an economic category is the process of achieving the unity of efforts of various subsystems in fulfilling the organization's tasks, both of a full cycle, including design, production, and distribution of products and services [26]. However, this development process, which is directly related to the unification of individual parts into a single whole, which allows for the long-term rapprochement of their general goals.

1.2 Features of the organization of logistics activities of organizations in modern conditions

The integrated approach creates a real opportunity to combine the functional areas of logistics by coordinating the actions performed by the independent links of the logistics system, sharing a common responsibility within the framework of the objective function, which is a source of customer value and competitive advantage. The process of improving the relationship of business entities based on systemic principles with the extraction of the economic effect for both enterprises and consumers determines the usefulness of logistics integration. It is integration (cooperation) that minimizes overhead costs and duplication of functions. In general, it should be noted that the integration of logistics allows companies and their partners in the supply chain to act as a whole, which lead to increased productivity throughout the chain. For a more detailed study of the logistics features of organizations in modern conditions, it is necessary to consider the main stages and components of the logistics process, which are presented in Figure 1.

INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

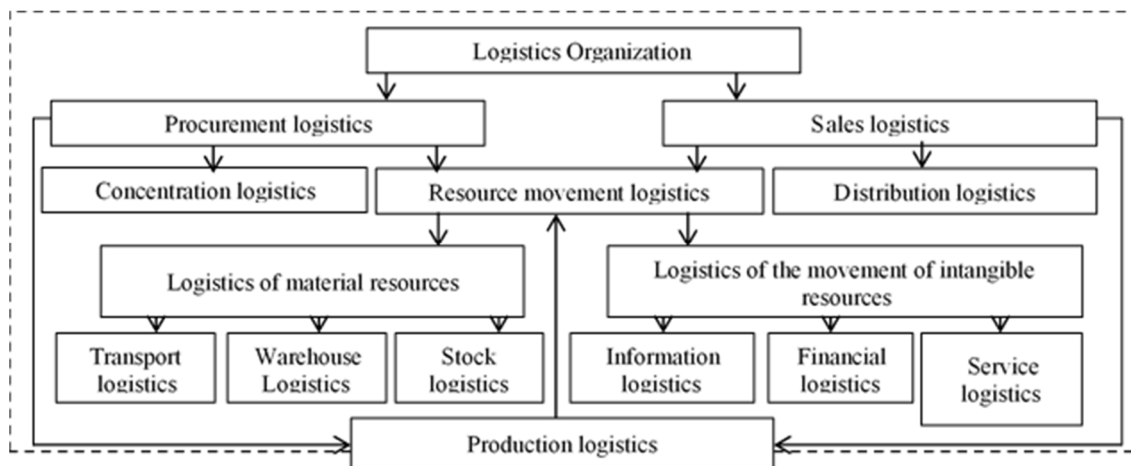


Figure 1 The main stages and components of the logistics process of the organization in modern conditions
Source: Developed by the author

Logistics is seen as a field of competence that connects a company with its customers and suppliers. Consumer information flows (and from them) enter the company in the form of sales data, forecasts and orders. This information is translated into specific production and procurement plans. The incoming material resources begin

the flow of stocks, which gradually acquire added value, the movement of which ends with the transfer of ownership of finished products to consumers. Thus, in this single process, two components are distinguished: the stock flow and the information flow. The main aspects of logistics integration are presented in Figure 2.

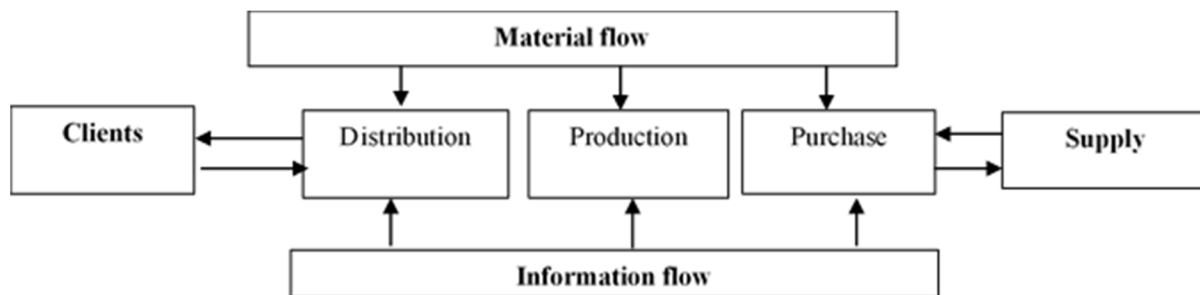


Figure 2 Integration of logistics activities of the organization
Source: Developed by the author based on [16]

Studying the specifics of integrated logistics [20] and [26] they focus on the following main aspects: 1) integration of such integrators as the process, management-marketing concepts, material and information flows; 2) the main focus is on overall efficiency, and not on the performance of individual logistics links; 3) management of production, distribution and supply are combined, i.e. all possible disagreements between functional areas and corresponding departments are eliminated; 4) minimizes the contradictions between the manufacturing sector and marketing; 5) there is a systematization and streamlining of information flows.

It should be noted that based on the functional principle, integrated logistics promotes the involvement of all structural divisions in ensuring the product life cycle, starting with the development of an idea and ending with an after-sales service. Thus, two areas of integration in logistics can be distinguished: 1) intra-company integration involves the integration of logistics functions at the enterprise level; 2) intercompany - facilitates

integration across the entire supply chain. Common to these integrations is the cross-functional focus. The peculiarity of integrated internal logistics is the creation at the enterprise level of the conditions for the interconnection of supply logistics, internal production and distribution logistics.

2 Methodology - Peer Review Process

The globalization of the world financial market and the high level of risks that are generated by the processes of uncertainty and volatility, both external and internal environment of organizations, necessitate a revision of existing tools and approaches to management. This transformation and necessity also influenced the peculiarities of the conduct and principles of organizing the logistics activities of organizations. In order to determine the theoretical aspects of the development of logistics activities of organizations, taking into account the transformation of the financial market, the main methods

INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

of theoretical generalization and comparison are used in the work. To form a unified approach, tools were used in structural and logical analysis in order to highlight the key tools of the logistics activities of organizations and the main directions in the development of integration management. The methodological component was the data on the grouping of countries by the level of development of the international logistics index. On the basis of economic and statistical analysis, conceptual factors are identified that contribute to the formation of integration processes in an organization in modern conditions. With the help of economic and statistical analysis of the world logistics market, the intensity and necessity of using intra-firm and inter-firm logistics integration are substantiated.

3 Result and discussion

This interconnection is carried out in the form of a single end-to-end function that implements the functional cycle of logistics. Intercompany integrated logistics guarantees, on a supply chain scale, the interconnection of all types of logistics activities between participants. The interaction is carried out in a consistent manner in the form of a single end-to-end function until the final need is satisfied, i.e. networks are being created to integrate logistics functions. The effectiveness of intercompany integrated logistics ensures compliance with the following rules: all participants in the same supply chain must cooperate to maximize the satisfaction of the end user of the enterprise, while avoiding competition in the supply chain. As noted by a group of scientists [15] and [26], they emphasize the intercompany integration of managerial actions, which is based on an agreement between independent enterprises that compensates for weaknesses and creates sustainable competitive advantages and contributes to achieving a synergy effect. Among the main prerequisites that contribute to the activation of the integration processes of the participants in the logistics market, it should be noted: 1) the development of information technologies, allowing, on the one hand, to effectively manage all areas of production and business; and on the other, to reduce logistics costs; 2) assessment of logistics services by consumer enterprises as a strategic element in the development and implementation of competitive advantages, respectively, a better (informed) choice of logistics operators; 3) prospects and trends for the introduction of new organizational forms - logistics networks; 4) understanding of logistics as a tool for creating and implementing competitive advantages.

Companies and organizations that use an integrated logistics approach are united into logistics networks and get a number of opportunities, such as: rationalization (optimization) of logistics processes and operations, leading to lower logistics costs for all participants in the logistics market; expanding the range of logistics services through the introduction and development of new technologies of logistics processes; increasing the number of customers for all integration partners; reduction of

logistic risks; improving the quality of the logistics services provided, without increasing its cost to consumers; strengthening the competitive position of logistics operators in the logistics services market. It should be noted that the logistics services market may also be involved in the integration process. In this context, the integration process is aimed at strengthening ties between business entities, that is, consumers and suppliers of logistics services, as well as the state, combining them into a single whole. As noted, [26,27], not all companies can perform a full range of logistics operations. Typically, firms use the logistics services of third parties, that is, companies transfer part of their logistics functions to third parties. It is the ability to ensure the fulfilment of a particular logistic function that has become the main classification element of companies - logistics intermediaries.

Based on multifaceted scientific research, it is worth noting that most often they resort to third-party organizations to carry out the following logistic functions: providing information on tracking cargo and managing transportation; check cargo invoice; organization of freight traffic from ports or to ports; customs clearance and customs declaration; preparation of freight and export-import documentation; Warehousing local transport coordination (on the basis of the shipper); negotiation of transport tariffs; communication with foreign suppliers; assembly, testing of products, as well as marking and other operations; selection and verification of the reliability of the performance of their duties by the freight carrier.

The market of logistics services at the present stage is characterized by a process of fundamental changes that have a cardinal effect on the scale, role of the activities of its participants, as well as the structure of their relationship. The level of service and, as a result, the structure of the organization of classes of logistics operators (1PL, 2PL, 3PL, 4PL, 5PL) are dictated by the global logistics market and the need of companies for this type of service. In modern business conditions, the growth of the global logistics market is due to the following factors: 1) the development of international trade flow; 2) globalization of the economy; 3) the desire of enterprises to optimize costs in all parts of the supply chain; 4) the concentration of enterprises on activities related to key competencies and outsourcing of non-core areas in their work; 5) an innovative approach to product distribution and marketing (electronic methods and ways of doing business). The rating of countries by gradation of the international logistics efficiency index as of 01.01.2017 is presented in Figure 3.

The development trends of the logistics services market are confirmed by the results of annual research. Among them, a number of major foreign resources can be distinguished: an annual analytical review of the results of the development of logistics according to the World Bank methodology (Logistics Performance Index); Logistics Market Development Index in Emerging Economies,

INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

developed by the Transport Intelligence Research Institute (UK); Annual State of Logistics Report provided by the Council of Supply Chain Management Professionals. The annual analytical review of the results of logistics development using the World Bank methodology (Logistics Performance Index) is compiled in order to identify problems and opportunities in the field of logistics efficiency by measuring the convenience of the logistics system.

The calculation of the logistics performance index for each country is based on surveys of regional, national and international logistics operators, freight forwarding companies that provide services for organizing the transport of goods by various modes of transport, as well as warehouse operators. The main criteria for evaluating the effectiveness of logistics according to the World Group Bank include:

- Customs - the effectiveness of customs and border clearance (speed, simplicity and predictability of formalities);

- Infrastructure - the quality of infrastructure related to trade and transport (for example, ports, railways, roads, information technology);

- International shipments - simplicity of organizing international shipments at competitive prices.

- Logistics quality and competence - the quality and competence of logistics services provided by market operators - logistics operators, transport companies, customs brokers, etc.

- Tracking and Tracing - tracking the passage of goods.

- Timeliness - timely delivery of goods.

The methodology for calculating the logistics performance index is not the only one. The Transport Intelligence Research Institute (UK) has developed the Emerging Market Logistics Index (EMLI), which reflects the attractiveness of the logistics market for foreign investment, as the Logistics Market Development Index for Emerging Economies. The dynamics of the logistics development index in countries with a developing economy for the period from 01.01.2013 to 01.01.2017,% is presented in Figure 4 is presented in Figure 4.

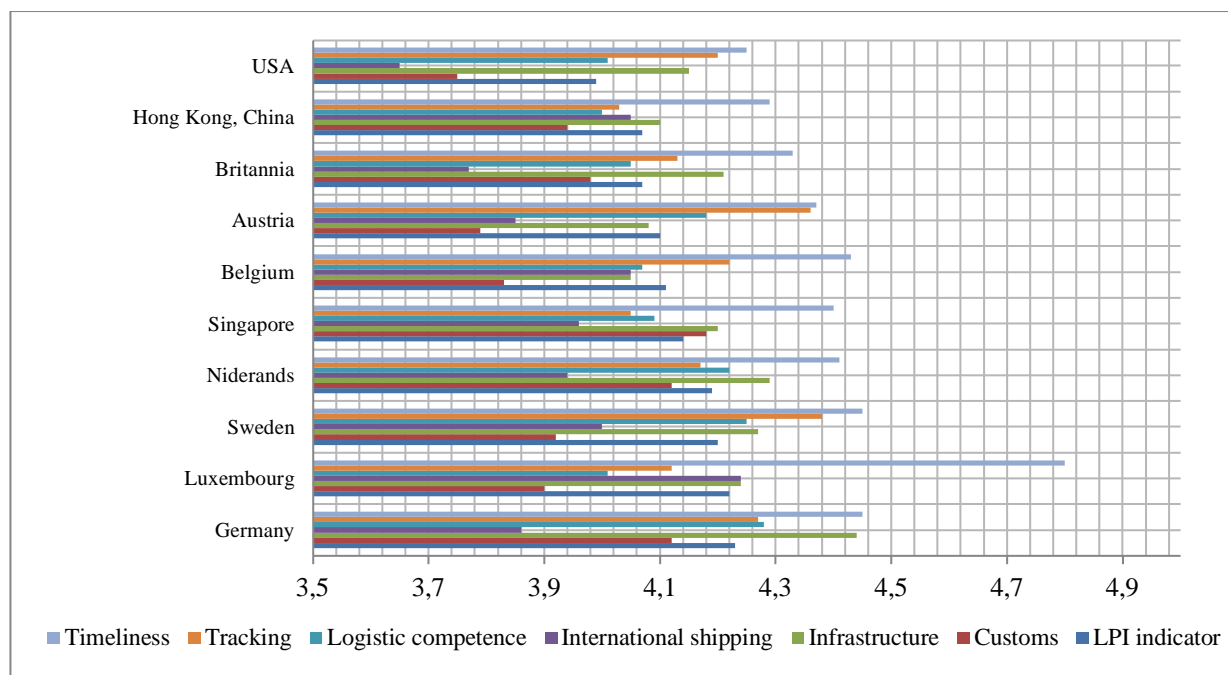


Figure 3 Rating of countries by gradation of the international logistics efficiency index as of 01.01.2017,%
Source: Developed by the author based on [29,30]

INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

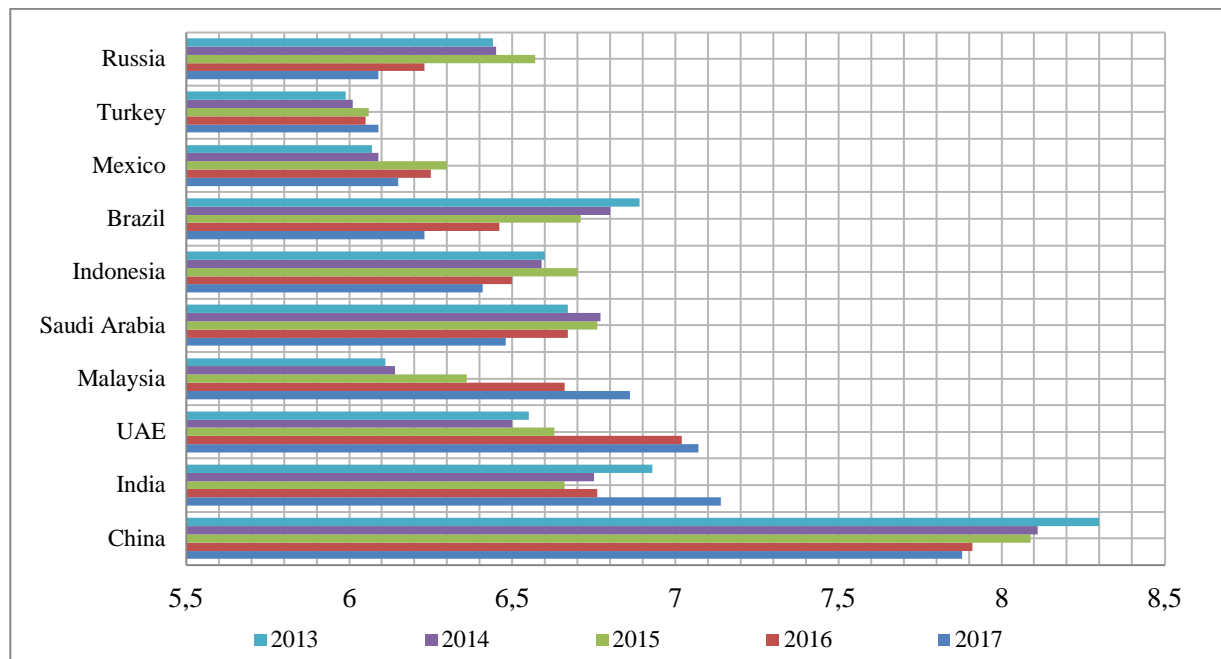


Figure 4 The dynamics of the logistics development index in countries with a developing economy for the period from 01.01.2013 to 01.01.2017,%

Source: Developed by the author based on [30]

According to the TOP-50 Rating of global logistics companies of 3PL-operators, the gross income of the 50 largest logistics companies in the world in 2016 amounted to \$ 229.2 billion, which is 1.18% more than in 2015. From the perspective of the business as a whole, logistics exists to ensure that inventories arrive at the right time at the right place and with the right benefits at the lowest total cost. Reserves in themselves are of little value until they are placed there and then, where and when they are required to ensure the transfer of property from hand to hand or to create added value. If a company fails to constantly comply with this condition of place and time, it will have nothing to sell. In order for logistics to bring maximum strategic benefits, all of its functional links must work on the basis of integration. Success in each such link makes sense only if it contributes to the efficiency of the integrated logistics system as a whole. In fact, achieving the strategic goals of any business enterprise depends on the integration of logistics functions. The feasibility of the purpose of logistics depends on the successful implementation and coordination of specific functions related to physical distribution, production support and supply.

The second section of the chapter discusses the scheme of integration of logistics operations and the role that belongs to the management of inventory and information flows. At a large manufacturer, logistic operations sometimes consist of thousands of such movements, which ultimately come down to a single result: product delivery to one user, retailer, wholesaler, dealer or other consumer. At a major retailer, logistics covers a wide range of activities, from purchasing goods for resale to finding and attracting new customers and delivering purchases to

customers. In an ordinary hospital, logistics begins with the supply of necessary resources, and ends with the full provision of surgical procedures and postoperative treatment of patients. The main thing is that in any business, regardless of size and type, logistics plays an important role and requires the continued attention of managers.

Integrated logistics allows you to most effectively realize the goals of business and the state. Profit maximization will be influenced by factors such as competitive position (positioning), competitive price, low costs and industry structure. Management is based on the method of involving individual interconnected elements in an integrated process (integrated logistics) in order to prevent irrational losses of material and other resources. Thus, logistics should be seen as an integrated process to ensure the creation of use value at the lowest cost. Until recently, the main success factor was considered exclusively market orientation. However, to ensure stable profitability, enterprises must choose and combine resources correctly. The concept of resource orientation in economically developed countries inevitably leads us to rethink the role of integrated logistics.

From this point of view, integrated logistics has the following features that have a direct impact on efficiency: the formation and use of key competencies, which involves a particularly effective combination of resources that competitors do not have; maintaining stable core competencies in the long-term strategic perspective; the ability of customers to benefit for themselves, the willingness to pay for additional services. An integrated logistics approach using a “value chain” is targeted at all

INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

participants. Value chains (supply chains) contain five areas of effectiveness: communication with suppliers; communication with consumers · technological processes within one unit; Logistic processes between departments within the enterprise; logistic ties between enterprises in the supply chain. The enterprise management system, which is built according to this type, is aimed at a significant reduction in costs by accelerating capital turnover, reducing lead times, and coordinating work with a network of suppliers. Thus, it should be noted that integrated logistics is a holistic process, which includes information and organizational support for the post-production stages of a product’s life cycle: purchase, delivery, implementation, maintenance, including the supply of spare parts. The main goal is to constantly improve processes in all parts of the supply chain, reduce costs and maintain products and goods.

Logistic integration seems to be a multidimensional process of building logistics systems. This process takes place in different directions and not in the abstract market model of entrepreneurial activity, but in the space of specific economic ties. There is always an initiator of

building such a system - a company in which, at the strategic level of management, logistics is perceived as a competitive development strategy. Only under this condition, the search for options for using the logistic approach in building a firm’s strategy can begin. At the same time, the search begins for new forms of organizing relations with all subjects with which the company interacts in the value chain. When the logistics management goes beyond the boundaries of a specific legally and geographically separate company, the most difficult stage in the construction of a logistics system begins.

The rapid spread of this concept is hindered by fear of contacts with competitors and losses that can be incurred in the course of competition. However, it should be noted that the introduction of a new approach to managing an organization or expanding its activities is always crowned with an expansion in the scope of activity, income and the level of competitive position in the market. Gross income of key logistics operators in the world as of 01.01.2017 is presented in Figure 5.

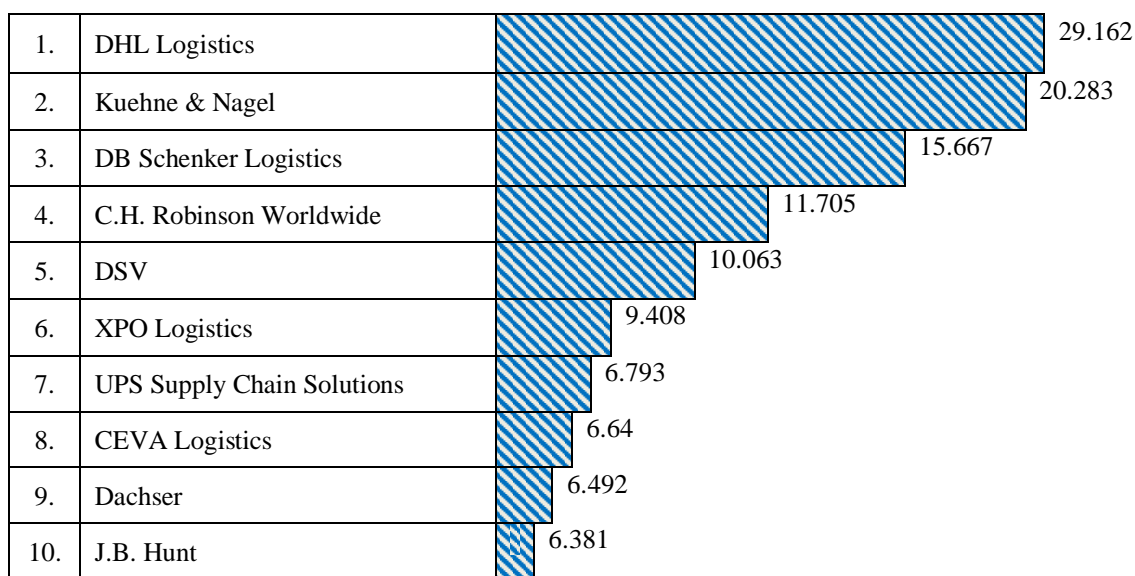


Figure 5. Gross income of key logistics operators in the world as of 01.01.2017 (billion dollars. USA)

Source: Developed by the author based on [30-32]

With the dynamics of key indicators of profitability of the key operational logistics market in the world as of 01.01.2017, DHL Logistics has become a leader in the provision of logistics services with a gross income of 29.162 billion. dollars. USA. With a global network in more than 220 countries, DHL is the most international company in the world and can satisfy a wide range of logistics services. Significant demand for logistics services from industrial and trading companies is an indicator of the intensity of the application of intercompany logistics integration. The competitive advantages of enterprises

from the introduction of an integrated approach are achieved through: 1) increase the efficiency of the enterprise by reducing operating logistics costs and, as a result, reducing the cost of production; 2) increase the adaptation of the enterprise to constant changes in the environment; 3) risk reduction; 4) reducing the duration of operational and logistics cycles.

Logistics management is more often understood as a strategic parameter. Logistics is involved indirectly in the creation of value in the enterprise, but this is where the huge potential lies in the field of cost optimization, and

INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

therefore in the field of improving the profitability of all areas of the enterprise. Until now, the activities of individuals. Responsible for logistics in enterprises, focused on creating partnerships in the field of outsourcing. This trend exists today and will develop. This trend covers all areas of activity that can be well or very well performed by organizational units that are not part of the enterprise structure.

Service providers undertake more or less independent functions in accordance with their tasks or in accordance with their capabilities. However, the quality of logistics services and the costs of logistics as part of outsourcing do not always live up to expectations. As an alternative to discussion today, the concept of horizontal cooperation is proposed. It is a union of competitors, that is, a union of equal partners in the common market. This concept has many advantages over the concept of partnerships in the framework of outsourcing.

Logistic integration allows you to optimize the relationship between business entities, which increases the efficiency of each individual enterprise and the integrated system as a whole.

4 Conclusions

In modern business, logistics is the main tool that provides a holistic production process for the organization. Logistics is becoming a real organizational, technological and conceptual pillar of business entities and one of the most effective tools for the innovative development of enterprises in a developed market economy. It is taught that in the conditions of a volatile operating environment for companies and organizations, ensuring the efficiency of operations is a key guideline, the achievement of which is impossible without logistics. It has been established that logistics is a synthesis of many methods and principles of such traditional fields of activity as marketing, production, finance, freight transportation, it should also be noted that the use of logistics concepts allows for the tight integration of production, logistics, transport and information transfer on the movement of goods into a single system.

The key aspects of the organization of logistics in organizations in modern business conditions are substantiated, highlight the key stages and components of each type of logistics. The provisions considered regarding the unification of functional areas and their participants within the framework of a single logistics system, which suggests the need for an integrated approach in logistics. It is the development of information technologies, the introduction of new organizational forms - logistics networks, as well as the transformation of logistics organization forms that contribute to the integration of logistics processes.

The feasibility of combining logistics functions at the enterprise level is due to internal integration; integration across the entire supply chain - intercompany. At the same time, it should be pointed out that inter-company logistics integration allows for the rationalization (optimization) of

logistics processes and operations; expanding the range of logistics services; increasing the number of customers for all integration partners; reduction of logistic risks; improving the quality of logistics services; strengthening the competitive position of logistics operators in the logistics services market. An in-depth analysis and critical study of the existing approaches to organizing the logistics of organizations in modern business conditions made it possible to determine at the global level the significant importance of logistics in the management system. The analysis and evaluation of the development of logistics services in the world in the context of leading logistics operations allowed us to state that there has been significant demand recently for logistics services from industrial and trading companies, which is an indicator of the intensity of the use of inter-company logistics integration in modern business conditions.

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INTEGRATED APPROACH IN ORGANIZING LOGISTIC ACTIVITY

Hassan Ali Al- Ababneh; Svitlana Popova; Tatyana Ibragimkhalilova; Elena Tomashevskaya; Olha Popova; Myroshnychenko Ganna

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Review process

Single-blind peer review process.