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COMPARATIVE CHARACTERISTICS OF LOGISTIC DISTRIBUTION FORMS FOR MATERIAL FLOWS IN RETAIL TRADE

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The logistics system for the distribution of goods is the basis for the development of e-commerce. A distinctive feature of the new logistics and distribution infrastructure of e-commerce is its global nature, due to the possibility of information technologies. The advantages of global distribution of products provided to manufacturers by electronic commerce [1] are the following:

– e-commerce provides companies with access to a larger number of markets and suppliers (it does not matter where to send the goods after payment, the cost of delivery is calculated and paid by the buyer separately);

– e-commerce promotes access to information in the "24-7-365" mode and eliminates traditional paper documents (the buyer and the sender of the cargo can at any time receive information about the location of the goods and predict the date of their receipt);

– e-commerce provides faster payments and decisions at all links of the supply chain (buyers, when purchasing a product, make a full advance payment for its delivery, which is then redistributed among all participants of the distribution network).

As a result, local sellers can no longer take advantage of the geographic advantages of local markets, as goods become equally available to all buyers, regardless of their location. They are forced to expand the scope of their activities or give up the market to network merchants. On this basis, a new global market for distribution logistics services is being formed, which is, according to experts, approximately 450 billion dollars, of which only 18-20 billion dollars have been implemented so far. Moreover, "from the entire market of these services, transport outsourcing accounts for approximately 80%" [2].

It provides a link between the virtual space and real markets. After all, without a mechanism for processing, shipping and delivering goods, e-commerce is meaningless. However, in e-commerce, transportation services are significantly different from conventional outsourcing, as they are much more integrated into marketing networks. Transport intermediaries are moving from simply providing transport services to performing logistics distribution functions and becoming providers, an integral part of the marketing network. J. R. Stock and D. M. Lambert note that successful marketing-oriented carriers view themselves as partners with their customers and anticipate their needs. Distribution providers provide a full range of logistics services, including sorting and transporting orders, accounting documentation, customs clearance, and labeling and packaging of goods for each consumer. At the same time, suppliers transfer paid goods and a database of buyers to distribution providers, and providers deal with all issues related to national and international delivery. The result of such changes is the opportunity for even small and inexperienced manufacturers to enter foreign markets thanks to distribution providers. In the network economy, products acquire the utility of time and place, and the promotional content of consumer goods production changes from the supply of raw materials to the duration of the life cycle. Currently, competition in the global economy is for control of goods delivery systems, which opens up global opportunities in the network economy. Analysis of the "square root" rule in logistics shows that a reduction in inventories can be achieved by reducing the number of warehouses. In the network economy, virtual inventory management makes it possible to reduce the number of warehouses and determine inventory levels based on demand information. This system allows warehouses to be located optimally, regardless of the geographic location of the manufacturer. For example, the company may be located in New York, production may be in mainland China, and shipments may be made from Hong Kong or Singapore.

Unsustainable actions targeting domestic producers may be fought in vain. It is much more effective to create your own commodity distribution system, which is not inferior to the competition of world leaders. Networked inventory management in e-commerce provides a competitive advantage

because “virtual inventory is managed as if it were a single package, reducing overall system inventory even if it is physically located in different locations where it is most profitable” [3].

Logistics suppliers implement four of the five main functions of wholesale trade in distribution channels, with the exception of the formation of product assortment:

- Reduced contacts - since they take responsibility for organizing deliveries, from shipment by the manufacturer to the transfer of goods to the buyer.
- Unified distribution infrastructure - since they collect and process supplies simultaneously from all suppliers, including even the smallest ones.
- Economies of scale - because they assemble large quantities from small quantities of goods, saving on transport tariffs, bulk purchasing of packaging materials, and so on.
- Improving service for suppliers - since they have extensive experience in organizing deliveries and have established contacts, and also take upon themselves the organization of interaction with customers during the transfer of goods.

In this way, manufacturers can manage "production and inventory as if they were centralized, even though the physical location of production and inventory is determined by other factors - mainly the market or supplier". Therefore, the so-called distribution centers become the most important link in the distribution system in e-commerce. They perform both traditional warehouse logistics functions and all service functions for processing and transporting orders to end customers (Table 1).

Table 1 - Comparative characteristics of distribution forms

Parameters	Warehouse in traditional goods movement	Distribution center in e-commerce
The main purpose	storage of stocks	order processing
Addressees of services	wholesale and retail trade	end buyers and suppliers
Nature of storage	constant	operating
Production cycle	reception, storage, assembly, shipment	receiving, sorting, processing, shipping
Related services	Missing	maximum, up to assembly/disassembly
Data collection and processing	regarding batches of goods	in real time
Orientation	minimization of operating costs	to meet customer requirements

Distribution centers act as full-function partners in relations with goods suppliers. In addition to basic services, they provide logistics consulting, track delivery and carry out export-import operations with goods. In this case, the choice of location of distribution centers is determined by economic feasibility. There are two options: supplier orientation and customer orientation. Supplier centricity makes it easier to process shipments, but makes delivery to end consumers more costly due to the need for direct shipping. At the same time, focusing on consumers simplifies delivery, but makes it difficult to ship goods. In the case of postal delivery, the goods can either be delivered centrally across the border and then sent at domestic rates, or sent directly by international mail. Such a marketing policy does not interfere with the interaction of several distribution centers, for example, in cross-border deliveries. In logistics, such approaches even have their own name - “localized global distribution”.

Its essence lies in the fact that local decision-making centers are created in remote markets, which independently distribute goods: process orders, ship products and maintain interaction with customers. The global advantage of such distributors lies in their ability to quickly resolve issues related to ongoing local supplies. At the same time, localized distribution may not involve the presence of physical stocks of goods and only deal with the distribution of virtual stocks. Today, many national trade providers sell goods from international suppliers in their country, dispatched from a single supply center. Trends in the development of distribution networks in the network economy lead to the creation of global distribution centers, which are increasingly penetrating all

areas of product distribution. If in traditional trade large shopping centers in the warehouse-store format came first, then in the near future a new sales organization scheme will appear in e-commerce. Instead of the "wholesale - retail" link, we will see a "distribution center - goods delivery point" link with the addition of an exhibition center (showroom), where buyers will be able to see product samples in person.

In conditions of catching-up development, the horizons of network logistics are determined by its trends and achievements of leaders. We are talking about the formation of distribution infrastructure at the level of 4PL and 5PL2 provider services, which determine the degree of competitiveness of marketing networks in the global economy. The world's three distribution logistics centers are located in Western Europe (Germany), North America (USA) and Southeast Asia (China). Western Europe is not a leader in the implementation of distribution networks in e-commerce due to the fact that distribution networks there were created long before their current form. The reform of this infrastructure occurred as a result of the implementation of the pan-European project “Europe: 1992”, the goal of which was the creation of an internal (“pan-European”) distribution logistics infrastructure, which provides for:

– centralization of logistics and distribution centers;
– an increase in the number of partnerships and strategic alliances in the delivery structure;
– the use of outsourcing and intermediaries in the delivery of goods;
– elimination of interstate barriers to the transport network;
– restructuring of logistics management

In Western Europe, e-commerce has been integrated into the existing distribution infrastructure of large European corporations and logistics providers. At the same time, independent 5PL services have not yet become widespread in Europe. Today, the basis of the competitive advantage of distribution networks in the consumer market in Europe is the services of the final stage of supply - parcel lockers (automated postal stations). According to literary sources, in Germany alone there are about 4.5 thousand parcel terminals, covering 90% of the country's territory, which account for 40% of delivery sizes. In other countries, the figures for their use are much more modest: in Poland – 18%, in the Baltics – 22% of the volume of parcel delivery. The advantage of parcel terminals is the automated nature of their operation, which reduces the cost of delivering parcels.

In North America, there are three areas of distribution logistics that have a global competitive advantage: transportation, warehousing (USA) and customs clearance (USA, Canada, Mexico). In addition, the United States is a recognized world leader in the implementation of 5PL distribution logistics in the consumer market, although the share of these services is still small. The main competitive advantages of US distribution logistics are in the area of institutional regulation of logistics activities. In transport and warehouse logistics, this is due to the regulatory consolidation of the status and institutional features of public transport companies and public warehouses. Such providers provide standard logistics services at fixed rates to everyone on a general basis. Their tariffs are regulated by the state and cannot exceed a certain level. In other words, these intermediaries are recognized at the legislative level as socially and systemically significant.

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