

## ЕКОНОМІКА ТА УПРАВЛІННЯ

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### Place of Transport in the Sales Policy of the Industrial Enterprise

**Purpose.** Currently, the organization of sales at the enterprise is the main and continuous process that provides the enterprise with its economic efficiency and bringing the goods to the consumer. The purpose of this work is to analyze and compare modes of transport and its role in the marketing of products by an enterprise. **Methodology.** To build a model for the marketing activity of an enterprise, as well as when modeling the mechanism of functioning of its organizational, economic and production structure and the place of transport in the structure of an industrial enterprise, elements of economic and mathematical modeling were used. Analysis of the data obtained allows you to choose the best method of transportation, which is extremely important to ensure that the needs of the enterprise, as well as the needs of consumers, are met. **Findings.** Marketing and logistics services of the enterprise need, having studied all the advantages and disadvantages of all types of transport, to choose the most optimal mode of transport when transporting goods. For the sale of its products, the enterprise should take into account that over time, the costs of different types of transport may change, and the transportation schemes should be revised. The paper compares the modes of transport and the structure of freight turnover by mode of transport (as a percentage of the total). **Originality.** The use of a mathematical apparatus in the construction of functional dependencies that make up a general economic and mathematical model that characterizes the organization of the marketing activities of an enterprise will allow not only to identify «weak» points, but also to adjust the marketing policy of the enterprise accordingly, relying not on abstract conclusions, but on the obtained clear dependencies. **Practical value.** The result is, first of all, a reduction in costs in the marketing policy of the enterprise and an increase in competitiveness, an increase in profits and maximum satisfaction of consumer requirements.

*Keywords:* transport; sales policy; industrial enterprise; consumer; products; Republic of Belarus

#### Introduction

The increasing complexity and dynamism of the economic environment, the increasing level of competition in the market for goods, works and services requires significant efforts from the management of an industrial enterprise to create an effective mechanism for its functioning, which, along with other areas of the enterprise's activities, can also be achieved by improving the marketing organization.

Organization of sales at the enterprise is the main and continuous process that provides the enterprise with its economic efficiency and bringing

the goods to the consumer. By improving the sales system and the quality of service organization in accordance with the needs of customers, the company strengthens its position in the market [1, 2, 4, 5].

In a highly competitive market environment, the problem of product sales is becoming more and more complicated, and it is already necessary not only to study demand and produce products, but also to choose a distribution channel and find reliable partners in the sales area. The production of products can develop steadily only when their sales are established and guaranteed, and this is difficult if the so-called «transport factor» is not taken into

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account, i.e. direct organization of transportation as an element of the process of selling manufactured products to the consumer.

In the sales management system, it is necessary to subordinate and retain a certain part of the market, maintain superiority over competitors in the selected segment, and, as a result, make a profit from the sale of products (goods, works, services) of the enterprise. The best result for the enterprise here can be achieved only if the customer (buyer) is satisfied – and this is impossible if the products are delivered late or if the quality is inadequate as a result of violations of the transportation conditions. Therefore, modern enterprises of various sectors of the country's economy, which strive for dynamic development and occupy a stable position in the market in the conditions of market relations, pay close attention to the problems of optimizing the process of promoting goods from manufacturer to consumer.

The actual tasks of the sales policy of the enterprise, regardless of the sector of the economy to which it belongs, and the occupied market niche, are the following:

- timely and high-quality delivery of goods from the manufacturer to the consumer;
- ensuring high-quality work of marketing services and complex organization of the sales network;
- creation of official dealerships and shops;
- selection of the most optimal type of transport and transportation option, including the definition of the system and routes of movement of goods, work on the shipment and loading of goods.

It is not possible to solve these problems for the marketing service or the sales department locally, without interaction with other divisions of the enterprise. Therefore, in the course of its sales activities, the enterprise is brought into close interaction with other departments and divisions of the enterprise. An approximate diagram of such interaction is given in Fig. 1.

When considering each pair of elements of the presented scheme, it should be noted that the Sales department of the enterprise has indirect relationships with each department of the enterprise. So, interaction with the logistics department can be characterized by the presence of mandatory support for shipments to clients, and with the marketing department – by organizing promotional sup-

port and direct participation in market analysis. An integral part of the structure of an industrial enterprise is transport (represented by the transport department or the transport service of the enterprise), which is a system of technical means of the enterprise used for their own needs in order to load, unload and transport various materials, products, and other objects used by the nature of their activities. The main task of the transport sector is the implementation of uninterrupted transportation of all goods in accordance with the production process, the maintenance of vehicles in good working order, reducing the cost of transport and handling [3, 6–8, 9–12].

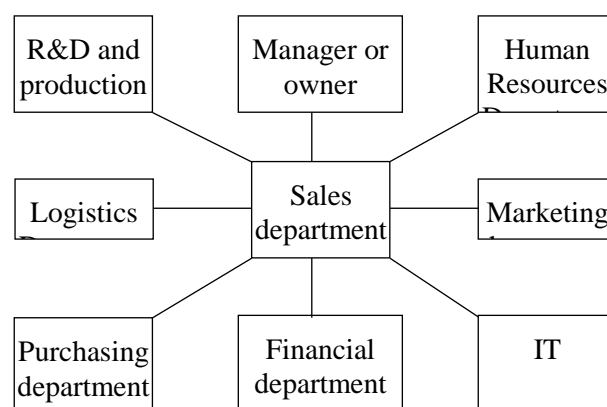


Fig. 1. Scheme of interaction of departments and divisions of an industrial enterprise

With the rational organization of the transport service at the enterprise, the cost of production is reduced, which ultimately leads to an increase in the profit of the enterprise and an increase in the profitability of its production.

### Purpose

Currently, the organization of sales at the enterprise is the main and continuous process that provides the enterprise with its economic efficiency and bringing the goods to the consumer. The purpose of this work is to analyze and compare modes of transport and its role in the marketing of products by an enterprise.

### Methodology

To build a model for the marketing activity of an enterprise, as well as when modeling the mechanism of functioning of its organizational, econom-

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ic and production structure and the place of transport in the structure of an industrial enterprise, elements of economic and mathematical modeling were used.

The place of transport in the structure of an industrial enterprise can also be determined from a mathematical point of view, using elements of economic and mathematical modeling to build a model for the marketing activity of an enterprise, as well as when modeling the mechanism of functioning of its organizational, economic and production structure. For example, if the marketing activities of an industrial enterprise are separated into a separate subsystem, then mathematically, its work in general can be described as follows:

$$f = \int_{t_0}^t f(p), \quad (1)$$

where  $f(p)$  – is a function that characterizes the process of bringing goods directly from the manufacturer to the consumer, taking into account the use of vehicles, the corresponding delivery schemes;  $t_0, t$  – moments of time that characterize the immediate beginning and end of the process of bringing the goods to the consumer.

In this case,  $f(p)$  is defined as a function that takes into account the level of transport services for the goods movement process, as well as logistics and forwarding (if necessary) services, and the marketing component. Thus, to construct the reduced function, it can be defined as follows:

$$f(p) = f(m, l, r, g) \in \begin{cases} f(m) \\ f(l) \\ f(r) \\ f(g) \end{cases}, \quad (2)$$

where  $f(m)$  – is a function that characterizes the level of transport services for the goods movement process;  $f(l)$  – is a function that characterizes the level of logistics services for the product distribution process;  $f(r)$  – is a function that characterizes the need for forwarding service of the goods movement process;  $f(g)$  – is a function that characterizes the marketing component of the product distribution process.

When considering these functions and substituting in them a set of initial data characterizing

a specific element of the production structure of an enterprise involved in the process of commodity circulation, the analysis of the data obtained allows you to choose the best method of transportation, which is extremely important to ensure that the needs of the enterprise, as well as the needs of consumers, are met.

### Findings

Depending on the characteristics of technological processes and types of production at the enterprise, various vehicles are used – depending on the requirements (single, one type of transport or various combinations with the involvement of an external carrier or without). Therefore, the presence or absence of own vehicles or free access to them (as needed) affects the work of the enterprise and its financial side, which, of course, requires a professional approach to the procedure for organizing such activities.

Large industrial complexes of the Republic of Belarus are often characterized by the presence of their own transport departments, including those with their own vehicles. The company's own transport can be used both for internal movements (which leaves a certain imprint on the choice of vehicles for such purposes), and for direct delivery of products to the consumer. The internal transport of the enterprise is intended for the movement of goods between workshops, sections and workplaces. Internal transport is not only a means of moving goods, but also an instrument of labor that organizes the work of enterprise departments in a given rhythm or schedule. Domestic transport should ensure timely production of all types of vehicles and services; rationally organize the operation of vehicles and lifting mechanisms with minimal transportation costs; to develop the technical base and mechanization of transport processes.

External transport is intended for the delivery of raw materials, fuel, materials, equipment and other cargoes to enterprises, as well as for the export of finished products from the territory of enterprises to the points of their transfer to the main transport or directly to the consumer.

Enterprises of the industrial complex, faced with the need to deliver their goods to the consumer over long distances or due to the lack of their own transportation capabilities, can successfully choose any of the modes of transport widely repre-

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sented in the Republic of Belarus – rail, road, water, pipeline or air transport, depending on the requirements to the carriage of claims.

Rail transport is the most cost-effective mode of transport for long-distance transportation, where the transportation process is practically independent of weather conditions. Thus, freight operations on the Belarusian Railway are carried out by 228 stations, there are 6 enterprises for terminal handling of goods, 52 freight terminals. In 2020, work is also continuing to increase traffic volumes with the maximum use of the development opportunities of the western route of the North-South international transport corridor, container traffic China-Europe-China.

In terms of water transport, the cost of transporting cargo such as sand, coal, grain, oil and metal ores is very low. However, water transport has significant drawbacks – it is the slowest transport, and it is also significantly influenced by weather conditions.

Mainly pipeline transport is used to transport gas, oil and oil products. The cost of transporting oil products by oil pipelines is cheaper than by rail, but somewhat more expensive than by water. However, the limited list of goods suitable for transportation by pipeline makes the scope of its application also very limited.

Due to its flexibility and maneuverability, road transport allows you to use various route options and traffic schedules. It is used both for transporting goods over long distances and for delivery around the city. Also, the main advantage of road transport as a carrier is the ability to deliver cargo «door-to-door», i.e. the cargo is picked up from the consignor's warehouse and delivered immediately directly to the consignee. While when using rail or water transport, it is necessary to use road transport in addition to deliver the cargo «from door to door». Therefore, from the point of view of the organization of logistics services for the enterprise, the formation of its sales policy, road transport is a necessary link for the successful sale of products.

Despite the high cost of delivery, air transport is used when speed of distribution of products is important, a decrease in the level of inventory, a reduction in packaging costs, or the distance to the point of sale is large. Most often, air transport is used to transport perishable products (fresh flowers, fresh fish), as well as non-bulky items of

high value (such as appliances, jewelry). The widespread use of this type of transport for the implementation of their marketing policy is typical for enterprises that produce single products, the cost of which is very high, and, therefore, the transport costs associated with the use of air transportation will not significantly increase it.

The correct choice of an external carrier determines not only the speed of delivery and the condition of the goods at the time of arrival at the destination, but also the level of prices. Thus, an enterprise, when organizing the sale of its products, can choose any type of transport or its combination.

As noted above, all types of transport operating in the Republic of Belarus are actively used by industrial enterprises to bring their products to consumers. This is evidenced by the volume of cargo turnover by type of transport. The structure of freight turnover by type of transport is shown in Fig. 2.

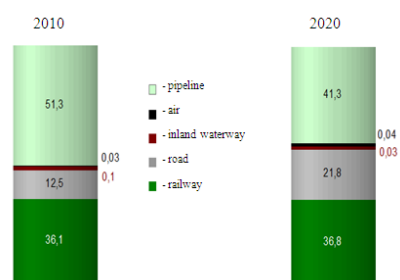


Fig. 2. Structure of freight turnover by mode of transport (as a percentage of the total)

According to Fig. 2, a large share of freight traffic falls on rail transport – 36.1% in 2010 and 36.8% in 2020, and road transport – 12.5% and 21.8%, respectively.

Each enterprise, based on its sales policy, must make a choice of transport, taking into account a number of factors:

- delivery speed – choice for air or road transport;
- minimum costs (delivery price) – choice of water or pipeline transport.

Many enterprises, thanks to containerization (loading goods into boxes or trailers), use two or more modes of transport in the sale and delivery of their products, which brings certain benefits to the sending enterprise. Also, when choosing and using transport for marketing its products, an enterprise should take into account that over time, the costs of

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different types of transport may change, and the applied transportation schemes should be revised. The transport department, marketing department, logistics and other structural divisions must use up-to-date information and work in close cooperation with each other to achieve the most efficient organization of sales of manufactured products.

### Originality and practical value

Based on the study of literature and scientific developments in the field of development and improvement of the sales policy of the enterprise, it was proposed that enterprises monitor and reorganize the sales system to maximize its compliance with the requirements of the market environment.

The use of the mathematical apparatus in the construction of functional dependencies that make up a general economic and mathematical model characterizing the organization of the marketing activities of an enterprise is a rather promising approach, since with a detailed mathematical description of functional elements, it becomes possible to predict the results of the organization of sales of both a specific product and the whole enterprise. This, in turn, will allow not only to detect «weak» points, but also to adjust the sales policy of the enterprise accordingly, relying not on abstract conclusions, but based on the obtained clear depend-

encies. However, the detailed construction of these constituent elements of the sales activity model of the enterprise is quite voluminous and laborious, and, therefore, within the framework of this article, only the model is given in general form and its approximate components are described that can be taken into account in practice.

The result in the case of a versatile and methodical approach to building a sales policy of an enterprise should be, first of all, a reduction in costs in its main areas and an increase in the competitiveness of the organization, an increase in profits and maximum satisfaction of customer requirements.

### Conclusions

The correct sales policy will allow the company to maintain a stable level of sales throughout the entire business cycle, to meet the needs of various groups of the population in a timely manner, and to develop dynamically. For the successful implementation of the sales policy at the enterprise, it is necessary to be based on a scientifically grounded approach, constant monitoring and reorganization of the sales system must be carried out to increase its flexibility and maximum compliance with the requirements of the market environment.

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