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# Logistics Information Systems in Ukraine's Trading Enterprises

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**Abstract:** ***The issue of the information system management of a trading enterprise's logistics as a subsystem of an enterprise's information system management and peculiarities of designing information systems management of an enterprise's logistics system are analyzed. The authors suggest combining management facilities of an enterprise's tangible, financial and information flows and also structuring essential characteristics of a trading enterprise's logistics informationsystem.***

**Keywords:** information systems, logistics, logistics systems, trading enterprise

## 1. Introduction

The purpose of any trading company's operation is to generate a profit. It is an ultimate opportunity to enhance and develop the social and industrial sphere of the organization. In turn, the modernization of the manufacturing sector provides the opportunity to withstand fierce competition and achieve the main goal of the company's operation, notably making a profit in order to be cost-efficient. Competition, in turn, involves all market participants in looking for beneficial opportunities to reduce the cost of managing an enterprise.

The introduction of an efficient information system management can be viewed as one of the best solution to an issue; as well as the implementation of the information system management for logistics (as part of the information systems management of the enterprise) in inbound and out bound movement of goods both within the trading network and the logistics of the delivery of goods to small trading enterprises.

## 2. LiteratureReview

Theoretical and methodological background of introducing and designing an enterprise's information system, the question of determining the mutual influence of elements of systems of various nature have always been in the scope of domestic and foreign scientists such as: Bushueva S., Buslenko N., Vitlinskiy V., Zhaldak M., Krivoruchko O., Mikhailenko V., Tsyutsura S., Tsyutsura M., Sakhno E. etc. Theoretical and methodological issues of analyzing the essence of logistics management and logistics information flows are presented in the works of Alferiev V., Afanasyev N., Gajinskiy A., Zalmanov M., Injutin K., Myasnikov L., Novikov D., Novikov O., Plotkin B., Protsenko O., Purlik V., Rodnikov A., Semenenko A., Sergeev V., Sokolov R., Uvarov S., Shcherbakov V.

However, the information systems of the logistics management of the trade company as part of the information management system of the organization as well as its specific traits and functional peculiarities have not been sufficiently investigated yet.

## 3. Approach

According to the current national legislation, according to Article 62 of the Commercial Code of Ukraine, " an enterprise" is an independent economic entity created by either a competent state authority, or a local self-government body or other entities to meet social and personal needs through the systematic implementation of production, scientific research, trading or any other business activities in the manner prescribed by this Code and other laws [1].

Taking into consideration all above mentioned, it means that a commercial trading enterprise can be distinguished by a particular sphere of its activity.

The Ukrainian scholars Apopiy V., Bila O., Blank I., Kopich I., Mazaraki A., Moshek G., Ivanov G. have dedicated their works mainly to analyzing the notion "a trading enterprise". Let us consider some of them:

- A trading company is viewed as an independent economic entity, the general features of which are the purchase, sale of goods and provision of services to the population in order to meet its needs seeking a profit [3, p. 10];
- A trading company, as a primary function, is the main link in the sphere of trade, it is an independent economic entity with the right of a legal entity created for the purchase, sale, and also storage of goods, the provision of various related services in order to meet the needs of the market seeking a profit [2 ];
- A trading company is an independent economic entity with the rights of a legal entity, which, using the property complex and a special organizational structure, makes the purchase, storage and sale of goods and services to


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customers in order to meet the market needs seeking a profit, [4, p. 12].

By synthesizing the above mentioned, a trading company is an independent business entity in the field of trade with the right of a legal entity that operates in accordance with the Commercial Code and other laws of Ukraine, it is namely organized for seeking a profit and it deals with the purchase, storage and sale of goods and the provision of additional services, or own production to get even more profits and meet customer needs and wants.

The main purpose of the operation of a trading company is to generate profits by organizing effective activities. The effectiveness of business enterprises directly depends on the quality and efficiency of making managerial decisions, which is determined by the clear organization of information flow within the enterprise and between enterprises of trade and the environment.

The process of creating new and making the already existing working structures more complicated in the field of trade requires not only the attraction of more skilled and high caliber workers, but also the introduction of new progressive management methods based on modern information technologies. This, in turn, requires the involvement and development of the latest technologically-enhanced tools and methods of analyzing the organization's business activities. Computerization of decision-making processes and enterprise management will enable to actively increase sales, which directly relate to profit generation.

Taking into account the current state of informatization of all vectors of economic activity, it is important to introduce an effective information management system of the enterprise.

According to the standards (DSTU 2392-94): an information system is a communication system that provides collection, search, processing and forwarding information [7].

Scientists define the notion of "information system" as follows:

- The Information system is an interconnected set of concepts, methods, technologies, technicalities and software tools used to automate the processes of collecting, registering, processing, storing and delivering information to the consumer in pursuit of this goal [5];
- From the business point of view, the information system is a set of information, hardware, software and technological tools, telecommunication facilities, databases and databases, data processing methods, management personnel that organize the process of collection, transmission, processing and accumulation of information for the preparation and adoption of effective managerial decisions. From a technical point of view, the information system is defined as a set of interrelated components that collect, process, store and distribute information to support the process of making management decisions and managing the organization as a whole [6];
- The Information system is a set ofinformation, economic and mathematical methods and models, technical, software, other technological tools and professionals designed to process information and make managerial decisions [8].
- Considering the above mentioned, it is possible to define the "information system of a trading enterprise" as an automated information system designed to carry out management functions in a trading enterprise, which implies a set of information, hardware-software and technological means, telecommunication facilities, databases, data processing methods and personnel management who organize the process of collection, transmission, processing and accumulation of information, organization of information flow for effective preparing and adopting their managerial decisions in order to achieve the goal of functioning - profit making.

In order to ensure the continuous process of collecting, processing, transmitting and storing information necessary for making managerial decisions in all branches of the trading company, it is necessary to solve the issue of organizing information flows; it is important to streamline logistics information flows and logistics of tangible assets.

The concepts of logistics are defined as the science of optimal financial, material and information flows management in economic systems, an important characteristic of which is that any links are synergistic. It means that the final outcome of the trading company's activities, in the context of logistics, is the profit, which directly and explicitly depends not only on a separate flow, but also on the combination of the interaction of material, financial and information flows as a total factor determining the main goal of the enterprise.

Thus, as

- A flow is a set of objects perceived as a unit and exists as a process in a certain time interval and measured in absolute units for a certain period of time [9];
- A financial flow is the flow of logistics system, which directs the movement of financial resources, circulating both in the system and in interaction with the external environment;
- A material (tangible) flow is a flow in which objects are finished products, incomplete products and material resources, to which logistics operations concerning physical movement are mainly applied;
- An information flow is a stream, the objects of which are viewed as messages circulating both in the logistics system of the trading company providing communication with the external environment;
- Then the methodologically important factor from the point of view of logistics is the definition of the interaction of material and information flows [13].

It has always been believed that the material flow generates information, since it implies the primacy of the material flow [10].

In our opinion, the information flows of the logistics system, taking into account the digital rethinking of business needs, are integrated into the material sphere. Information can also be viewed as a product.

Consequently, information logistics flows can be regarded as actual information and as material.


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Thus, the combination of the interaction of material, financial and information flows (information both material and actual information) can achieve synergy and profits. That is, if you consider each stream separately and manage it without taking into account the interaction with other flows of the logistics system, the profit will not be correlated if all flows are considered in terms of combination and mutual influence.

The information flow undeniably makes the crucial influence in the context of synergy. Especially if you take into account the enterprise's needs for using critical (structured) data and unstructured ones that have been significantly accumulated over the years and turned into bigdata, that in a digital transformation of the enterprise can easily become a real platform for future business decisions.

## 4. Results

Taking into account the fact that the enterprise's information flows notably correlate with material (tangible) ones, the effective automated information system of logistics (AISLP), which is a major component of the trading company's single information space, needs to be implemented in order to efficiently manage the overall trading company's logistics system. The main task of AISLP is determined by the digital transformation of the trading company.

It should also be noted that the information system of the logistics of a trading enterprise should have certain properties (drawing): providing distributed editing and quick start of work, coordinating document management and customer selection, supporting protection and scaling of data, managing the life cycle of the information system.

Logistics information system management as part of an organization single information space and application of various content and forms of information resources management of trading enterprises is an important problem that requires application of scientific approaches and means of its solution.

Creating the logistics information system of the trading company (as an integral part of the ISPT) is a complex and multi-vector process, which uses the innovative advancements in information technology that make possible the organization successful management, the interaction of the structural divisions of the enterprise, and fruitful interaction with suppliers and buyers [14].

## 5. Conclusion

In order to optimize the company's profitability and boost its performance trading enterprises should implement the latest information management systems of the organization, one of the main components of which is an information logistics system, which is designed to provide integrated logistics information flows management both inside the enterprise (trade network) and externally.

With the purpose of modernizing the information space of a trading enterprise, including the organization of logistics, it is necessary to use the most up-to-date information and communication technologies, cloud-oriented technologies that allow individualizing enterprises' needs and expanding the possibilities of organizing and implementing modern information management systems and logistics information systems as part of a single organization information space.

## 6. FutureScope

The authors are planning to further analyze and investigate the issues connected with identifying the role of logistics information systems in the overall information systems management of a trading enterprise.

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## Author Profile



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