

IMPROVING THE EFFICIENCY OF SUPPLY CHAINS IN FREE ECONOMIC ZONES

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Abstract. *This article covers issues of improving the efficiency of supply chains in free economic zones operating in Uzbekistan. Also, author's views on material resources entering and leaving free economic zones, structural elements of supply chains were previously requested.*

Keywords: *free economic zone, supply chain, goods movement, material flow into the area, material flow out of the area, warehousing, stock of goods.*

Introduction

Free economic zones have a special role in ensuring comprehensive and effective use of the production and resource potential of the regions of our country, strengthening foreign trade relations, storage of goods, transport, engineering and communication and social infrastructure. A free economic zone is a zone established for the purpose of establishing new production facilities, developing high-tech production, actively engaging in the development of production of modern competitive, import-substituting, export-oriented ready-made industrial products. The purpose of its creation is primarily to solve the strategic development tasks of the country or a separate region, i.e. foreign trade, general economic, social, territorial and scientific-technical issues.

The main difference between free economic zones and other zones is the intensity of the flow of goods entering and leaving the zone. In order to increase the volume of production in free economic zones, raw materials, semi-finished products, and components are moved as goods entering the territory, and the movement of finished products to other regions of the country and to foreign markets is organized. This requires increasing the efficiency of supply chains in free economic zones. It is in free economic zones that the stability of production and trade activities depends on supply chains. Based on this, this article highlights the issues of improving the efficiency of supply chains in free economic zones.

Analysis of literature on the topic

In the conducted studies, aspects related to logistics in the organization of supply chains and economic issues of free economic zones were studied separately. The issues of effective management of supply chains in the production line have been extensively researched in the scientific works of foreign scientists. In particular, Langley C.J. researched a wide range of activities related to the effective organization of the movement of commodity resources in the supply of raw materials in the product production line [3]. K. Oliver and M. Webber formed the concept of business logistics as an integral tool of business management in supply chains, and also showed that there are significant principle differences in the functions of marketing and logistics in distribution channels [4]. In the early 1980s, the term "Supply Chain Management" began to be used in the United States. The first use of this term was proposed by the American designer K.Oliver and M.Webber as part of an integrated strategy, calling it the supply of

primary raw materials to production enterprises, the management of supply chains from production enterprises to the final consumer[4].

In recent years, a number of scientists and young specialists from Uzbekistan have been conducting research on the issues of economic study of free economic zones and organization of goods movement. Rashidov M.K. the impact of free economic zones on regional development [11], criteria for evaluating the efficiency of free economic zones [12] were studied in the studies. Kholmamatov D.H. and Mukhiddinov M.Sh. the use of international marketing strategies in increasing the export potential of free economic zones [5], theoretical issues of SWOT analysis of free economic zones [6] have been researched. Kholmamatov D.H. the role of wholesale trade in the organization of supply chains in the regions, marketing and logistics issues in trade [8], modern methods of distributor activities in agricultural products supply chains [9] were researched.

To date, there is insufficient research on the efficiency of supply chains of integrated free economic zones. Based on this, this research was conducted.

Research methodology

During our research, scientific observation and abstraction, monographic observation, analysis and dialectical methods were used. The issues of supply chains for managing the movement of goods and material resources moving in free economic zones, its main elements of warehousing, storage, order acceptance and operation, and delivery were highlighted.

Analysis and results

The stability of the movement of goods in free economic zones depends on supply chains and their operations. The purpose of supply chains of free economic zones is to load material resources on time, to deliver material resources to the right place, in the right amount at the right time, and to have accurate information on the needs of consumers. A business entity that delivers goods to customers in the right assortment, on time, with high quality and with reliable information about consumers will definitely have an advantage in the competition.

Organization of the movement of material resources in supply chains is associated with costs. In most cases, commodity movements and costs are inversely related. For example, the management of cargo transportation in transport believes that the most convenient mode of transport is railway transport. But in this case, payments are delayed, capital turnover decreases, that is, the railway "stops" the company's means of transport for a longer period of time than road transport. A similar phenomenon occurs when cheap shipping containers are used, that is, the risk of cargo damage increases. Or if less stock is kept in the warehouse to reduce storage costs, this will lead to frequent order updates and increased transportation costs, etc. Organization of supply chains requires marketing and logistics approaches. Therefore, when analyzing the efficiency of supply chains, the total costs associated with the operation of the total system are taken into account, it is not useful to isolate some parts of the system.

Many businesses make delivering goods to the right place at the right time at the lowest cost the main goal of their supply chains. Unfortunately, none of the supply chains are able to simultaneously minimize costs associated with the movement of goods and provide maximum customer service. Maximum customer service means maintaining a large stock of goods, organizing goods transportation at a high level and having many warehouses. These, in turn, lead to an increase in the costs associated with the movement of goods. Cost reduction is associated with low-cost transportation systems, low inventory levels, and fewer warehouses.

In the organization and management of supply chains of free economic zones, attention should be paid to two processes:

- 1) management of the movement of material resources (raw materials, semi-finished products, cargo, finished goods) entering the territory;
- 2) management of the movement of material resources (raw materials, semi-finished products, cargo, finished goods) leaving the territory.



Figure 1. A simple model of the movement of goods in supply chains of free economic zones (author's development)

The level of service in the process of movement of material flows entering and leaving the territory is determined by factors such as the composition and amount of stock of goods, the perfection of the delivery or transportation system, and the availability of warehouses in various markets. Realization of these factors requires huge funds. Therefore, the process of movement of goods and material resources is a process related to the issue of optimization, in which measures related to the creation of a cheap transport - transportation system, a sufficient amount of stock of goods and an optimal warehouse system should be solved. Creating an optimal warehouse system means determining the optimal amount of their number and capacity, as well as the optimal location.

In order to determine the dislocation of warehouses, that is, the location of the area, the method of transferring the map drawing showing the locations of the enterprise and consumers to the coordinate system is used. All production enterprises have maps showing enterprises and their consumers. If they are not available, the State Land Cadastre and cartography departments can prepare such maps. This method makes it possible to estimate the costs incurred in the delivery of material resources from each enterprise to the intended warehouse. The cost estimate takes into account the tariff rate of the vehicle, the quantity of goods delivered and the distance of delivery. In this case, it is necessary to observe the three basic rules of movement of material resources.

First, in order to more effectively meet the needs of production enterprises operating in free economic zones for material resources, it is necessary to penetrate as much as possible to the end point of the distribution logistics chain, to use it as much as possible and to use freight transport units that provide a greater capacity for long distances. should make the delivery.

Secondly, in order to more effectively solve the issues of physical distribution in the logistics chain, it is necessary to use the minimum amount of contractual units of measurement of commodity resources and the minimum amount of contractual units of transport, regardless of the capacity.

Thirdly, if it is not possible to abandon the creation of a stationary warehouse, it should be included in the logistics chain in a consolidation center that can be located close to the final sales points if it concerns physical distribution in the transportation plan, and in a consolidation center close to the initial production process if it concerns sorting.

Based on the above, the author expressed the structural elements of supply chains of free economic zones as shown in Figure 2. The purpose of the supply chain is to meet the needs of the population and the economy of the region in time and in full.

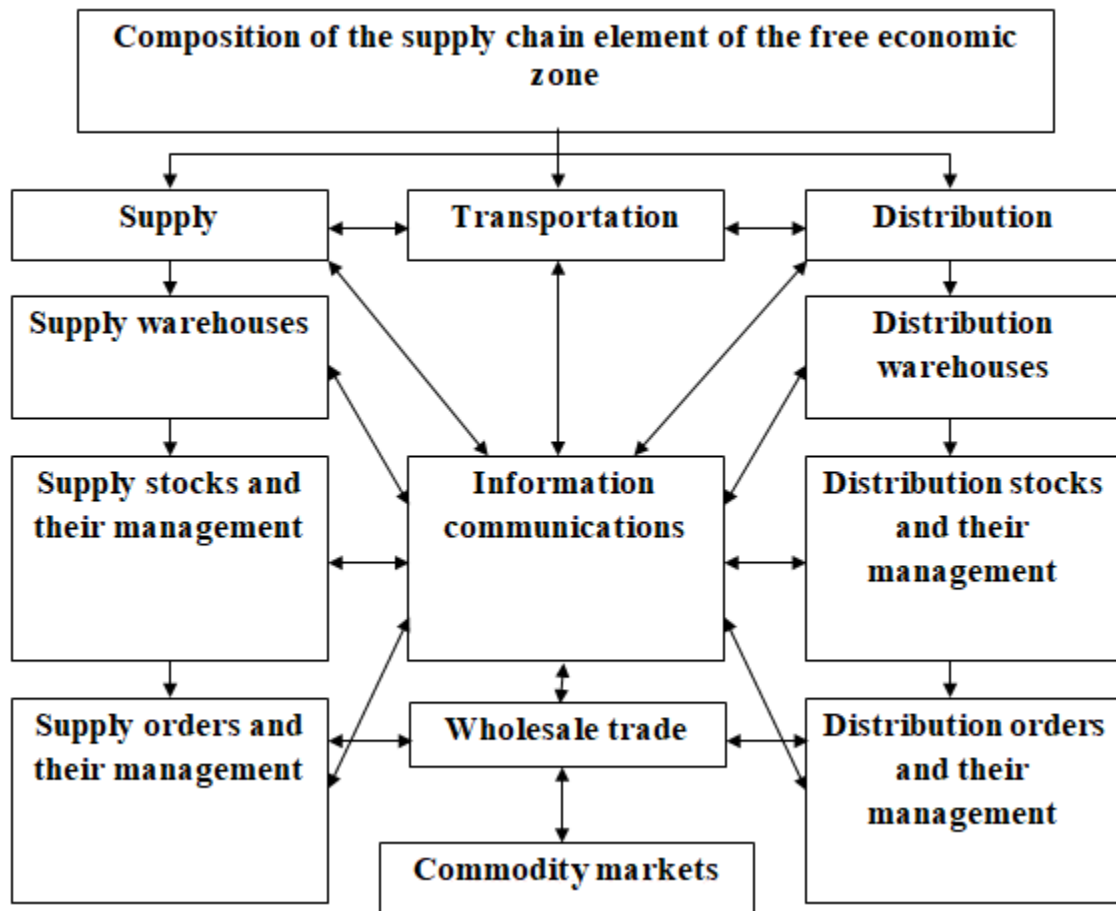


Figure 2. The composition of elements of supply chains of free economic zones (author's development).

Just as the results of all economic activities are determined by efficiency, supply chains in free economic zones are also determined by efficiency indicators. Most of the scientific literature has extensively researched the efficiency of supply chains.

Conclusions

As a result of the establishment of free economic zones, the movement of material, financial and informational resources will be activated, their volume will expand, and their scale will increase. In the development of socio-economic relations, the importance of supply chains in particular is incomparable. Supply chains require a certain amount of financial and informational resources. As a result, the value of the commodity resource increases. Therefore, in the organization and management of supply chains in free economic zones, the use of systems that ensure a minimal increase in the value of commodity resources is an urgent issue of today. For this, it is advisable to do the following:

- 1) Modification of models of optimal placement of supply centers in free economic zones based on the principles of marketing and logistics;
- 2) Determining the functions of intermediaries in the delivery of goods in supply chains and the optimal batch (part, amount) of raw resources;

3) Determining the optimal amount of orders by the directorates of free economic zones, developing optimal transportation routes.

4) Placement of supply and distribution warehouses in free economic zones, creation of trade platforms within the V2V system, development of specialized wholesale trade and brokerage activities that trade with raw resources.

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