

THE ECONOMIC ASPECT OF INTRODUCTION OF ELEMENTS OF LOGISTICS AT THE ORGANIZATION OF WAREHOUSE ECONOMY

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Abstract

Recently more and more attention it is given logistics – science about the rational organization of movement of information, labor and material resources. Therefore this article is devoted to a problem of the organization of warehouse economy from a position of introduction of logistic elements, after all for Republic of Belarus actually increase in warehouse stocks and as a result increase in expenses. Namely such approach will allow to organize optimum work in a warehouse, to lower costs for storage, to reduce movement of the warehouse personnel and to optimize operation of cars and mechanisms in a warehouse. That is introduction of logistics of warehousing at the enterprise will allow to increase efficiency of activity of the enterprise.

Keywords: warehouse logistics, expenses, goods turnover, outsourcing, warehouse, process, optimization.

Competent planning, management and control of movement of material streams allow to lower costs of the enterprise for production of goods at various stages of its life cycle.

Process of movement of a material stream is impossible without concentration of stocks in certain places and warehouse logistics is take place here. It solves the following problems: decrease in expenses for consignment conversion, increase in power of a warehouse and its capacity.

The problem of accumulation of finished goods in warehouses is actual for Republic of Belarus. Warehouses in Belarus are overstocked with goods by production of the local industry. There are the main reasons for this phenomenon:

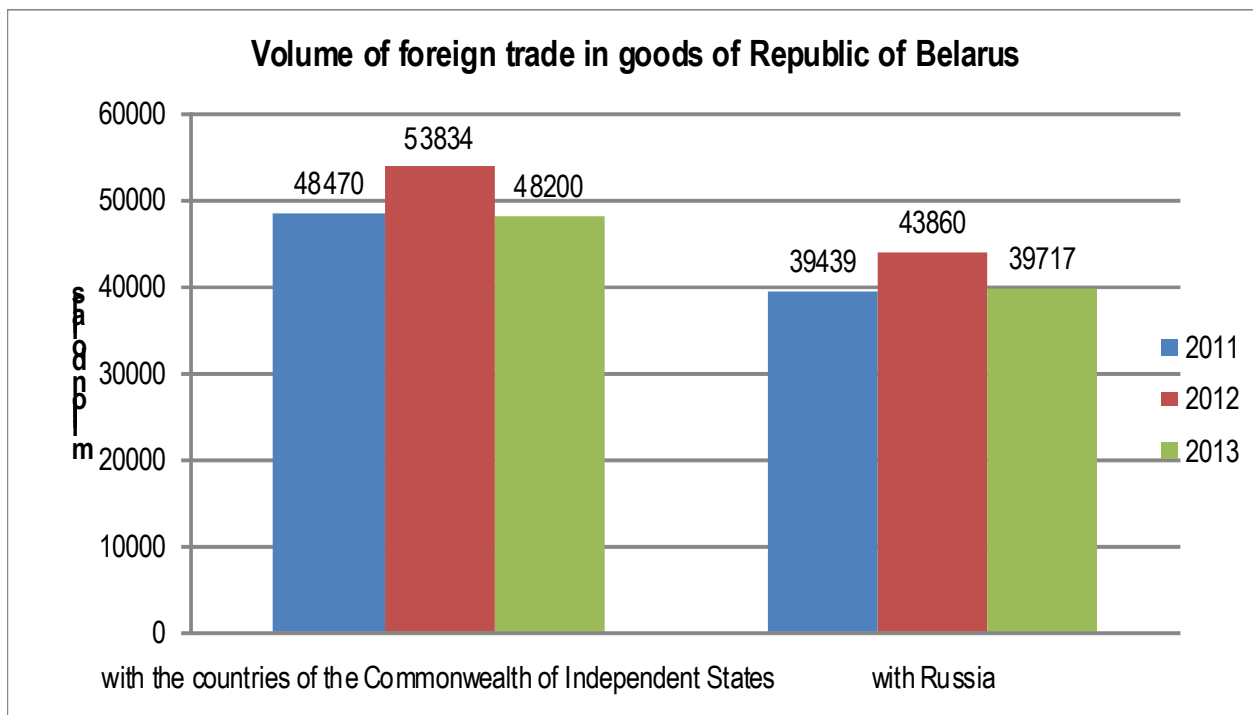
1. The decrease in demand for the Belarusian production in the markets of Russia (after accession to WTO) and CIS countries (picture 1).

2. New international standards to which production of Russia has to correspond (and in a consequence the Belarusian production has to

correspond to) after accession to WTO.

3. Outdated technological base of the industry.

4. The orientation of the Belarusian economic model to gross production which doesn't depend on demand for production [1].



Picture 1 Dynamics of foreign trade in goods of Republic of Belarus with CIS countries and Russia

The overstocking of warehouses is confirmed by increase in warehouse stocks every year. During the period from 2006 to 2013 the size of warehouse stocks increased on 34, 46 trillion rub. For the end of January, 2014 stocks of finished goods made 31 843, 2 billion rub.

In 2013 at the enterprises of the Brest region warehouse stocks made:

The Brest electromechanical plant – 1137%;

Chulochny combine - 380%;

Brestselmash plant - 320%;

Tsvetotron - 251%;

Belalko - 120%.

The main articles of costs for the maintenance of warehouses can be divided into four groups:

Maintenance of warehouse:

depreciation of warehouse buildings;

depreciation of the warehouse equipment;

- costs of preventive repair;
- expenses on heating, electric power and water;
- insurance of buildings and land tax;
- rent.

Costs of the service personnel:

- salary of warehouse workers and employees;
- expenses on social needs of workers and employees.

Costs of vehicles:

- depreciation;
- expenses on fuel and energy;
- expenses on preventive and maintenance;
- insurance and taxes on vehicles.

Losses from storage of stocks:

- protection of warehouses and aging of materials;
- corrosion and other losses;
- divergences in results of inventories;
- thefts;
- losses owing to drop in prices;
- insurance of stocks.

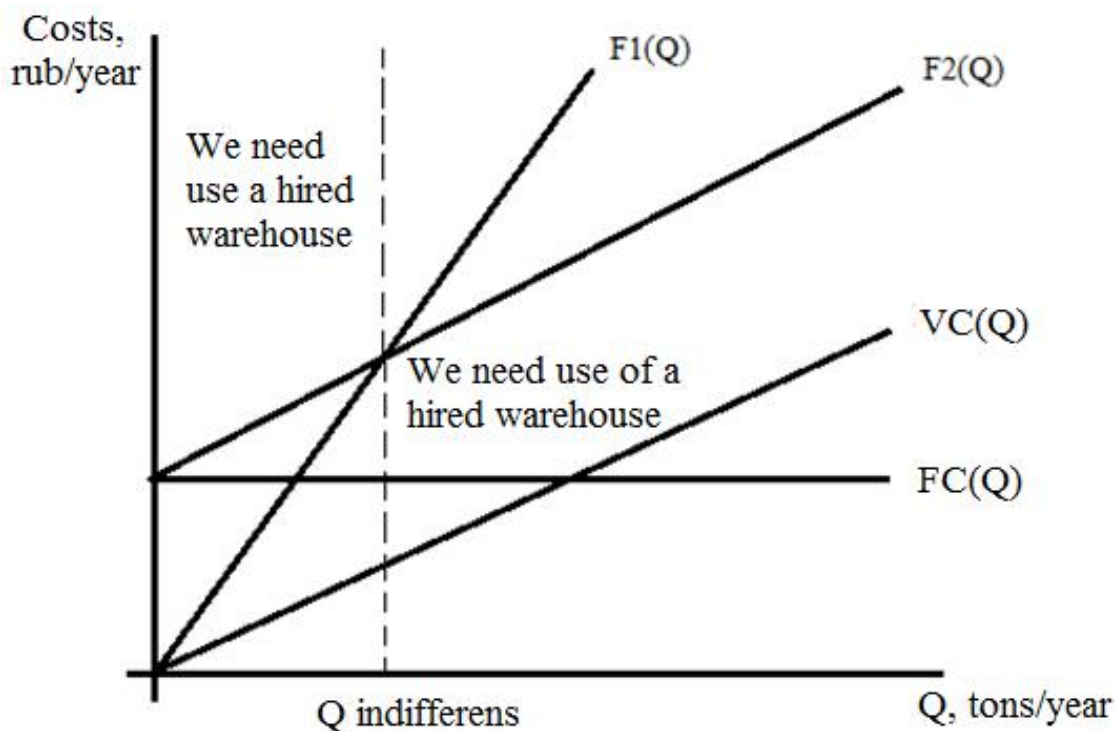
Many enterprises inherited warehouses from Soviet period and now their work is based by the principles of the same era and this also is a problem.

Thus, for situation improvement in warehouses it is necessary to pay to warehousing process special attention, to organize the correct work and the process that can allow to lower expenses.

The first decision which needs to be accepted at the organization of warehouse economy, is a choice between own and hired warehouse.

Process of adoption of such decision is based on point calculation «indifference goods turnover» which is on crossing of curve dependence of expenses on storage of goods in a hired warehouse from the volume of goods turnover (F1) and curve dependence of total expenses for storage of goods in own warehouse (F2) [2]. Thus, the management needs to analyse articles of costs for two options at the planned volume of goods turnover and to choose favorable option (picture 2).

Also it is possible to carry to this group the outsourcing direction. Logistics outsourcing, at its core, is simply the process of contracting with other companies to handle various aspects of the logistics supply train—for example, instead of purchasing and maintaining a fleet of trucks, a company would contract with a dedicated shipping company to transport supplies and products to and from the market.



Picture 2 Choice of the decision on using services of a hired warehouse

Ways of optimization of warehouse economy can be considered in two directions:

1) the first direction is such logistic technologies which optimize concrete operations in a warehouse (for example, production identification, placement of arriving products, shipment of products);

2) the second – logistic technologies which are directed on optimization of work of a warehouse as a whole.

We will consider the offered logistic technologies in more detail and we will designate positive effects from their application:

Introduction of shaped coding in a warehouse simplifies and accelerates process of identification of production.

Advantages:

reduction of time for process of acceptance of production (in case on arriving cargo units already there is a bar code),

decrease in risk of «human mistakes»,

simplicity of search of the necessary goods on a rack [3].

Radio-frequency identification (RFID) rather appeared recently abroad and while in the Russian and Belarusian practice it isn't used yet. Basic elements of system are tags, the antenna and the computer. The tag is a data carrier which is brought by means of the computer. The tag is located inside flights. After that all these tags by means of the antenna are transferred to the computer.

Advantages:

control freight movement,
reduction of time for information processing, and as result reduction of expenses.

Cross-docking is a technology and process of acceptance and shipment of goods and freights through a warehouse directly, without placement in a zone of long-term storage. At classical model of cross-docking the direct overload from one vehicle in another takes place.

The AVS-XYZ-analiz method is based on division of all commodity positions into 3 groups then for their storage «hot» and «cold» warehouse zones are allocated [4].

Warehouse automation by means of a control system of the warehouse WMS (Warehouse Management System). The territory of a warehouse shares on zones depending on technological operations for automation of procedures: reception, placements, storages, processings and shipments of goods. It gives the chance to order personnel work on various sites and effectively to distribute responsibility spheres.

The WMS system automatically selects storage places for the accepted freights and forms tasks for warehouse workers. Tasks arrive on the screen of radio terminals in the form of elementary stage-by-stage teams individually for each worker [5].

Imitating modeling – the effective tool providing high precision of calculation for the account of possibility of detailed «playing» of behavior of modelled system.

Solved tasks: definition of an optimum arrangement of a warehouse complex on the basis of data on possible suppliers, consumers and intermediaries; choice of the space-planning decision at determination of optimum capacity and compatibility of a warehouse, an equipment choice; definition of quantity of the chosen types of the hoisting-and-transport equipment on the basis of the analysis of efficiency of its work; modeling of capacity of technological zones and logistic system as a whole; calculation of number of ports of arrival and departure of vehicles; optimum arrangement of cargo units in rack warehouses and other tasks [5].

Application of the actions considered in the article will allow to plan and organize rationally work in a warehouse from various positions. The introduction of this action helps to optimizing warehousing process and reduces enterprise expenses and as a result to increase economic efficiency of work of the organization.

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МЕТОДЫ НАЛОГОВОГО ПЛАНИРОВАНИЯ METHODS OF TAX PLANNING

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Аннотация

Эта статья посвящена различным методам, применяемым в налоговом планировании и их классификации.

Abstract

This article is devoted to various methods applied in tax planning and their classification.

Ключевые слова: налоговое планирование, методы налогового планирования, оптимизация, субъект налогообложения, налоговые льготы

Keywords: tax planning, methods of tax planning, optimization, subject of the taxation, tax privileges