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INVENTORY MANAGEMENT IN THE SYSTEM OF PURCHASING ACTIVITIES OF THE ENTERPRISE UNDER RISK CONDITIONS

УПРАВЛІННЯ ТОВАРНИМИ ЗАПАСАМИ В СИСТЕМІ ЗАКУПІВЕЛЬНОЇ ДІЯЛЬНОСТІ ПІДПРИЄМСТВА В РИЗИКОВИХ УМОВАХ

The article is devoted to the study of problems related to the need to improve the efficiency of inventory management during the procurement activities of enterprises under risk conditions. It is substantiated that the effective management of production stocks is a necessary condition for the creation of financial reserves to ensure the financial stability of the enterprise. The main types of computer programs used for inventory management at enterprises are analyzed. The characteristics of the latest integrated ABM Inventory management system are given, its advantages over existing systems are emphasized. A comprehensive approach to inventory management in procurement and logistics departments using special training, courses and trainings is important. The authors noted the importance of a balanced approach to inventory management, the need for technological modernization of production in combination with the knowledge of employees and a well-thought-out strategy adapted to the individual needs of the company.

Keywords: inventory, management, purchasing activity, enterprise, risk.

Закупівельна діяльність підприємства в останні роки набуває все більшого значення, продуктивне та результативне управління якою є важливою умовою його ефективної діяльності та довгострокового розвитку. Стаття присвячена дослідженню проблем, пов'язаних з необхідністю підвищення ефективності управління запасами при закупівельній діяльності підприємств в умовах невизначеності та ризику. В результаті дослідження визначений істотний вплив товарних запасів на економічну діяльність підприємств. Обґрунтовано, що товарні запаси – це активи підприємства, тому ефективне управління ними є необхідною умовою створення фінансових резервів для забезпечення фінансової стійкості. Управління запасами є складною ризикованою діяльністю. Розглянуто цілі управління запасами в умовах ризику та невизначеності. Доведено, що управління товарними запасами є відправною точкою в діяльності компанії, з якої продовжуються інші процеси, а саме: зберігання, виробництво, транспортування. Проаналізовано основні види комп'ютерних програм, за допомогою яких здійснюється управління товарними запасами на підприємствах. Надана характеристика новітньої інтегрованої системи управління товарними запасами та закупівельною діяльністю ABM Inventory, підкреслені її переваги перед існуючими системами. Зазначені суттєві покращення діяльності в роботі з товарними запасами при використанні цієї системи, серед яких: зменшення втрачених продажів та масиву надлишків продукції, скорочення збитків, покращення бази постачальників. У дослідженні авторами підкреслена важливість комплексного підходу до ефективного управління запасами у відділах закупівель, логістики та складування, тому було обґрунтовано необхідність застосування спеціального навчання, курсів та тренінгів, адаптованих до потреб і вимог, характерних для цих відділів. Також авторами статті відзначена важливість збалансованого підходу щодо управління товарними запасами, необхідність технологічної модернізації виробництва в поєднанні зі знаннями співробітників та добре продуманою стратегією, адаптованою до індивідуальних потреб і специфіки діяльності підприємства.

Ключові слова: товарні запаси, управління, закупівельна діяльність, підприємство, ризик.

Problem statement. In recent years, the purchasing activity of the enterprise has become more and more significant, competent management of which is an important condition for its effective activity and long-term development. Procurement management should be examined in close relationship with the external

environment, which covers a wide range of financial, economic and social problems. The established influence on the purchasing market provides a transition from the seller's market to the buyer's market, which is accompanied by significant organizational changes in the strategy of supply and sales of products.

Analysis of recent research and publications.

The construction of an effective inventory management system at the enterprise in the system of its purchasing activity, which takes place in changing conditions, was of interest to many scientists, among them: Bezginova L. I., Bogatska N. M., Bozhok V. V., Vishnevska O. A., Voloshina A. O., Marchenko V. M., Olinichenko K. S.

They determine that when justifying the inventory management system in the conditions of an increased level of aggressiveness of the external environment, the main motives of the enterprise engaged in procurement, which encourage the effective and justified formation of inventory, should be considered, namely:

- the need to carry out trade transactions;
- the possibility of immediate and high-quality customer service;
- the possibility of fluctuations in demand.

Forming the goals of the article. The purpose of the article is to determine the main strategic directions for improving the inventory management process of enterprises engaged in purchasing activities in conditions of uncertainty and risk.

Methodology. In the process of research, general scientific methods of analysis, synthesis, generalization, analogy, comparison, and a systematic approach were used to determine the impact of inventory on the economic activity of the enterprise. The content analysis of scientific works made it possible to systematize existing approaches to inventory management. The research was conducted in a logical sequence – from the theoretical understanding of the need for effective inventory management to the practical analysis of the factors of its formation.

Presentation of the main research material. A modern enterprise cannot be effective without the use of logistics. By forming a connection between producers and consumers, it is possible to reduce logistics costs [1].

Enterprises can purchase raw materials, goods or services to meet their own needs. Trading firms (wholesale, retail) buy stocks for resale. Manufacturing companies use inventory for processing to use for their products, and inventory can also be used for capital repairs, equipment maintenance, and more.

The purchase of goods and material values for the purpose of their further processing, resale, for own needs has a significant impact on the economy. In order to effectively meet the needs of the enterprise in commodity values, it is important to ensure uninterrupted functioning of the enterprise.

In terms of cost reduction, it is important to consider the cost of resources and materials used. Purchasing activity has a great impact on part of the costs of future periods, production stocks, semi-finished products of own production and work in progress.

In any production, the predominant factor affecting the efficiency of resource use is the procurement of services or materials for progressive processes. The quality of service or products in particular depends on a high level of cooperation with suppliers [2].

Purchasing activity largely depends on the listed factors, and also confirm the importance of their analysis and solving the identified problems. With the help of these processes, there is the creation of commodity stocks at enterprises, which are necessary for the smooth functioning of any enterprise. Therefore, it is clearly

necessary to create new, modern approaches to inventory management, because the efficiency of many market processes often depends on their quality and volume. Considering the fact that suppliers and other partners (dealers, distributors, etc.) play a significant role in the formation of inventories – that is, external factors of the company's activity, it is necessary to understand that their management operations must be planned and coordinated. Such actions will result in lower costs. Therefore, the quality of inventory management affects the company's activity indicators [3].

Inventories are company assets in which significant capital is invested. Inventory management is always an investment. Properly configured inventory management accelerates cash flow and returns invested money faster. A large part of the capital of enterprises consists of investments in stocks. The further, the greater the needs of customers and the higher their requirements. Because of this, businesses are forced to hold significantly more inventory to meet more customer needs and increase their volume.

The problems of inventory management are especially relevant at manufacturing enterprises, where inventories occupy a significant part of the company's assets. When a business is short on working capital, profitability is declining, and purchase prices are rising, it is imperative to start managing your assets effectively.

The company's management begins to analyze ways to use capital more efficiently and try to achieve the same or even greater results with less investment. When it comes to inventory management, it's critical to keep it moving, not "hanging." When a company does not have an inventory management system and stops the supply chain, it does not properly coordinate the business areas, and in order to operate profitably, it must implement an inventory policy. This policy includes the management of stocks, technical and warehouse facilities, as well as the analysis of financial funds that will be invested in stocks to avoid losses. V. M. Marchenko states that "the inventory management system is a whole set of strategies and control tools, the purpose of which is to monitor the level of inventory and determine what the level of inventory maintenance should be, when to replenish inventory and how to achieve the best results" [4].

Inventory management consists in bringing them to the optimal amount and maintaining the most ideal ratio between income and expenses [5]. The inventory management system is designed to continuously supply the user with the necessary products. The realization of the set goal is achieved by solving the following tasks: determination of the size of warranty stocks; order size calculation; orders should be not only optimal, but also rational.

Effective inventory management is a complex process, which is accompanied by various types of risks, such as: loss of customers, increase in the number of delayed orders, periodic shortage of warehouse space, etc. [6]. In the scientific literature, various solutions for inventory management are proposed.

According to D. Walters, reserves are defined as a form of material flow. If the material flow followed a continuous chain, there would be no need to stock up at the enterprise, but in practice, for objective reasons, it turns out somewhat differently [7].

Consider the goals of inventory management in risky business conditions:

1. Economies of scale: costs are reduced if a company buys raw materials, manufactures and transports goods in large quantities. Costs per unit of production are reduced and the efficiency of equipment use is increased. There is a trade-off between inventory and holding costs. If you produce in larger quantities, then in this case the cost per unit of production will be lower.

2. Balancing supply and demand: demand is constantly changing, but it is more profitable for a company to maintain the same level of production than to change it by increasing or decreasing it in response to fluctuations in demand. An even rhythm of production and fluctuations in demand are made possible by matching stocks. It will be more economically efficient to buy raw materials when their price is the lowest.

3. Specialization: the enterprise's decision to produce only a certain type of product, which will then be transported to other regions. At these warehouses, orders are formed according to the wishes of customers, based on available stocks. When a product is produced over a long period of time and in large quantities, it offsets the cost of holding inventory.

4. Protection against force majeure: When goods are not delivered on time and there are fluctuations in demand, this objective helps to avoid shortage of goods. Many business leaders hoard existing stocks in the hope that they will become more expensive in the future, and it will be more profitable to buy them now and keep the surplus.

5. Production inventory: production should not be interrupted. After one operation, the product moves to the next, thus forming a continuous chain. If the process is interrupted in even one part of the circuit, the entire line can stop. In this way, the production stock temporarily "closes" the interruptions caused by failures. If there were no production stocks, there would be a constant shortage of product at a certain point in the chain and a surplus elsewhere.

The stability of the enterprise's functioning is very important for all spheres of its activity. During inventory management, the market demand for products produced by the enterprise has a particularly strong influence on losses. A large number of stocks in the warehouse negatively affects the efficiency of the enterprise, so in order to maintain the sales volumes that were planned, it is necessary to revise the prices, apply discounts and try to reduce the number of stocks in the warehouse as much as possible so that the storage costs are as low as possible.

When managing stocks, indicators of the efficiency of the use of stocks are calculated, which are used in the analysis of the strategy and organizational structure of the enterprise. Stocks are needed when their arrival time exceeds the waiting time agreed with the customer. Goods in warehouses must move, only in this case it will bring profit.

In summary, we can say that inventory management is the starting point in the company's activities, from which other processes that take place in the enterprise continue, namely: storage, production, transportation. Strictly speaking, the inventory management system is an enterprise strategy that all employees must adhere to and strive to improve in order to achieve optimal inventory levels and, therefore, the movement of all other related processes.

More and more modern enterprises are trying to achieve higher efficiency of procurement and inventory management due to the computerization of these processes. Most often, the program "1C: Enterprise" is used at domestic enterprises. Trade management". The main drawback of this program is that this system is not intended specifically for specialized trade enterprises, it does not consider the specifics of their activities [8]. However, on the basis of this system, a number of automated systems have been created, specially designed for enterprises engaged in the sale of food products.

But there are already a number of IT systems that support enterprises in effective inventory management. Here are some of them [9–11]:

– ERP systems (Enterprise Resource Planning). ERPs are comprehensive IT systems that integrate various company functions, including inventory management, production, finance, human resources, and many others. Examples of such systems are SAP, Oracle, Microsoft Dynamics and Infor.

– MRP (Material Requirements Planning) systems. MRP systems focus on materials requirements planning, these systems help predict when and in what quantities raw materials and components should be ordered.

– WMS (Warehouse Management System) systems. These systems are designed for warehouse management, including the location of goods, the processes of receipt and release of goods, as well as the optimization of warehouse flows.

– POS (Point of Sale) systems. These are retail systems that track sales in real time, allowing you to quickly respond to changes in inventory levels.

– DRP (distribution requirements planning) systems. These systems focus on distribution needs and help plan delivery to various distribution locations.

– Electronic Kanban systems. It is a digital version of the traditional Kanban system, which is a production control and inventory management method.

– SCM (Supply Chain Management) systems. These systems span the entire supply chain, integrating inventory management with other functions such as logistics, demand planning and procurement.

Therefore, you can use any of the latest integrated inventory management and procurement systems, such as the ABM Inventory management system, which is successfully operating on the Ukrainian market [12]. This program allows you to automate the process of optimizing warehouse stocks: forecasting demand, calculating the optimal insurance stock, forming auto-orders, choosing the best suppliers and substitute goods.

When using such a system, even one employee can independently and efficiently manage the company's product range from about ten thousand different items. The main advantages of the system:

1. Forecasting in many ways with automatic selection of the best forecast.

2. Assortment management for the correct selection of suppliers and purchased goods considering profitability, stability of demand, availability of substitutes, which ensures a reduction of the excess amount of illiquid goods by up to 35%.

3. The possibility of calculating the optimal insurance reserve considering fluctuations in demand, terms of delivery of goods, various types of restrictions, in particular

financial, transport, warehouse, etc., which as a result increases the turnover of funds by an average of 25%.

4. Almost complete automation of the analyst's actions when forming forecasts and planning activities.

An array of various economic indicators makes it possible to evaluate and optimize warehouse operations. Including:

- main economic indicators: profitability, turnover, liquidity, etc.;
- indicators of movement of materials in warehouses: turnover, average stock in the warehouse, circulation time, etc.;
- indicators of warehouse efficiency: use of warehouse space, intensity of their work, etc.

Therefore, the company's management will not need any internal structural changes with such qualitatively adjusted work, all necessary business processes will be transparent and clearly function.

According to the developers of the programs, the increase in the efficiency of inventory management after the implementation of the program reaches an average of 25%. Modern systems allow you to minimize costs, avoid planning errors, loss of funds and time to correct miscalculations. As a result, the company that implements such a system will receive:

1. Reduction of lost sales due to increased transparency of available goods in warehouses (30–50%). As a result, the client base will expand significantly.

2. Reduction of the array of surpluses (about 35–55%), which will lead to the release of frozen funds. As a result, the need for loans will also be significantly reduced.

3. Reduction of losses as a result of a decrease in inventory and losses associated with the write-off of substandard goods or a decrease in their prices due to obsolescence. As a result, the company's financial condition will improve.

4. The supplier base is greatly improved due to their reliability and competence statistics.

5. Warehouses are used more rationally, which leads to optimization of their use and required quantity.

Equally important is that ABM Inventory and similar systems are cloud-based, so no additional installation costs or specialized server-type equipment are required. Therefore, on average, the payback period when using it is about 6 months. Currently, this system works for more than 2,500 trade enterprises in the EU and Eastern European countries.

Today's inventory management IT systems often use advanced technologies such as artificial intelligence,

machine learning and predictive analytics to help companies manage inventory more accurately and efficiently. The choice of the appropriate system depends on the size of the enterprise, the specifics of the industry and individual needs and requirements.

If a business wants to make progress in effective inventory management in purchasing, logistics and warehousing departments, it is worth considering training and courses tailored to the needs and requirements specific to these departments. Here are some suggestions to consider.

– Basics of inventory management, advanced inventory management practices and strategic purchasing. Such training involves exposure to key inventory management concepts, methods and techniques such as ABC analysis, EOQ and JIT. They may also involve more sophisticated tools and techniques, ranging from strategic purchasing, negotiation skills development, supplier evaluation and supplier relationship management.

– Supply chain management training. They allow for discussion of processes and best practices for managing the entire supply chain, managing supply chain risks, i.e. issues related to the identification, assessment and minimization of potential threats in the supply chain.

– Training in modern warehouse management, planning and demand forecasting. These include the study of sales and demand forecasting techniques, which are key to effective inventory management, and allow you to learn warehouse and delivery management techniques and methods. They also provide knowledge of the systems that support warehouse management, and increase awareness of automation and robotics in the warehouse.

In addition, businesses should invest in regular training for employees, such as communication, teamwork or conflict management training, which can help improve the efficiency and culture of supply, procurement, logistics and warehousing departments.

Conclusions. Inventory management is an integral part of every procurement business, playing a key role in ensuring smooth operations and customer satisfaction. In the era of digital transformation, when data and information technologies are reimagining traditional business methods, effective inventory management is becoming more and more difficult, as enterprises must operate in a changing risk environment, but at the same time opens up new opportunities for optimization. Success in this area requires a combination of employee knowledge, appropriate technologies, and a well-thought-out strategy adapted to the individual needs and specifics of the company's activities.

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