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**THE CONCEPT OF SUPPLY CHAIN MANAGEMENT
AS A METHOD OF OPTIMIZING THE DOING BUSINESS**

The article considers the recognition of many leading specialists in supply chain management, that the concept of Supply Chain Management (SCM) is one of the most effective ways to manage commercial structures, which significantly improve the optimization of business conduct.

To improve the efficiency of the company, the company must apply the concept of SCM to facilitate the synchronization of all activities carried out during production and distribution; Value added value optimization (VAL) for the end user; elimination of ineffective business activities.

Currently, the concept of supply chain management is associated not only with maximizing the productivity and profitability of individual business units of the chain, but with optimizing the entire system to achieve higher quality of service at lower total costs.

Key words: supply chain management, value added, doing business.

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**Бизнесті жүргізуді оңтайландыру әдісі ретінде
жеткізу тізбегін басқару тұжырымдамасы**

Қарастырылып отырған мақалада көптеген жетекші мамандардың алғысы бойынша жеткізу тізбекті басқаруды қамтамасыз ететін Supply Chain Management (SCM) тұжырымдамасы ретінде коммерциялық құрылымдарды басқарудың ең тиімді әдістерінің бірі болып табылады және бизнес жүргізуді оңтайландыруды айтарлықтай жақсартады.

Операциялық тиімділікті арттыру үшін компания SCM тұжырымдамасын келесідей қолданады: өндіріс және тарату кезінде орындалған барлық іс-әрекеттерді синхрондауға өз үлесін қосу; соңғы пайдаланушы үшін қосылған құнды оңтайландыру (VAL); тиімсіз іскерлік қызметті болдырмау.

Қазіргі уақытта, жеткізу тізбегін басқару тұжырымдамасы қызмет көрсету жоғары сапасына қол жеткізу үшін барынша тізбектің жеке құрылымдық бөлімшелердің рентабельділігін мен өнімділігін ғана емес, бүкіл жүйені оңтайландыруы жалпы төмен шығындармен байланысты.

Түйін сөздер: жеткізу тізбекті басқаруды, қосылған құн, бизнесті жүргізу.

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**Концепция управления цепями поставок
как метод оптимизации ведения бизнеса**

В статье рассматривается признание многих ведущих специалистов по управлению цепями поставок, о том, что концепция Supply Chain Management (SCM) является одним из наиболее эффективных способов управления коммерческими структурами, позволяющим существенно повысить оптимизацию ведения бизнеса.

Для улучшения эффективности функционирования компания должна применять концепцию SCM, способствующую синхронизации всех видов деятельности, выполняемых в ходе производства и дистрибьюции; оптимизации добавленной ценности (VAL) для конечного потребителя; устранения неэффективных видов деятельности ведения бизнеса.

В настоящее время концепция управления цепями поставок связана не только с максимизацией производительности и рентабельности отдельных бизнес-единиц цепи, но и с оптимизацией всей системы, чтобы добиться более высокого качества обслуживания при более низких общих издержках.

Ключевые слова: управление цепями поставок, добавленная стоимость, ведение бизнеса.

Introduction

The external environment in which logistics operations are carried out is constantly undergoing changes under the impact of market changes and competition conditions. In order to timely and adequately respond to these changes, any company needs a methodology for administering logistics activities, managing the transport and logistics system, allowing to take into account existing circumstances and assess possible alternatives to its development and risks. In the logistics management of the global format, a new direction is actively developing today – the design and management of supply chains.

The supply chain is a new kind of logistics systems, the management of which from the standpoint of minimizing overall costs, increasing profits, improving customer service and reducing the impact of uncertainty on the system is called supply chain management (Chen, F., Federgruen, A., & Zheng, Y.S. 2001: 693, Christopher, M. 2000: 37, Harrison A. 2010: 102; Ivanov D. 2009:42)

The concept of supply chain management as well as the concept of integrated logistics is a mixture of different disciplines (Van Leeuwen, T., & Tijssen, R. 2000: 183). It combines the tasks of logistics (minimization of costs in the logistics chain) and operational management (efficient management of inventories and production), marketing (focus on creating value for the client) and marketing relationships (interaction with partners in the supply chain), as well as other disciplines. In this regard, it is obvious that it is possible to explain how to manage the system of relationships and achieve overall reduction of costs in the supply chain with a given level of quality of service to end-users, only on the basis of an interdisciplinary approach.

For a better understanding of why it is supply chain management that poses such an ambitious, difficult task, an analysis of the evolution of the development of supply chain management is necessary. The practice (followed by the theory) of supply chain management emerged in response to the

new economic challenges of the late 1970s and early 1980s, when the macroeconomic characteristics of the world economy, which was stagnating after the energy crisis, required significant efforts to develop new managerial decisions and concepts. At that time, one of the conditions for the survival of companies was the reduction of logistics costs. It quickly became clear that the reason for the significantly increased logistics costs was not so much the increased transport component, as the high costs of creating and maintaining insurance stocks, the write-off of obsolete stocks or, conversely, the lost profit due to the lack of the necessary level of reserves to meet the increased demand.

Materials and Methods

With the help of information technologies, it became possible to implement one of the basic ideas of supply chain management – information coordination and synchronization of demand and supply. It is integration and coordination that fundamentally distinguish the management of supply chains from traditional concepts of inter-firm cooperation.

From the 1990s to the present, it is business that is driving the development of supply chain management, science mostly only follows it, and is not a source of development.

At present, supply chain management is developing rapidly and is gaining increasing importance for industrial, logistics and trade enterprises.

The practice of supply chain management has proved the effectiveness of building and analyzing a business based on an integrated review of all areas and elements of the process of creating the value of the product, and not only the costs and profits of your own enterprise without taking into account the impact on them of interorganizational relationships with suppliers and relationships with customers. The current supply chain differs from a vertically integrated corporation of the beginning of the 20th century in that it consists of isolated, formally independent (actually closely interrelated in the business process and therefore interdependent),

focused on their key competencies for organizations aiming to minimize total costs in the chain supply and maximize value for the end customer. There are five sectoral areas in which management supply chain is one of the main tools to improve business performance: aircraft construction, automotive, electrical engineering, wholesale and retail trade, consumer and pharmaceutical products. Currently, the management of supply chains has clearly indicated a shift from simple information coordination and operational cooperation to a holistic interaction in supply chains, which leads to an understanding of supply chain management as a business management concept.

In Union of Independent States(UIS)countries and abroad supply chain management is considered from three main positions: as a business concept, as an independent scientific direction and as an environment of information interaction of enterprises. Business processes and information technologies, in practice the most closely connected with each other, are considered in many respects apart from each other. The same applies to the modeling and optimization of supply chains. The establishment of interrelations between these three areas – the business concept, information technology and supply chain modeling – is currently one of the most important tasks.

One of the methods of optimization of logistics is supply chain management – Supply Chain Management. For the enterprise, the introduction of SCM means doing business on the basis of strategic interaction with suppliers and customers. In a traditional system, enterprises compete by achieving the ultimate competitive advantage in the supply chain of the product. Managing supply chains involves competition not of individual enterprises and their products, but of supply chains, which include these enterprises. The supply chain is links connected by information, money and commodity flows. Each chain begins with the acquisition of raw materials from suppliers and ends with the sale of finished goods and services to the consumer.

Let's give a description of the content and functionality of the stages of building the supply chain of the enterprise.

PLAN (planning). At the stage, the sources of supply are determined, the reserves are planned, the requirements for the distribution system, as well as the volumes of production, supplies of raw materials / materials and finished products are determined. All decisions related to resource planning and product life cycle management are taken at this stage. (Dyer, J.H., Cho, D.S., & Chu, W.J. 1998:57; Em-

mons, H., & Gilbert, S.M. 1998:276; Ertogral, K., & Wu, S.D. 2000:931; Fisher, M.L. 1997:105)

SOURCE (procurement) The stage identifies key elements of supply management, evaluates and selects suppliers, checks the quality of supplies, concludes contracts with suppliers. In addition, at this stage, processes are occurring related to the receipt of materials: acquisition, receipt, transportation, similar control, storage prior to posting and receipt.

MAKE (production). Definition of specific production procedures: production procedures and cycles, quality control, packaging, storage and output (in-plant logistics) (Beamon, B.M. 1999: 275; Ertogral, K., & Wu, S.D. 2000:931 Fisher, M.L. 1997:75; Fleischmann, M., Beullens, P., & Bloemhof-Ruwaard, J.M. 2001:156).

DELIVER (delivery). Production management of orders, warehouse, and transportation. Order management involves the creation and registration of orders, the formation of value, the choice of the configuration of the goods, as well as the creation and maintenance of the client base. Warehouse management includes a set of actions to select and complete, package, create a special package / label for the customer and ship goods.

RETURN (return). Definition of the structural elements of the return of goods (redundant, defective, requiring repair) from make to source, and it deliver: determining the state of the product, placing it, requesting return authorization, scheduling returns, sending for destruction and processing. (Fox, M.S., Barbuceanu, M., & Teigen, R. 2000:165; Frohlich, M.T., and Westbrook, R. 2001:185; Savaskan, R.C., Bhattacharya, S., & Van Wassenhove, L.N. 2004:239)

Factors affecting Supply Chain Management. Rapidly changing demand for products. The demand for products can not be precisely determined, because it is subject to change. Demands may vary depending on several series of changes, such as seasonality (holidays, heating season) and state control.

The geographical position of the manufacturer and supplier. Currently, the distance between the supplier and the manufacturer increases in scale, as in the pursuit of low production and labor costs, many Western countries produce their goods in low-income regions such as Eastern Europe and South-east Asia.

Despite this geographical factor, the customer's demand for quality, service, time and price does not change Location of goods and warehouses. In the world there is a tendency to large regional warehouses and several supply centers. Some companies exclude warehouses altogether. (Guide, V.D.R.,

Jayaraman, V., Srivastava, R., & Benton, W.C. 2000:125; Gupta, A., & Maranas, C.D. 2003: 1219

Provider of logistics services. The question is that the company must decide whether it will itself deal with warehousing, delivery, etc., or will subcontract (outsource). In the world market there is a trend towards 3 PL and 4PL.

Literature Review

The listed problems are signs of the «whip effect» (bullwhip effect) (Lee, H.L., Padmanabhan, V., & Whang, S.J. 1997a: 546; 1997b:93) in the supply chain, the essence of which is that partners do not have reliable information about real demand and are forced to create an insurance stock of materials and (or) finished products.

The paradigm of key competencies that dominated strategic management in the 1990s only exacerbated the problem of the «whip effect», since the company's focus on core competencies means the removal of non-core business processes beyond it.

As a result, in most cases, there was an increase in the number of links in the supply chain while reducing control for the activities of suppliers. A natural and logical decision was to organize a simple coordination of the flow of materials and finished products through the exchange of reliable information between partners in the framework of trust relationships. This was what it was called supply chain management and later developed in the direction of creating more complex systems of coordination and integration of key business processes (Ohotnikov I.V., Sibirko I.V. 2014:77; Sergeev V.I., Dorofeeva E.A. 2010:48). The development of supply chain management has objective bases.

In the 90s of the XX century, two tendencies became apparent: the globalization of markets and the informatization of society. These trends have caused changes in strategies to ensure the competitiveness and profitability of the business. To ensure the competitiveness of enterprises have become forced to individualize products and take into account the needs of customers. In the 90s of the 20th century, new markets of Southeast Asia, South America, Eastern Europe and Russia began to be actively developed. Many enterprises transferred their production capacities to these regions. The volume of transportations, including intercontinental ones, began to increase rapidly.

Rapid development of information technologies for management business and the emergence of the global information space of the Internet has provided fundamentally new opportunities for busi-

ness management. All this combined resulted in consideration of the whole chain of Value Chain creation, all its intra-firm and inter-organizational sites and the places of joining the different stages of the value creation chain, rather than optimizing the local functions of managing one's own enterprise, was a decisive factor in ensuring competitiveness and profitability business. This determined the development of supply chain management. The first use of the term «supply chain management» is accepted refer to consultants R. Oliver and M. Weber. They in their article «Supply Chain Management: Logistics catches up with strategy» in 1982 proposed to consider the material flows from the producers of raw materials to the final consumer within the framework of the integrated strategy, calling it the management of supply chains. (Oliver, R.K., & Webber, M.D. 1982:73; Christopher, 1992:63). According to experts the starting point for the emergence and the development of the concept of supply chain management was the desire to reduce uncertainty on the basis of methods and models of cooperation and multi-echelon inventory management, which developed intensively in the 1970s and 1980s. at several enterprises simultaneously. On the supply chain, then speech was not yet on. In the 1970s-1980s, the concepts of synchronization of distribution, production and supply were actively developed (Dybskaya V.V., Sergeev V.I. 2009:93; Ivanov D.A. 2009:82).

In practice, the most common concept was «just in time» (Just-in-Time). A number of specialists associate the emergence of supply chain management with the rational use of production capacities. Without the management of supply chains, enterprises were forced to plan

the production process is subject to significant buffer spans, as supply processes have not been synchronized with either suppliers or customers. Since then, the understanding of supply chain management has changed significantly. In practice, supply chain management began to develop in the 1990s XX century in the United States, Europe and Japan in an individualized customer industries (such as automotive, light industry, electrical engineering) and trade.

The increasing importance of supply chain management is associated with the development of outsourcing, increased competition and the emergence of new forms of competition in the context of globalization and integration, as well as the development of information technology, logistics, the expansion of the range of logistics services and the growing role of logistics providers.

A new stage in the development of supply chain management was given by corporate information systems, and later by Internet technologies, which significantly improved the coordination of processes in the supply chain. (Lancioni, R.A., Smith, M.F., & Oliva, T.A. 2000: 45; Arntzen, B.C., Brown, G.G., Harrison, T.P., & Trafton, L.L. 1995: 69).

Information technologies were, on the one hand, the environment for ensuring and improving the efficiency of the supply chain, and on the other hand, a powerful tool for the development of new concepts of supply chain management. (Ozer, O., & Wei, W. 2006: 1238; Cachon, G.P., & Lariviere, M.A. 2005:30; Chen, F., Drezner, Z., Ryan, J.K., Simchi-Levi, D. 2000:436).

Results and Reasoning

The introduction of SCM requires not only financial costs and changes in operations in logistics, but also changes in mentality in doing business. For example, the success of world-renowned companies like Toyota and Dell would not be possible without a close partnership of suppliers with customers.

Lack of trust and inconsistency impede the implementation of SCM and in general, negatively affect the logistics process. The introduction of automated systems does not solve all problems, because in order to reduce risks and costs, it is necessary to be in close interaction with all participants in the production process.

The question of ecology every year rises sharply at the discussion, especially in European countries where there is regulation for the damage to the environment.

Intensive agitation is conducted for the use of railway transport, as the most environmentally friendly, cargo-carrying and relatively inexpensive mode of transport. (Narashimhan, R., & Jayaram, J. 1998:579; Naylor, J.B., Naim, M.M., & Berry, D. 1999:107)

Risks and problems in the implementation of Supply Chain Management. The risks of implementing Supply Chain Management are related to the high financial costs of acquiring information technology and automating processes inside the supply chain, training personnel, consulting companies to develop their own strategy. In addition, there are risks associated with inaccurate definition of demand for products, such as an incorrect interpretation of the needs and desires of the client. As a result, the manufacturer can create a product that is not in demand. There is also a potential problem that information required

at the planning stage of SCM implementation, in the implementation for simulation of the program can be incorrectly analyzed, verified and corrected. Since the individual model of the program for SCM is built on the data about each process of the supply chain, in the following, such a mistake will be disastrous for the whole system and its result. Due to the fact that all processes are automated, the requirements for accuracy and quality of data are growing.

The next risk is associated with the application of new business processes for companies. We have already mentioned that the introduction of SCM requires not only financial costs, but also changes in the conduct of business. Not infrequently, employees of the company negatively perceive internal changes and the need to study a new approach to business. The lack of qualified personnel and their motivation are also important, since we have to work with the latest systems and computer technologies, which require great knowledge, experience, accuracy and responsibility.

Conclusion

An additional risk is the «bovine whip effect» with subsequent deviations caused by it. The effect of a bull whip is a situation created by insignificant changes in the demand of the final consumer, which causes significant changes in the planning of stocks and production from other participants in the supply chain (suppliers, producers, distribution / distribution). This situation can arise in the event of a surge in demand for products, as a result of which a decision is made to order a larger volume of products in order to meet demand with some margin. However, upon the arrival of an order, such a demand for goods falls and as a result, its surplus accumulates in warehouses. In this case, the next order for the goods will be postponed until the moment it is spent, or it will be significantly reduced in volume. Meanwhile, the supplier, receiving uneven orders, in order to insure himself, makes an order from his supplier also with a margin. As a result, the amplitude of the jump increases. Such an effect is achieved due to incorrect forecasts, price fluctuations, delays in the required information, increases in the volume of orders and delays in consignments of goods.

The introduction of SCM in Kazakhstan enterprises will help to solve the following tasks:

– reduce the planning cycle and increase the planning horizon by obtaining reliable and timely information.

- optimization of costs through the ability to determine strategic counterparties, the optimal choice of purchased products and their suppliers.

- reduction of production costs (cost of raw materials, costs of maintaining stocks, investments in equipment, cost of in-plant shipments) through optimization of product flows and operational organization of information exchange between counterparties;

- decrease in warehouse costs due to bringing production volumes in line with demand (analogous to Just in Time in lean manufacturing);

Improving the quality of customer service due to the speed and flexibility of the supply chain.

According to analytical studies, implementing SCM, companies receive the following competitive advantages:

- increase in profits from 7% to 19%
- reduction in the cost and processing time of the order from 24% to 37%
- the reduction of stock from 18% to 36%

- reduction of production costs from 5% to 15%

Production advantages:

- reduction of the planning cycle
- reducing production costs through accurate forecasts

- reduced inventory costs

- reduced inventory costs

- reducing the time to order

Additional advantages:

- improving the quality of customer service

- provision of an additional service due to the ability to monitor the movement of goods

- reduction of paper transactions

The study was conducted by AMR Research and Forrester Research. Thus, the introduction of SCM in Kazakhstan enterprises should influence the formation of a network of warehouses of raw materials and finished products to reduce operational logistics costs and optimize the scheme of transport routes.

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