STRUCTURE AND PARTICULARITY OF MANAGEMENT OF LOGISTICS INFRASTRUCTURE ON ENTERPRISES BUILDING SECTOR

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Abstract
In the current market conditions, one of the key competences for the enterprises, including and the enterprises of building sector is its competitiveness. Various factors affect on the competitiveness of enterprises, one of the constituents is the price of the product that provided building enterprises. The basic is net product cost of enterprises building sector, we are proposing to consider a logistics infrastructure of building enterprises for reducing net cost. Also propose to illuminate its structure, particularity and how management of logistics infrastructure could impact on reducing product cost of building enterprises.

Key words: *logistics infrastructure, logistics infrastructure on enterprises building sector, structure of logistics infrastructure, management of logistics infrastructure, informational support, building sector*

1. THE LOGISTICS INFRASTRUCTURE: THEORETICAL BACKGROUND

In the current condition of operation the important goal for enterprises building sector is supporting economic results of activity, its competitiveness. One of the instruments which create possibilities for solving this object is logistics system, which realized over creation and using logistics infrastructure of enterprises.

The theoretical point of formation and development of logistics infrastructure on enterprises has been explored at the papers of following scientist (Bowersox, Closs, 2005; Dmitriev, 2012; Klimenko, 2011; Kovalska, Savka, 2009; Kolodin, 1999; Krikavskij, 2005; Kyvaev, 2006; Kuznetcov, 2012; Sergeev, 2005; Taran, 2010; Krikavskij, Chornopiskaya, 2009; Uvarov, 2012; and others).

As result of analysis of present theoretical development was defining absence of integrated approaches concerning definition “logistics infrastructure”.

We offered to consider this definition from point of view: functional and elemental approaches.

The logistics infrastructure is aggregate of elements, which execute important logistics tasks and provide implementation of logistics processes (Krikavskij, 2005). He considering logistics infrastructure like integral system of management (totality of buildings, construction with necessary equipment for warehousing products, transport and manipulation facilities, facilities of packing, facilities of receiving, transmission and processing of information).

Supported of present approach (Krikavskij, Chernopiskaya, 2009), define logistics infrastructure like systems of facilities space-time transformation of logistics flows (material, financial, informational, human), and as well totality of enterprises different law-organizing forms, which creating economic-organizing conditions of passing this flows by the way of creating of potential corresponding logistic services.

In the frame of functional approach of logistics infrastructure describes like aggregate types of activities with assistance of which fulfill and servicing process of movement financial and material flows or process of movement goods (Klimenko, 2011).

Dividing proposition of element approach (Kovalska, Savka, 2009) are considering logistics infrastructure like complex of objects, which own specified geographical location and different descriptions.

Logistics infrastructure – aggregate of elements which accept participation in the movement material-commodity flow from producer to consumer (Kyznecov, 2012). At the base has founded: organizational basis, which consists of supply - realization, brokerage and others commission business. The material base consists of transport systems, warehouse and packaging economy, information system and communication facilities, credit and calculation base in structure of banks and structure establishment.

Logistics infrastructure is considering like set interrelated elements, which ensure functioning the purchasing system, shipping, storage and delivery goods to the consumers (Dmitriev, 2012).

In the frame of elements approach segregate following subdivision of logistics infrastructure: warehousing (storage of different kind and function, cargo terminal and terminal complex); transport subdivision different kind of transport; transport communication (car and rail road's, approach line and other); repair and subsidiary subdivision, which has served transporting and warehousing; telecommunication system; information-computer system (Sergeev, 2005).

Author's approach concerning definition "logistics infrastructure on enterprises building sector" define it like complex category which consists of totality of functions, objects, which oriented on the development of building enterprises by the way of optimization financial, informational, material and others flows with taking into account characteristics of interaction with different groups of concerned persons.

2. THE STRUCTURE OF LOGISTICS INFRASTRUCTURE ON ENTERPRISES BUILDING SECTOR

Logistics infrastructure on enterprises building sector have specified peculiarities, which exerted on its forming and functioning. A building enterprise has considered like consumer in logistics system of producer and supplier material and components.

The scheme of logistics infrastructure on enterprises building sector has been considered (figure 1).

Logistics infrastructure require complex interaction of elements, relative to delivery, production and realization product of building enterprises, by the way of use integrative approach relative to movement and using material, information and financial flows on enterprises. Given approach allow define direction of management this system to take into account features of building enterprises.

In consideration of logistics infrastructure on enterprises building sector, possible to say, that material flow is forming from supplier (supplier 1, supplier 2, supplier n) and from own production on building enterprises. Next stage – is delivery material at the warehouse, and later from warehouse actually on the building construction (material and technical support). Next stage – construction building and the next is realization ready product to customer. New cash flow enterprise received from customer, this flow divides on the following expenses:

- overall production expenses: amortization fixed assets overall production assignment; amortization intangible assets overall production assignment, expenses on maintenance, operation and repairing, insurance, operation lease fixed assets, another intangible assets overall production assignment; expenses on improvement technology and organization of production (improvement quality of products, rising its reliability, operating life); expenses on heating, lighting, water supply and sewerage and other maintenance on industrial premises, expenses on services industrial process (remuneration of labour personals of overall production, assignments on social measures, medical insurance of personals and management personnel of production; expenses on job safety, safety engineering, another expenses (movement of materials inside enterprise, components)

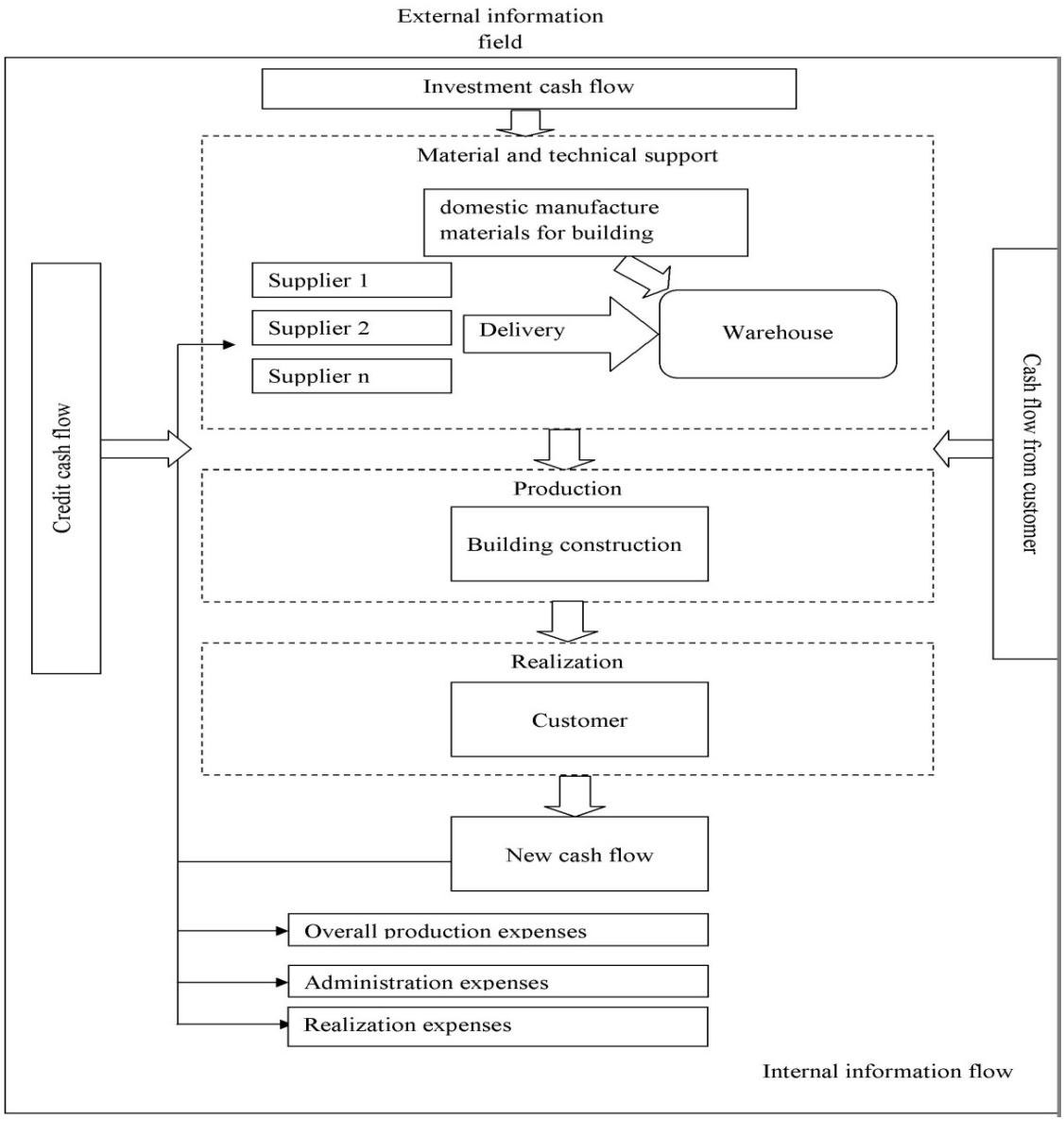


Figure 1: The scheme of logistics infrastructure on enterprises building sector

- administration expenses: overall corporate expenses (organization expenses, expenses on holding annual meeting, expenses on representation), expenses on maintenance management personnel of company, business trips, expenses on maintenance fixed assets and other material intangible assets overall economic usage (property insurance, amortization, repairing, lighting, heating, water supply and sewerage, protection); expenses on communication (post, internet, telephone); expenses on solution to the dispute in the court, taxes, charges and another provided by law compulsory payment which included in production price).
- realization expenses; expenses on marketing; remuneration of labour people which engaged realization product; other operation expenses, the sum of bad accounts receivable, expenses on operations difference on exchange rate
- expenses on purchases raw material from suppliers

Investment cash flow arise on initial stage of production; he consists from moneys of issuing offices. The credit cash flow and cash flow from customer could arise on the stage of material and technical support, production and realization.

Logistics infrastructure couldn't exist without internal information flow and external information field, which connected with cash and material flows.

Information flow in the frame of logistics infrastructure on building enterprises accomplish optimization and integration financial and material flows along horizontal, synchronization and integration the process management along vertical.

Horizontal integration of material and information flows permit organic connect material flow with general system of planning and management on the enterprise level. Availability of this kind of connection in the perfect variant give a possibility gain kind of that all solution about production process isn't accept and realize without correlation it with general strategy and goals of enterprises.

Vertical integration of information flows consists in impact each other on different levels in control hierarchy company, starting from structures of strategic planning of development company and completed on the level of operations management at separate production sector. Vertical integration include all levels like direct – from up to down, and back to front (down to up) connections, allows up-level to have enough information about condition of each element of system and quickly react to change which happens.

3. MANAGEMENT OF LOGISTICS INFRASTRUCTURE

The strategy of minimization investment in logistics infrastructure considered like one of the methods of management of logistics infrastructure. The ways of realization given strategy:

- optimization of configuration logistics net;
- usage of third party logistics in transportation, warehousing;
- usage the logistics technology "just-in-time";
- optimization of dislocation objects logistics infrastructure;
- optimization of decisions in separate functional areas and logistics functions on the criterion of minimum of logistics expenses.

By choice of strategy and methods of its realization necessary to take into consideration that management of movement the goods are based on the accounting not one, but like minimum several factors. Many factors is meaning of logistics process. By attempting to solve this task with account only one factors, other components of logistics system substantially had limited possibilities of company or worse the planed results for other indicators. By the usage the strategy of minimization investment in logistics infrastructure possible to receive essential rising transport expenses, which are constant and adjustable for company and size of which will be have negative influence on profitability and, thereafter, on its position at market.

The conception "Just in time" will be considering more detail. The main task of this conception is coordination of supply with production management (synchronization needs in material recourses with material recourses flow)

JIT characteristics:

- minimal stock;
- short logistics chains;
- small volume of production and stock replenishment;
- interrelation by purchasing with little quantity trusty suppliers and carriers;

- effective information supports;

The order on replenishment of reserves will arise only at that time, when quantity of material recourses in subdivision will reach critical value. Actual production provided by material recourses only for fulfillment the one order.

In such situation necessity in warehouses fallen away, but quality of information systems became to be critical, exact prediction of demand, quality of delivery. Very important is territorial closeness of suppliers.

Another conception of production planning "Conception Manufacturing Resource Planning (MRP II)" for enterprises of building sector are considering.

The task of information system of class MRP II is optimal forming of material flows. The system of class MRP II has an object integration of all main processes, which realize on enterprise, such as supply, inventory, production, sales, planning, control for achievement plan, expenses, finance, fixed assets and others.

The results of usage integrated system of standard MRP II:

- receiving operative information about current results of enterprises activity in general, and with total detail separate orders, kinds of sources, execution of plans;
- strategic, operative and detailed planning activity of an enterprises with possibility of updating systematic data which based on operational information;
- solving the tasks of optimization production and material flows;
- real decrease material recourses at the warehouses;
- planning and control for all production cycle with possibility of influence on it in the goals achievement and optimal efficiency in using production capacities all kind of recourses and satisfaction customer needs;
- financial demonstration enterprise activity in general;
- significant decreasing nonproduction expenses.

The basis of the MRP II is laid plans hierarchy. Plans of lower levels depend on the plans of higher levels, that is the highest level plan provides of the input data and indicators envisaged any restrictive framework for lower-level plans. Furthermore, these plans are interconnected so that the lower level plans results have reverse effect on higher-level plans. If the results of the plan is unrealistic, the plan or plans of the higher level should be reconsidered. Thus, it is possible to coordinate the supply and demand of resources at a certain level of planning and resource planning at the highest levels.

The importance of information flows in logistics infrastructure for enterprises building sector, they are an important link of all logistical infrastructure and on the quality of information flows is based the management of logistics infrastructure.

Each of the ways of implement strategies to minimization investment in logistics infrastructure could improve the competitiveness of the company. When choose a method, founding on conditions of the logistics infrastructure and choose the best option for a particular enterprise building sector.

For example, the transition to 3PL providers for one company may increase the costs of transportation, storage and other operations cost, and the usage of technology «just in time» conversely reduce the cost of storage (avoid them). And of course for this company will be chosen strategy «just in time» as the optimum for enhancing the competitiveness of the company.

CONCLUSIONS

In the course of the paper the approaches to the definition and the notion of logistics infrastructure has illuminated, given the author's definition for the concept of logistics infrastructure on enterprises building sector. The scheme of the structure of the logistics infrastructure on enterprises building sector has considered. The ways of managing logistics infrastructure has treated.

Importance of permanent modification logistics infrastructure to adapt to changes in supply and demand can not be overemphasized. In a dynamic competitive environment, the range of products, terms of delivery and production needs are constantly changing . To achieve competitive advantage they need to continually assess and adapt to changes. Undeniable is impossible without modern information system, which is realized through software.

The company which has the most perfect structure maintenance material flow usually has certain competitive advantages, ceteris paribus, as the unit cost of the service movement of goods will be lower than the competition. Improving logistics infrastructure is to find the optimum ratio of the availability of storage facilities in certain places, they are ideally located and arising from this total - cost components for transportation and warehouse handling. That is, the optimality criterion on-time delivery to storage facilities on production and costs required for these operations.

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