sciendo

Management Systems in Production Engineering

2022, Volume 30, Issue 1, pp. 9-17

Date of submission of the article to the Editor: 12/2021
Date of acceptance of the article by the Editor: 01/2022

DOI 10.2478/mspe-2022-0002

INNOVATIONS IN LOGISTICS MANAGEMENT AS A DIRECTION FOR IMPROVING THE LOGISTICS ACTIVITIES OF ENTERPRISES

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Abstract:
Nowadays innovations became the most important element of the country's economic development, since they provide a qualitative increase in the efficiency of processes or end production demanded by the market. In this article, the innovation of processes, viz. the processes of logistic management of the production-economic organization is proposed. Innovations in logistics management, as a direction of logistics activity improvement provide the development of new tools (methods, criteria, indices) in methodological logistics' groundwork, as well as improving the mechanism for the formation and functioning of micro- and macro-logistic systems. The aim of the research is to develop scientific and methodological recommendations for the application of logistics management innovations that involve designing the logistics system through the improvement of the enterprise's organizational structure as an element of the economic macro environment. Logistic system designing approach is suggested, that anticipates an enterprise's organizational structure formation under the process-matrix principle (unification of functional and process management approaches) and the establishment of the effective enterprise's logistic service that plays the role of coordinator and integrator of its business-processes. Efficient organization structure formation, that provides logistics approach implementation in practical enterprises' activity is grounded by authors. The result of the innovations in logistics management appliance is effective logistic system's design, in which the coordinated material, informational and financial flows motion is carried out. In the result, it ensures efficient enterprise's business-processes functioning and organic improvement of its organizational structure.

Key words: *logistics management, enterprise, organizational and managerial innovation, business-processes, logistics system*

INTRODUCTION

In the context of globalization of the economy, logistics has become an important component of the competitiveness and innovation activity of the enterprise. And at the national level, the logistics industry makes a very significant contribution to GDP, general incomes and competitiveness of the country, of course if there are efficient logistics management. The role of logistics and its interconnectedness with the country's profitability and wealth is demonstrated by the data presented in the report of World Bank for 2007-2018 [1]. The basis of ensuring the efficiency of logistics management should be its innova-

tiveness. Improving the efficiency of enterprise management on the basis of innovation activity is the subject of regulation not only at the level of an individual country but also at the international level [2, 3]. Since a certain production-economic organization is a link of the supply chain, the efficiency and reliability of the whole chain depends on the rationality and efficiency of its logistics system. Therefore, we will focus further on this link, i.e. the formation of the logistics system of the enterprise as an element of the supply chain. The basic component of logistic innovative systems activity is the organizational management structure formation with high level of innovative reception. It facilitates interfunctional coordination during the process of enterprise's business-processes functioning.

LITERATURE REVIEW

Studying theoretical achievements of foreign and domestic scientists concerning the problems of innovative development of enterprises Davenport [4] and Andrusiv & Galtsova [5] it could be concluded that the overwhelming majority of researches is oriented to the production concept of innovation development, which focuses primarily on product and technological innovations Becheikh et al. [6] and Illiashenko & Shypulina [7]. In accordance with Oslo's international standards, innovation is the result of innovative activity, realized as a new or enhanced product presented on the market [8].

Many scientists focus on the organizational aspect of innovation Armbruster et al. [9], Andrusiv et al. [10], Crossan & Apaydi [11]. Certain researchers connect technological and organizational innovations Camisón & Villar-López. [12] and Cherchata et al. [13] among others.

However, in an unstable environment, increased competition in domestic and international markets and the search for new reserves in entrepreneurial activity, the key factors of success become not only industrial innovations, but organizational and managerial innovations. Therefore, the issue of intensifying the production of innovative approaches to the management of logistics processes is relevant today.

Logistics innovations can be considered as organizational and managerial innovations aimed at flexible integrated management systems building that provide the consistency and balance of management decisions both within certain functional divisions of the enterprise and on the interfunctional level, as well as in the process of business relationships with external contractors. Such scientists as Kinash [14], Gonzalez [15]; Little [16]; Ryikalina [17] etc. that study logistic processes functioning problematic pay attention to logistics innovations.

It is necessary to use special methodological toolkit to design logistic systems, to analyse, to estimate integrated flows processes management efficiency in order to optimize costs, that is ultimate aim of logistic strategy realization. According to scientists' majority Krykavskyi & Chornopyska [18] and Popovychenko & Cherchata [19], one of the typical management structures is used to design an enterprise's organizational structure of logistic management: linear, functional, matrix, divisional, etc.

According to Sergiienko et al. [20] any production-economic organization consists of three functional fields: production, finances and marketing. This is classical conception of the functional formation principle of the enterprise's organizational structure.

An enterprise can implement not entire process approach, but, in accordance with Brown [21] propositions, apply matrix-process structures. In this case vertical and horizontal mechanisms of business-processes management will combine, while some functional liability zones will be kept. But how can this matrix-process principle be applied during the formation of the enterprise's logistics system and during the management of this system, which is essentially cybernetic? Remind the definition of the "cybernetic system" concept and formulate the definition of the logistics system to ascertain the legitimacy of the logistics system perception as a cybernetic with all the consequences that appear in it. According to academician Orlovska [22], cybernetic system is "a enormous number of interconnected objects called system elements that can perceive, memorize and reprocess information, and exchange information also". Hajinsky [23] defines the logistics system as an adaptive feedback system that performs certain logistic functions and logistic operations, which usually consists of several subsystems and has developed connections with the external environment. From the view point of business practice, the following definition of the logistics system as a structured economic system can be given: "The logistics system is a relatively stable body of links (structural/functional divisions of the company, as well as suppliers, customers and logistics intermediaries), interconnected and united by the single management of the logistics process (their material and associated flows) for the implementation of the company's operating strategy". In fact, the supply chain is a cybernetic logistics system, and supply chain management is the integration of key business processes that start with the end-customer and cover all goods suppliers, services and information [24]. The questions of the impact of supply chain partners, as elements of the system, on the performance of each other are investigated in the article [25]. A representative sample of vertical relationships in supply chains (22,500 observations) had been investigated. The authors reached a conclusion that the presence of a productive partner in the supply chain helps the firm to increase its own productivity, especially if the firm's client is a more productive partner. Besides, the authors considered that the concentration of supply chain and the maturity of relations influence the productivity of the company, as an element of the supply chain.

The importance of choosing suppliers policy in conditions of possible production failures in the company's activities is explored in the article [26]. Costs and benefits of a flexible strategy for interacting with suppliers, viz. the availability of regular and reserve suppliers estimated in the article. The authors observed that the supply chain performance may deteriorate due to the availability of a flexible source of resources. In practice sole sourcing is typically

justified by economies of scale, learning, and trust, despite its weakness in case of production disruptions.
Communications between the manufacturer and the retailer are investigated in such work, as Popadynets et al [27]. The authors made a paradoxical conclusion that a huge uncertainty of demand can contribute to a reliable exchange of information and, surprisingly, can benefit both firms. Optimizing the management of multiprofile stocks in the demand uncertainty for each product in each period of time, proposed in the article Simkiv et al [28], allows to find a balance between the expected value and the corresponding costs variance. In fact, the authors used simulation, where the resultant indicator is the target value of storage costs. The strategy of exchanging information with customers on the quantity and qualitative composition vertically differentiated products' stocks in order to smooth out supply and demand mismatches and to prevent deficits is proposed in article Cui & Shin [29].
One way or another, all above mentioned studies understand supply chain management as an open cybernetic system, where suppliers, producers, consumers, as well as internal and external factors that influence their activities are interconnected and interrelated elements of the system. Consequently, many researchers are looking for effective approaches and mechanisms for managing complex cybernetic business systems. And the proposed schemes for stimulating the managers of a large firm through improving the content and linking qualitative and quantitative indicators of their work allows to analyse the management efficiency of certain functional units of the company, but to a lesser extent, oriented towards the assessment of business processes and logistics flows management Englmaier & Roider [30]. Scientists Astashova et al [31] propose a multidimensional approach to supply chain management based on distinguishing between two related management objects: a subsystem of flowing business processes and a subsystem of business interaction of chain participants. It will allow to take into account the specifics and complexity of the logistics chain as an object of management. Fugate et al [32] in their work investigate the influence of logistics performance on enterprise performance. The results show the positive influence of logistics on the efficiency of the organization, while the efficiency and effectiveness are complementary indicators. Manlig et al [33] point out that if you do not innovate the business processes of enterprises, you will not survive. We fully agree with this statement, since high requirements for the quality of business process control more and more require the use of auxiliary tools that will allow us to get a detailed analysis of them.
However, in spite of numerous groundworks, it is left not adequately explored issues of coverage of innovative approaches in the field of logistic management in the context of improving the organizational structure of enterprise management and the creation of an efficient logistics system with the possibility of quantitative monitoring of the certain units' effectiveness and business processes through a system of interconnected criteria and indices which causes the necessity of further deep researches.

Hence, the goal of this article is to offer to the experts and interested users a copyright vision of the approach to designing a rational enterprise logistics system in the context of improving the organizational structure of this enterprise as an element of the macrologistical system (or element of the supply chain). The proposed approach, according to the authors, will allow controlling transparently and regulating the effectiveness and efficiency of the company's operational and logistical processes based on 4 criteria and a system of quantitative indicators linked to these criteria. We assume that such a system of indicators will balance the functional and process directions of the company's logistics management and ensure the implementation of the organizational, coordinating and integration role of the company's logistics service.

METHODOLOGY

To achieve this goal, the following research methods were used in the work:

- theoretical generalization – for a deeper study of the issue of innovation in logistics (in order to clarify the essence and types of innovation activity, in particular in the field of logistics, logistics and process management, organizational design)
- system analysis – for understanding the arrangement and operation of the organizational mechanism for the formation of the enterprise's logistics system.
- graphic – for building a process-matrix structure of enterprise management, taking into account the logistics service in it;
- economic and mathematical method – to build an integral indicator for calculating the efficiency and effectiveness of a certain operating business process;
- statistical analysis - for the collection and analysis of data from construction companies and the Stock market infrastructure development agency of Ukraine (SMIDA) [34] to calculate the efficiency and effectiveness of the business processes of the studied enterprises.

In particular, the financial and management reporting of 15 joint-stock manufacturing enterprises was analyzed. The authors analyzed quantitative - absolute and relative indicators of the effectiveness and efficiency of the operating activities of enterprises: net income, cost of goods sold and their structure, administrative, general production, burden (other operating expenses) and sales costs, profit from operating activities, profitability of operating activities, and also a number of others, including non-financial indicators, characterizing the operational business processes of the enterprise and their logistics services.

RESULTS

The efficiency of the logistics industry as a macrologistic system is formed due to the effective functioning and interaction of all micro-logistic systems, that is, the logistics systems of specific enterprises. Since the study examines the organizational mechanism for the formation of an enterprise's logistics system, we believe that the enterprise's logistics system is part of the country's

logistics system (industry). Therefore, we consider the micro-logistic systems of the enterprise as an element of the macrologistic system, that is, the supply chain with all its external participants and interconnections.

Thus, we believe that an efficient and transparent organizational mechanism for the formation and operation of the company's logistics system as an element of the supply chain should provide a compromise, but rather a consensus between the vertical and horizontal direction of this system management. The quality of this mechanism must be measured through a system of interconnected relevant indicators.

In other words, it is referred to matrix principle of an enterprise's organizational structure that can be realized through logistic service implementation, that integrates all participants of economic process in supply chain on the basis of connection mechanism's management of the economic flows. Consequently, the balanced matrix organizational structure formation could be done (Fig. 1). The notion "balanced" means: matrix OBS, that divides authority and real monitoring of some functions (vertical) and business-processes (horizontal) fulfilment into 50/50 proportion between functional fields supervisors and logistic service management. Organizational Breakdown Structure (OBS) is an organizational structure of performers (organizations) which is mainly used in project management. This study proposes the creation of a process-matrix organizational structure, that is, the imposition of process (project) management on the classical (functional) organizational structure. It characterizes the structure of managing the relationship of participants in the implementation of business processes related to logistics activities. Regarding to logistics activity of production-economic organization, it is reasonable to consider operational business-processes, i.e. manufacturing business-processes (engaged with production) and business-processes that ensure production's operating (resources supply, transport supply, storage of material and technical resources).

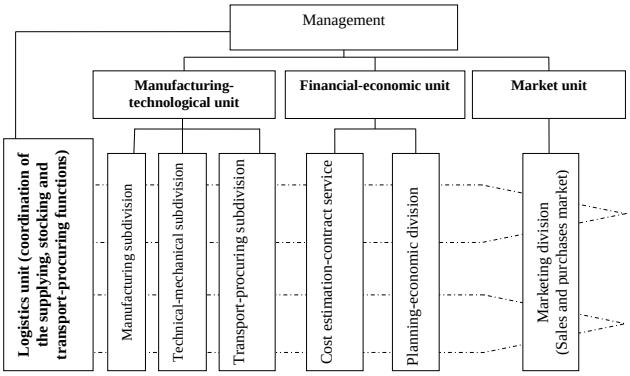

Fig. 1 Principal view of a balanced matrix enterprise's organizational structure

In order to manage this business-processes modified balanced scorecard with its peculiarities taken into account is suggested to use. The idea of balanced scorecard (BSC) belonged to Norton and Kaplan [35] found the development of this indicator system, but operational business processes of the enterprise, classified in a certain way (see above) are the object for estimating and system of indicators is formed for it. The authors proposed four criteria for evaluating the identified business processes: Financial-economic, manufacturing (resources), external integration criterion, organizational. Thus, implementation's logic of logistic service on the enterprise is grounded on the estimation of specific indices of operational business-processes in conformity with each accepted criteria. (Fig. 2). The set of indicators in accordance with a certain criterion is also tied to a certain functional unit of the enterprise. To form the sets of indicators presented in Figure 2, the authors studied quantitative-absolute and relative indicators of the effectiveness and efficiency of the operating activities of the enterprises: net income, cost of sales and its structure, administrative, general production, overhead (other operating costs), marketing costs, profit from operating activities, profitability of operating activities, and also a number of the others, including non-financial indicators that characterize the operational business processes of the enterprise and their logistics good service.

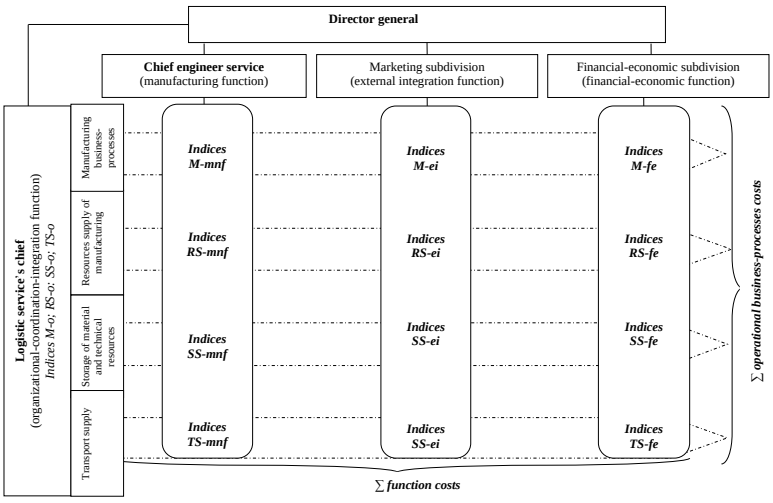

Fig. 2 A place and a role of the logistic service in a process-matrix enterprise's organizational structure

Explanation to the Figure 2:
M-mnf are indices characterised by business-processes of manufacturing within the framework of production functional of the chief engineer service;
RS-mnf are indices characterised by business-processes of manufacturing resources supply within the framework of production functional of the chief engineer service;
SS-mnf are indices characterised by business-processes of material and technical resources storage within the framework of production functional of the chief engineer service;
TS-mnf are indices characterised by business-processes of transport supply within the framework of production functional of the chief engineer service;
M-ei are indices characterised by business-processes of manufacturing within the framework of marketing subdivision's external integration functional;
RS-ei are indices characterised by business-processes of manufacturing resources supply within the framework of marketing subdivision's external integration functional;
SS-mnf are indices characterised by business-processes of material and technical resources storage within the framework of marketing subdivision's external integration functional;
TS-ei are indices characterised by business-processes of transport supply within the framework of marketing subdivision's external integration functional;
M-fe are indices characterised by business-processes of manufacturing within the framework of financial-economic functional of financial-economic subdivision;
RS-fe are indices characterised by business-processes of manufacturing within the framework of financial-economic functional of financial-economic subdivision;
SS-fe are indices characterised by business-processes of manufacturing within the framework of financial-economic functional of financial-economic subdivision;
TS-fe are indices characterised by business-processes of manufacturing within the framework of financial-economic functional of financial-economic subdivision;
M-o – indicators characterizing the production business processes within the organizational-coordination-integration functionality of the logistics service;
RS-o – indicators characterizing the business processes of resource support of production within the organizational-coordination-integration functional of the logistics service;
SS-o – indicators characterizing the business processes of storage of material and technical resources within the organizational-coordination and integration functionality of the logistics service;
TS-o – indicators characterizing the business processes of transport support within the organizational-coordination-integration functionality of the logistics service.
Detailed consideration of a specific list of indices with their physical content and formulas for calculation is beyond the scope of this article, but it should be noted that this list is not rigid and may vary depending on the industry, competitive position, strategic goals, and the stage of the life cycle of a particular enterprise. However, the principle, system, "matrix", presented above in Fig. 2 proposed by the authors are universal for any production-economic organizations. Thus, the logistic service consists of four subdivisions according to four highlighted groups of operational business-processes. It means, that each subdivision responsible for coordination and integration of certain business-processes' group. We will demonstrate how the matrix principle of the company's logistics system functioning, proposed by the authors, works and the approach to monitoring, evaluation and regulation of efficiency and effectiveness of the company's operational and logistics processes. The above approach, developed on the basis of the proposed criteria and indicators of evaluation of efficiency and effectiveness of operational business processes of the enterprise, is based on the complex application of methods of strategic analysis. The methods of strategic analysis allows to define a condition of both certain operational business processes, and their totality by definition of weighted average (I_{jBSC}) as part of criteria BSC, Integral (I_{bp}) and summary (I_j) indicators of efficiency and effectiveness of operational business processes. It creates a basis for substantiation of administrative decisions on improvement of activity of the enterprise for logistics of problem business processes.
The weighted average performance and efficiency indicator of a certain operational business process (IjBSC) within the BSC criteria is proposed to be calculated by a formula:

$$I_{jBSC} = \sum_{i=1}^{n} Ki \times wi \quad (1)$$

where:
K_i is the normalized evaluation i-th indicator of the efficiency and effectiveness of the operational business process, calculated on the basis of the definition of deviations "plan-fact" values within certain BSC criteria;
w_i – is the weighting factor of the indicator;
n – number of indicators.
The integrated indicator of efficiency and effectiveness of a certain operating business process (Ibp) as a whole is a sum of weighted average indicators of efficiency and effectiveness of a certain operating business process within the selected BSC criteria and is calculated by the formula:

$$I_{BP} = \sum_{j=1}^{n} I_{jBSC} \quad (2)$$

where:
k – is the number of business processes being investigated.
After calculating the value of the generalizing index of the set of operational business processes of enterprise I_j, the level of the state of the system (aggregate) of these processes of the enterprise on the known Harrington scale with the interpretation presented in Table 1 is determined.

Table 1
The scale of the final assessment of the level of the system (aggregate) of operational business processes of the enterprise

Numerical intervals of values of complex integral indicator of system (aggregate) of operational business processes of the enterprise, I_j	Assessment of the level of the system (aggregate) of operational business processes of the enterprise	Actions in relation to the system (aggregate) of operational business processes of the enterprise
0.8-1.0	Very high level of efficiency and effectiveness	The system functions efficiently and effectively, but it is necessary to develop preventive actions, if $I_j = 1$, the system does not require development of any actions
0.63-0.8	High level of efficiency and effectiveness	The system generally functions efficiently and effectively, but certain corrective actions need to be developed
0.37-0.63	Average level of efficiency and effectiveness	The system is functioning satisfactorily, goals and objectives have been partially achieved, but certain urgent corrective actions need to be developed.
0.2-0.37	Low level of efficiency and effectiveness	The system is functioning ineffectively and inefficiently, which requires the development of significant large-scale actions aimed at correcting its condition
0.0-0.2	Very low level of efficiency and effectiveness	The system is functioning ineffectively and inefficiently, goals and objectives have not been achieved, influential anti-crisis actions from the top management are needed. If $I_j = 0$, it is necessary to radically redesign the set of operational business processes.

After calculation of values of indicators of business processes the level of their efficiency and effectiveness according to the resulted scale is identified, and also actions in relation to the certain business process and in aggregate (system) of operational business processes of the enterprise as a whole are offered.

So, the interpretation of the generalizing indicator of efficiency and effectiveness of operational business processes of the enterprise is proposed to be performed using the Harrington scale: *Satisfactory*: $0.37 < I_j < 0.63$; *Good*: $0.63 < I_j < 0.8$; *Very good*: $0.8 < I_j < 1$; *Ill*: $0.2 < I_j < 0.37$. *Very ill*: $0 < I_j < 0.2$.

Thus it is important to carry out the analysis of change of this generalizing indicator of efficiency and efficiency of investigated business processes in dynamics that will allow to formulate reasonable conclusions about factors and administrative actions which influence operational activity of the enterprise and trajectory of its development.

Thus, the calculated indicators of efficiency and effectiveness of separate business processes and aggregate (system) of these business processes as a whole allow to receive and aggregate data on degree of achievement of the purposes as separate operational business processes, and the synergetic purposes of set of these business processes, on satisfaction of interested parties. The information on efficiency and effectiveness of business process performance is the basis for analysis of the system by the management, it is used for operational control of processes, periodic review of procedures, policies, goals and improvement of enterprise activity.

Let's give a concrete example of definition of indicators of efficiency and efficiency of business processes, namely – processes of storage of material and technical resources (SS) in connection with 4 criteria (functions) specified by the authors in Table 2.

Similar tables with concrete indicators within the framework of 4 criteria are formed for other groups of business processes of the enterprise – production, resource supply, transport support after which the generalizing indicator of a set of operational business processes of the enterprise is calculated (Ij).

On the basis of interpretation of values of integral indicators of efficiency and effectiveness of certain operational business processes (I_{bp}) on the offered scale the estimation of their condition for definition of problem business processes is carried out (Table 3).

On the basis of Table 3, it is possible to justify the priority of management actions to improve certain business processes based on the rankings. For example, first of all requires attention to the business process of "resource supply of production", because it received the lowest rating. "Bottlenecks" in the middle of investigated business processes are identified on the basis of values of weighted average indicators of efficiency and effectiveness of certain business process (I_{JBSC}).

Table 2

Definition of effectiveness and efficiency indicators of business processes for storage of material and technical resources (SS)

Name of effectiveness and efficiency indicators	Actual value of the indicator	Planned value of the indicator	Formula for calculating the relative unit indicator, K_i	Value, K_i	Indicator weighting factor, w_i	Note (change dynamics characteristic)
1. Financial and economic criterion (FE)						
Share of inventories in current assets *(SS_1)*	0.39	0.1	SS_1 =Plan/Fact	0.26	0.21	Fact > Plan → «bad»
Share of storage costs in total costs *(SS_2)*	0.35	0.05	SS_2 =Plan/Fact	0.14	0.14	Fact > Plan → «bad»
Total liquidity ratio *(SS_3)*	1.73	1.5	SS_3 =1-(Plan/Fact)	0.13	0.09	Fact > Plan → «good»
Stock turnover ratio *(SS_4)*	12.1	8.9	SS_4 =1-(Plan/Fact)	0.26	0.12	Fact > Plan → «good»
Profitability on Stock *(SS_5)*	0.85	1	SS_5 = Fact/Plan	0.85	0.10	Fact < Plan → «bad»
$I_{SSfe} = \sum(K_i \cdot w_i) = 0.2$						
2. Production (resource) criterion (MNF)						
Material integrity during storage, % (amount of spoiled material/volume of material in storage) · 100 *(SS_6)*	4	5	SS_6 =1-(Fact/Plan)	0.2	0.09	Fact < Plan → «good»
Load level of warehouse space (area actually used/total warehouse area) *(SS_7)*	85	100	SS_7 = Fact/Plan	0.85	0.12	Fact < Plan → «bad»
$I_{SSmnf} = \sum(K_i \cdot w_i) = 0.12$						
3. External integration criterion (EI)						
Costs of maintaining stocks held in hired warehouses *(SS_8)*	1000	700	SS_8 =Plan/Fact	0.7	0.06	Fact > Plan → «bad»
$I_{SSei} = \sum(K_i \cdot w_i) = 0.04$						
4. Organizational criterion (O)						
Unevenness coefficient of warehouse operation *(SS_9)*	0,85	1	SS_9 = Fact/Plan	0.85	0.05	Fact < Plan → «bad»
$I_{SSo} = \sum(K_i * w_i) = 0.043$						
$I_{SS} = I_{SSfe} + I_{SSmnf} + I_{SSei} + I_{SSo} = 0.2+0.12+0.04+0.043 = 0.4$						

Table 3

Results of evaluation of efficiency and effectiveness of business processes performance of the enterprise under study

Name of business process	Meaning	Rang	Numerical value intervals I_{bp}	Interpretation of business process efficiency and effectiveness assessment
1) Production	0.49	III	0.37-0.63	Satisfactorily
2) storage of material and technical resources	0.40	II		
3) transportation of production	0.51	IV		
4) resource support of production	0.32	I	0.2-0.37	III
Generalized indicator of the aggregate of operational business processes of the enterprise as a whole I_j = 0.43				Satisfactorily

Hereby, functions of vertical structural subdivisions (chief engineer service is manufacturing function, marketing division is external integration functional, financial-economic division is financial-economic functional) became identificated.

Horizontal direction of management (organizational-coordination-integration function) is provided by logistic service, which subdivisions is responsible for coordination and integration of enterprise's operational business-processes.

So, it is possible operational business-processes' efficiency indices to track, estimate and control clearly. Besides, responsible employees for this indices' status are identified strictly with both vertical and horizontal. It makes possible cross costs monitoring under business-processes and enterprise's functional structural subdivisions.

Thus, proposed BSC indices are "connected" to aims and tasks of certain subdivisions and employees that involved into certain business-processes. Enterprise's logistic management estimates and controls indices status.

CONCLUSIONS

The approach proposed by the authors to building the logistic system of the company is based on the appliance of well-known idea of the system of balanced indicators (BSC) by Norton and Kaplan but modified and adapted to the estimation of logistics activity itself as accompanying the operational activities of a production-economic organization, viz. operational business processes. Author's set of criteria has been developed (four criteria: financial-economic, production (resource), criterion of foreign integration, organizational), according to which it is proposed to form certain sets of indicators that quantitatively characterize the status of certain operational business processes in which certain functional units of the enterprise engaged. It allows to improve the organizational structure of the enterprise through the creation of an effective logistics service with coordination and integration authorities, which, at the same time, makes monitoring, analysis and costs (logistics, operation, transaction) evaluation and identifies clearly both business processes and functional structural subdivisions of the enterprise up to the level of certain performers.

An organizational "template" is proposed, in which logistic functions are linked to other functional areas of the enterprise, based on the criteria that characterize these functional areas. Within the framework of the proposed "template" sets of groups of quantitative indicators, the management of the enterprise and the management of the logistics service can form relevant indicators, taking into account the specifics of a particular business.

Thus, the research results in the form of a specific organizational process-matrix structure (model) represent a new organizational method in business practice, which will improve the efficiency of economic activities of enterprises, due to the improvement of logistics management.

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