

LOGISTIC PROCESSES IN SMALL ENTERPRISES



Ilona Petryk

Associate Professor, Doctor of Economics, Finance, banking and insurance department, Institution of Higher Education «Lviv University of Business and Law», Lviv, Ukraine

ORCID <https://orcid.org/0000-0002-2171-8180>

Abstract. The article describes the main logistics processes occurring at the enterprise. The application of Porter's model in the assessment of processes occurring in the supply chain is described. A typical supply chain and its shortcomings are described, as well as ways to improve it. The main business processes of the supply chain have been identified and those related to logistics processes have been identified. Reengineering is proposed as a method of

improving pre-business processes in the supply chain, which consists of numerous enterprises.

Keywords: *logistic processes, business process, supply chain, reengineering, Porter's model.*

Introduction

Manufacturing companies create value by buying raw materials and using them to produce something useful. Retailers combine a range of products and present them in a customer-friendly way, which is sometimes supported by services such as premises selection or the advice of personal consultants, and insurance companies offer policies for customers who sign insurance policies for large sums. Here, they present this larger policy in a consumer-friendly way and distribute it to a mass audience.

Literature review. The issue of logistics processes in small enterprises has been studied by many scientists who have studied logistics management (R. H. Ballou, D. J. Bowersox, D. J. Closs, J. R. Stock, D. M. Lambert) and supply chain management (W. C. Copacino, R. B. Handfield, E. Z. Nichols), but there are still many questions about the functioning of logistics processes in small enterprises.

Research methodology. Processes occurring in the supply chain should be evaluated using the Porter model. It is important to determine which of the main processes can be fully or partially outsourced, while ensuring high performance and building partnerships.

Research results. A typical supply chain as a poorly formalized structure is not a very stable formation of integrated enterprises and can be characterized by different levels of integration, ranging from harmonization of goals to the integration of resources and concentration of power. It is usually advisable to take into account intermediate levels of integration of enterprises in the supply chain on the basis of a balance of freedom of action and restriction of freedom of action. Therefore, poorly structured and poorly formalized supply chains makes it difficult to identify business processes for which it is advisable to apply a restructuring mechanism. This problem for ordinary enterprises, even integrated, but on the basis of joint ownership with the control center, arises in the creative stages, which is not the case with supply chains with blurred boundaries of ownership, freedom, authority, etc. of their participants. The situation is similar with regard to the restructuring of enterprises for certain reasons, to apply standard, repeatedly verified procedures.

It is expedient to identify business processes in the supply chain on the basis of their correspondence and influence on the effectiveness of the supply network. The effectiveness of the supply chain by analogy with a more strictly organized supply chain can be assessed using the following criteria: in the internal profitability of the network; customer service (availability of products); elasticity in relation to demand; product development (innovation); environmental friendliness of the network (Copacino, 2017).

Logistics business processes are broadly focused on all areas of network entities and operate in close contact with material, information and human flows between each of the entities, which in one way or another is aimed at network development. These include raw material suppliers, manufacturing companies, intermediaries, logistics centers, distribution centers. The human resource of the network is the added value of each business process, the effectiveness of which will depend on the timeliness, accuracy, completeness, ability to properly process the transmitted information.

In fact, based on the given criteria for the impact on their level to a greater or lesser extent affect business processes according to their division in the theory of Porter's value chain, in the theory of reengineering, but often such influence is multidirectional. and between parts of a separate business process. The separation of business processes with a focus on achieving certain criteria for evaluating the effectiveness of the supply chain completes the first stage of restructuring business processes in the supply network.

Given the added value in the formation of systematic processes, it is proposed to apply the mechanism of reengineering of logistics business processes (Tab. 1).

The highlighted algorithm of business processes of a logistical nature significantly enhances the importance of the processes of improvement and transformation of logistics business processes, and structures the decision-making process in a phased format. Reformatting of logistics business processes is designed to improve and enhance the stability of the relevant system. Helps increase its adaptability to dynamic changes (Handfield, 2018). Transformation of all key logistics flows: material, information, financial, human in the framework of reengineering allows you to direct logistics business processes to the process of holistic optimization, trust between chain participants and increasing the level of end-user service.

Table 1.

Stages of reengineering of logistics business processes *

Stage 1			Stage 2	Stage 3	Stage 4
Planning and identification of business processes within the phase division of logistics			Organizing the restructuring of logistics business processes based on reengineering	The process of direct restructuring of logistics business processes	Regulation of reengineering restructuring of logistics business processes
Supply logistics	Production logistics	Sales logistics	Forming a team of performers	Assessment of the fact's compliance with the process plan	Making adjustments to the bottlenecks of new business processes
Assessment of bottlenecks			Distribution of job responsibilities	Phase analysis of business processes	Development and implementation of a motivation system for employees
Setting goals for business process reengineering			Stress test of the existing system	Analysis of the level of satisfaction of partners and employees	
Identification of specialists			SWOT analysis		Evaluation of system efficiency
Forming a business plan for reengineering			Assessment of the market situation	Providing a system of continuous improvement of logistics business processes of both your company and partners	
Risk analysis			PEST analysis		

* formed by the author

In general, analyzing the results of the reengineering of logistics business processes of the studied subject, the level of results can be characterized on the basis of assessment: the volume of changes in the duration of logistics operations; the presence and number of errors in the organization of financial, informational, material and human flows; the ability of the system for short-term changes in the functional state with a subsequent return to the usual format of operation. This kind of analysis makes it possible to assess the risk readiness of the system and its ability to adapt quickly; the level of reduction of financial costs; the level of structure of the organizational structure of the company and the lack of duplication of responsibilities; increasing the level of cooperation between participants in logistics business processes; opportunities to ensure coordination of activities, and in the case of the involvement of information technology - opportunities for comprehensive synchronization of important business processes (Robeson, 2018).

The format of cooperation may be different, depending on the area in which the transfer of functions, the degree of integration of the enterprise and the outsourcer, and so on. An exceptional synergy effect can be cooperation with this company, which will integrate logistics business processes into a single system, thereby reducing the level of distrust of cooperatives, as well as increase the added value of each phase of logistics: supply, production and sales. Outsourcing can also be divided into the following forms of application: full and partial outsourcing; compatible outsourcing; integration outsourcing; intermediate outsourcing; transformational outsourcing; joint venture outsourcing; outsourcing with a share in the share capital; outsourcing on the basis of cooperation (Langford, 2019).

The main forms of partnership in the reengineering of logistics business processes include:

By volume of responsibilities: full and partial.

In the conditions of full partnership the activity is carried out on a parity basis and the control over realization of the set tasks is formed equally; Under the conditions of a partial format of cooperation, only certain structural subdivisions are integrated into a single system, which is usually entrusted with the administrative function and reporting to

the relevant partner on the implementation of the set tasks.

By the nature of the changes: improvement and reengineering:

Under conditions of improvement, the perception of logistics business processes in the format of non-ideal systems, which can be constantly improved (Kaizen philosophy). In the situation of reengineering, activities are aimed at the radical transformation of business processes, and in some cases the creation of completely new processes.

By geographical affiliation: local; regional; interregional and international type of partnership:

A format of cooperation that involves local activities, within a particular region or regions, or with operational activities in other countries.

By partnership term: short-term and long-term:

Usually business process reengineering is a long process that radically changes the functioning of the enterprise and partners involved in the formation of supply networks. However, quite often, due to the high risks and significant costs of reengineering all logistics business processes, companies focus on local (small) processes that can be carried out in short periods of time, at relatively low cost and assess the ability to cooperate with partner in the format of changes (Bowersox, 2016).

The supply chain is always a complex union both from the standpoint of material flow management and from the standpoint of cooperation between the actors in the supply chain. This type of enterprise is: the presence of a unique structure of the hierarchy, where on the one hand provides freedom of action, and on the other provides clear control over the highest structural element; well-coordinated units of different actors in the supply chain, where the number of tasks that arise during the implementation of operational and tactical tasks is solved on the spot. the presence of relationships that are built on trust and partnership; coordination and synchronization with the use of information technologies are clearly standardized processes with a clear algorithm of actions for all participants in the supply network; market relations function; cooperation is ensured, in particular, by sharing not only its own assets and common information environment, but also by providing its own funds to ensure the

effect of synergies and economic benefits; specialization is the main factor of success, which clearly prevails in logistics business processes.

In summary, logistics networks unite the subjects of the logistics system, as elements of the generators of the movement of material, financial, information and human flows. Business process logistics, as a complex set of actions combined into one system, the goal of which is to achieve, taking into account the optimality factor of logistics goals, is always extremely integrative. Integration into a single system allows companies with minimal losses to resolve conflicts in the logistics chain, to attract additional finance on a more efficient basis, more consumer-oriented to form a strategic marketing.

The integrated logistics system provides for: coordinated planning of cooperation with consumers; logistics customer service; order implementation management; ensuring efficient logistics of all production, warehousing and distribution processes; integration of inventory management processes between all actors in the supply chain; joint control and settlement of deviations in the product life cycle from the standpoint of logistics; availability of a well-thought-out management strategy for reverse logistics and waste logistics (Stock, 2018).

Table 2 compares simple logistics systems and systems that involve close cooperation and sometimes integration into the system of all logistics business processes.

Table 2.

Features of the formation of logistics business processes in terms of cooperation in the form of partnership or outsourcing *

Properties		Partnership	Outsourcing relationships
Type of flow	Material	Complementary flows	The streams are clearly separated
	Information	The only information network, possible failures at certain intervals due to the merger.	Close integration of certain information systems. Usually due to the specialization of enterprises avoids the mistakes inherent in the partner.
	Financial	There is a great interest in investing in partner competencies	Flows exclusively according to the contract
	Human	Close cooperation of employees, sometimes exchange of specialists	Mutual learning in certain areas, hierarchical cooperation
Relationship format		Contractual, complementary	Contractual, built on specialization
Crisis resolution		Together, compromise	Jointly or exclusively under contract
Purposes		Synergy	Specialization
Willingness to reengineer or change based on Kaizen		High	Rather low

* *formed by the author*

Reengineering of logistics business processes also allows for more efficient selection of supply chain participants. Usually the selection of potential partners in the supply chain is based on the analysis of their ability to meet the goals of the enterprise, but in the case of reengineering processes is also assessed for their ability to make radical changes, including for significant synchronization of business processes. Very often the involvement of additional partners allows to expand the scope of activities, to meet the needs of consumers in a more differentiated way. The process of analysis of

partners in the supply chain can not be clearly determined due to diversity as forms of management, goals, consumer needs, features of existing interpersonal relationships, but the analysis must be carried out and based on it must select partners to reengineer business processes. who will not be able to this process (Ballou, 2018).

Discussion of research results. Given that the analysis of supply chain entities is carried out in order to increase the level of competitiveness of all its participants, important factors for choosing who to conduct further reengineering are: clear specialization

of the enterprise, which fully corresponds to the life cycle of the analyzed business process; the presence and level of conflict resolution; the level of structuring areas of responsibility; availability and / or readiness to deploy an information system to ensure the continuity of information flows in the analyzed business process; partially mutually cooperative logistics business processes, which involve incomplete interconnection and partial differences in goals; partner companies that redirect available own assets for the implementation of relevant orders, thereby implementing the required level of efficiency in small periods of time; there is diversity in certain areas of activity; the volume of

cooperation is not significant; mutually cooperative logistics business processes, which in turn require changes and improvements in existing relationships within certain logistics business processes; fully integrated participants in logistics business processes, the goals of which completely coincide, partners of this type complement each other, well-established processes of joint use of movable and immovable property, information flows move without additional obstacles, and are almost always open, planning processes are both strategic and usual tactical take place with the participation and taking into account the needs of all participants in supply chains.

Conclusions

Given the dynamics of market conditions, and therefore the risk of reengineering logistics business processes, the lack of guarantees of full readiness of partners for structural change, openness and trust is important to choose the type of partnership, as well as format (if necessary) outsourcing, type of enterprise and them relationship. However, the opportunities that open up for companies in the case of reengineering supply chains on an outsourcing or partnership basis are significant, and planning and trust builds to eliminate the possible risks of achieving the company's goals.

References

1. Ballou, R. H., (2018). *Business Logistics Management: Planning, Organizing, and Controlling the Supply Chain*, 4th Ed., Prentice Hall.
2. Bowersox, D. J. and D. J. Closs, (2016). *Logistical Management: The Integrated Supply Chain Process*, McGraw Hill.
3. Copacino, W. C., (2017). *Supply Chain Management: The Basics and Beyond*, The St. Lucie Press/Apics Series on Resource Management.
4. Handfield, R. B. and E. Z. Nichols, (2018). *Introduction to Supply Chain Management*, Prentice Hall.
5. Langford, J. W., (2019). *Logistics: Principles and Applications*, McGraw Hill.
6. Robeson, J. F. (Preface) and W. C. Copacino (Editor), (2018). *The Logistics Handbook*, Free Press.
7. Stock, J. R. and D. M. Lambert, (2018). *Strategic Logistics Management*, 3rd Ed., Irwin Professional Pub.