

## ЛАНЦЮГ ПОСТАВОК ТА ФОРМУВАННЯ ДОДАНОЇ ВАРТОСТІ НА ОСНОВІ КЛІЄНТООРІЄНТОВАНОГО ПІДХОДУ

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**Розглянуто концептуальні підходи до трактування доданої вартості для клієнта. Розкрито сутність процесу формування доданої вартості у ланцюгу поставок в напрямку орієнтації на потреби клієнта. Висвітлено сутності процесу міграції доданої вартості у ланцюгу поставок. Обґрунтована доцільність перманентного підвищення ефективності функціонування ланцюга поставок з метою пропонування вищої доданої вартості для клієнта. Представлено практичний аспект реалізації цих досліджень.**

**Ключові слова:** додана вартість, ланцюг поставок, міграція, ефективність.

## THE SUPPLY CHAIN AND THE ADDED VALUE FORMATION ON THE BASIS OF CUSTOMER-CENTRIC APPROACH

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**The conceptual approaches for an added value handling are considered in the article. The essence of the added value formation process inside a supply chain aimed at customers' demand is presented. The essence of the added value migration process inside a supply chain is introduced. The expediency of permanent increase of a supply chain functioning efficiency in order to supply a higher added value to customer is substantiated. The practical aspect of the research implementation is presented.**

**Key words:** added value, supply chain, migration, efficiency.

**Problem formulation.** The supply chain management is undoubtedly a deflection from traditional management methods. A considerable part of companies are traditionally considered as institutions that operate independently of other ones and are bound to compete with them in reality in order to survive. This market philosophy influences on a strategy of companies. M. Christopher has equated this philosophy with "Darwin's ethic of survival for those adapt best". None, even the largest company, is not able to compete with supply chains that occur. Companies of automobile, pharmaceutical, and textile branches understood this best [1, p. 89]. It's advisable to note that the concept of value which is an ability of supplier to make utility demanded by customers is the prior element of chain supply conception.

P. Blake suggests a creation of value should be interpreted as an appropriate process of transformation, an aim of which is to achieve a market added value. Transformation means achieving demanded changes (effects) concerned with a time and a place of products supply to customers, an appropriate quantity of products, their quality, an assortment, a sort. A realization of added value is concerned with processes that provide a supply of added value to customers, e.g., a process of supply [2, p. 19]. Marketing and logistics processes execute there an essential role. These processes are concerned with a creation of main utilities, especially, additional service utilities, information utilities, utilities of place, time, and possession [1, p. 96-97].

According to the information mentioned above, it's important to research and develop the added value formation system inside a supply chain on the basis of main logistics principles which give an opportunity to implement some improvements: a) for a consumer: to improve a quality; to decrease expenses; to reduce terms of supply; to increase a competitiveness of goods; b) for a supplier: to improve a distribution; to make long-term arrangements; to make authoritative forecasting; to provide an income increase.

**Analysis of current research outputs and publications.** The problem of effective management of tangible and informational flows from a supplier to a final consumer on the basis of supply chain conception is partially presented in papers of many domestic, especially, in E.V. Krykavskiy's "Logistics", R.R. Larina's monograph "Logistics in management of organizational economic systems", V.E. Nikolajchuk's monograph "Theory and practice of tangible flow management (logistics conception)", M.A. Oklander's monograph "Logistics system of company", N.I. Chuhrai's "Industrial marketing", and foreign, especially, D. Bowersox's "Logistics. The integrated supply chain", M. Christopher's "Logistics and supply chain management", K. Lyons's "Purchasing and supply chain management", J. Waters's "Logistics. Supply chain management", scientists. Simultaneously, it's important to emphasize that, on the one hand, the concept of "added value" is used in the papers of scientists mentioned below. But, on the other hand, a lack of attention is devoted to a development of theoretical and practical principles of added value formation inside a supply chain, a determination of added value migration directions, and an estimation of supply chain functioning efficiency in view of added value for a customer.

**Article objectives.** Aims of article are determined by the research of theoretical and practical bases of customer-centric approach applying inside a supply chain. The aims are:

- a determination of prerequisites of customer-centric approach applying inside a supply chain;
- a consideration of added value migration directions inside a supply chain;
- a presentation of supply chain functioning efficiency in view of added value for a customer;
- an introduction of practical aspect of added value formation inside a supply chain.

**Presentation of main materials.** There are two approaches to a definition of category "value" in an economic literature: firstly, the value is defined as an importance or a utility of particular commodity; secondly, the value is defined as an amount of expenses for creation of this importance, expressed in terms of money. According to [3, p. 63] "...a value is that real basis which identifies a money and goods as equivalent concepts...". According to a marketing view, as a market-centric conception, a value creation is first of all considered from a position of providing a consumer with particular commodities in order to meet his needs. According to a logistics view, as an expenses-centric conception of definition, the concept of "value" equals an amount of expenses for a creation and a promotion of goods.

Taking into consideration an ambiguity of term definition and also generally used categories of "value (utility) chain" (according to M. Porter) and of "added value", the concept of "value" is going to be used as an expression of utility of goods from a position of a market (consumer utility), a supplier, and a company. A consumer value is a value supplied to (created for) a consumer. From a consumer's point of view, particular goods and service should meet his needs. A consumer is willing to pay an according sum only for such value. A consumer value is a measure of value creation process estimation of a company, a goal of which is a supply of estimated goods to consumers. Commodities for consumers who finally determine a value and a price of goods or service may be presented as a set of demanded features of commodities (main and additional), offered to consumers [2, p. 18].

During last years both theoreticians and practitioners have been noticed to increase their interest in a problem concerned with a creation of value for a consumer. Accordingly, this tendency stipulates an appearance of a set of conceptions concerned with the problem of value and of supply chain concept formation. In a scientific literature a supply chain is defined as a process of adding a value to goods that appears in a moment of purchasing of elements needed for a production process (raw materials, inputs, half-finished products, etc.), includes an execution of production operations (production), and finishes in a moment of goods selling and services providing [4, p.16]. The most expended ones are to be considered.

Inside a supply chain, according to M. Porter [1, p.87-88], an attention is concentrated on organizational relations. Besides, an important fact is companies may connect their value chains using coalitions. A multiple-element value chain may exactly be an integrative supply chain. A value chain is a multitude of separate, but closely correlated procedures that create utility. Activities that create a value are determined as value activities which earn incomes at that time when a value exceeds their expenses. Procedures that create value are divided on main ones and ancillary ones. The first includes a logistics of

production, distribution, supply, a consumer service, marketing, and a sale. Ancillary procedures are purchasing, technologies, a human potential management, and an infrastructure of company. According to the supply chain theory, a competitive advantage of company in a market may be reinforced by an appropriate partnership through a connection of particular procedures, e.g., a logistics and a production, a logistics and marketing. Modern movement management methods, such as “just in time”, “quick response”, ECR (effective consumer response) and, also, management conceptions, such as outsourcing, a lean management or a lean logistics, first of all lead to strategic cooperative relations establishing. A reason of supply chain formation is an increase of competence that is considered from a position of a whole system [5].

The one more conception that emphasizes a functional presentation of company is the value creation cycle of K. Fletcher who pays special attention to a determination and a creation of value. This process includes production, marketing, and logistics processes that are responsible for a formation and a realization of an adequate value. Adequate reverse relations also have an important role. They connect benefits received by customers with incomes received by a company. The value creation cycle of K. Fletcher is significantly based on a market orientation direction. A recognition of demand as an output orientation of company activity in a market is an exertion of market orientation direction [4, p.18].

Simultaneously, it's expediently to pay attention not only at the functional approach, but also at the process value chain of D. Cushman and S. King which underlines benefits received due to a process approach implementation. There may be disagreements and conflicts in a process of interfunctional relationship analysis. These conflicts are concerned with points of correlation between particular functional branches of a company. An interfunctional coordination may lead to determination of main processes realized by a company and connected with a creation and a realization of an added value. These actions are represented in the conception [4, p. 20].

An added value for a customer may become apparent in different ways, but it is always connected with a positive assessment of goods or service supplied. Customers may have different goals and intentions that influence on expectancies about characteristics of goods and demanded results of consumption/applying. A satisfaction of these needs leads to partially determined level of customer satisfaction. A level of customer satisfaction is influenced by not only a price and goods characteristics, but also by a method of supply, in other words, a time, a reliability, a rapidity of supply, an elasticity of reaction, and, also, every time a wider list of after-sales elements of logistics service [2, p.20].

To effectively create an added value for a customer inside a supply chain it is necessary to use a “customer-centric” principle. This necessity, besides other, is related to:

- an accumulation of knowledge about customers' needs and requirements by a company;
- a formation and a development of market position adjusted to customers who form market segments;
- a creation and a support of long-term arrangements with customers, especially with key ones;
- a systematic monitoring and an estimation of provided service level and customer satisfaction level.

An added value may appear on the each level of a value formation process. Simultaneously, it becomes really perceptible only in a buying-selling moment. There may be numerous transactions of such type dependently of its length and structure inside a supply chain. This relates to particular trends of a supply chain. Simultaneously, an added value for a final customer is still decisive, in other words, a last buying-selling transaction is decisive. It is a consequence of a fact that this transaction is stipulated by all previous transactions. Hence, values added by previous participators wouldn't be necessary if there wasn't a final buyer who was willing to buy at a determined price. Although a price as a marketing complex element is not the only criteria of choice, it is certainly one of the most considerable elements of expenses a customer sustains. Simultaneously, a price is a factor of profit earning for a seller, hence, a factor of further functioning.

A value formation for a customer inside a supply chain is a more complicated process than in a separate company. On the one hand, it is a result of more complicated process structure of the first case, on the other hand, it is a result of necessity of chain separate element activity coordination because of a

probability of contentious interest existence. An added value inside a supply chain is formed by all participators of commodity flow process, hence, not only by every next supplier and buyer of goods, but also by providers of different services (including transportation service). Besides, it can be explained by a fact that all of them, looking for more effective solutions, may try to increase a logistics process productivity and/or to decrease total value of logistics processes.

Certainly, an added value formed by a such subject is transferred to a next owner. For example, a supplier may mark pallets with identification labels. This action has a great role for a receiver, since it facilitates a store operation execution, enables to decrease a number of mistakes and to reduce costs of storage and inventory accounting. However, taking a supply chain functioning specific into consideration, there may be an opposite situation where a customer/receiver creates an added value for a supplier. A willingness of customer to give an information about a state of his inventories is a value for a supplier. This information enables a supplier to coordinate amounts of production with amounts of forecasted demand. According to this a supplier decreases own production and storage expenses.

Sometimes a problem of added value migration inside a supply chain is a more complicated problem. It may be caused by an added value creation for a few next treads of chain, and sometimes for a subject that operates in a distant part of chain which doesn't place directly near a supplier. For example, finished goods packaging that facilitates provision goods selling: SRP (Shelf Ready Packaging – packaging suitable for placing on a shelf). A whole process of packaging is provided by a producer, and a seller and, certainly, a buyer operate as beneficiants. The mentioned above conception appears in result of requirements from a large storehouse selling branch. These requirements are addressed to suppliers and stipulated by limitations of works related with shop shelf content fulfillment and by facilitation of purchasing for customers. Since expectancies of trading networks are contradictory to interests of producers, this situation has a contentious character. Producers, making additional expenses, may not relay on utilities related with expenses as on an alternative.

An essence of value creation using a supply chain requires all actions of chain participators to be oriented on a realization of principles of final customer interest immediate importance. Certainly, customers are also particular treads of supply chain for each other, but their individual interests may not contradict with “last customer” interests. If participators of supply chain have conflicts, needs of supply chain added value final receivers should be allowed. Thus, a cooperation in a branch of value creation for a customer is a critically significant condition for a supply chain functioning [ 7 ].

An effective functioning of added value inside a supply chain depends significantly on an identification of relationships that appear between its treads. An identification of these relationships requires, besides others, such actions [ 8 ]:

- an identification of supply chains of each subject;
- diagnosing of processes that are realized inside these supply chains (actions which are operated by separate subjects during a process of creation of added value for customers);
- an estimation of assets of companies that are included in a chain system;
- an identification of company key competences in an added value creation branch;
- specifying of relations that are formed between supply chains in a value creation integral process, including an opportunity of each next subject to create added value for a customer;
- a determination of methods of partnership between separate value chains (a partnership is based on a mutual orientation of all participators on an increase of value offered to customers) and solving their problems due to this determination.

A realization of added value and its functioning efficiency inside a supply chain in practice may be demonstrated on a basis of researches of worldwide company Gartner that is leading in the industry of informational technologies. During the last nine years it has been making a rating of efficiency of chains constructed by main worldwide industry subjects of different economic branches – The Gartner Supply Chain Top 25. There is a need to note that both qualitative (characterize a supply chain functioning efficiency and are estimated using expert methods) and quantitative characteristics (are determined on a basis of weighted average financial indexes for last three years) are considered in a process of estimation (table 1).

**The Gartner Supply Chain Top 25 (2010-2013)**

№	Name	Place in the rating				Composite score, (2013)
		2010	2011	2012	2013	
1.	Apple	1	1	1	1	9,51
2.	McDonald's	11	8	3	2	5,87
3.	Amazon.com	10	5	2	3	5,86
4.	Unilever	21	15	10	4	5,04
5.	Intel	18	16	7	5	4,97
6.	P&G	2	3	5	6	4,91
7.	Cisco Systems	3	6	8	7	4,67
8.	Samsung Electronics	7	10	13	8	4,35
9.	The Coca-Cola Company	13	11	6	9	4,33
10.	Colgate-Palmolive	17	13	11	10	4,27
11.	Dell	5	2	4	11	4,05
12.	Inditex	21	19	15	12	3,85
13.	Wal-Mart Stores	4	7	9	13	3,79
14.	Nike	16	20	14	14	3,62
15.	Starbucks	-	22	16	15	3,41
16.	PepsiCo	6	9	12	16	3,41
17.	H&M	-	-	17	17	3,22
18.	Caterpillar	-	-	-	18	2,91
19.	3M	-	24	21	19	2,87
20.	Lenovo Group	-	-	-	20	2,75
21.	Nestle	-	18	18	21	2,51
22.	Ford Motor	-	-	-	22	2,51
23.	Cummins	-	-	23	23	2,48
24.	Qualcomm	-	-	-	24	2,37
25.	Johnson & Johnson	14	21	22	25	2,35

Source: [9]

As can be seen from the table, leaders of the rating are companies which have shown their worth as the most successful companies in their own product markets: Apple and Samsung are in the market of mobile gadgets, McDonald's and Starbucks are in the market of fast-food restaurants, Unilever and P&G are in the market of household chemicals, etc. Designing of chains for these companies proposes a priori to consider an added value for customers as an initial point. This information may explain as brief as possible term of innovation commercialization which may be provided by the mentioned companies. Moreover, a complication of supply chain participator action coordination in terms of such time compression is not an obstacle, but is probably an additional opportunity to be notable in terms of tough competition. A consumer preference diversity and, as a result, a width/depth of product/ trade assortment is a particular challenge for a supply chain functioning efficiency. Nevertheless, many market players presented in the table prove, using own activity, that an organization of high-level supply chain is possible in such terms.

The example of UPS and Cisco (7th place in the rating) partnership is notable as an illustration of mentioned above. UPS gives Cisco an opportunity to offer to its customers a high consumer value. The UPS status of the biggest worldwide producer of network equipment is an indirect evidence of this. Consequently, the UPS and Cisco partnership creates a multi-stage process of transition and evolution from a 3PL operator to a 4PL one. The Cisco Systems proposition (the head office California) includes

many Internet-solutions, Internet equipments, virtual network management software, mail software, Internet-domain management equipments, etc. These products are sold in more than 115 countries due to different channels: own offices, distributors, independent trade agents. 90% of profit from products from this list is provided by selling through the Internet. Since about 100 carriers are involved in direct supplying of goods to European customers, a highly developed activity has caused difficulties, especially in a supply branch. Due to the UPS partnership a number of carriers was reduced to 3 ones. A central point of all European supply intersections is the logistics centre Best in the Netherlands. Such method enables customers to maintain a contact with a one operator, and a supply process lasts not more than 8 days that give accordingly a practical opportunity to form an added value inside a supply chain [9].

**Conclusions and perspectives for further research.** According to the information mentioned above, it may be affirmed that an importance of supply chains in a process of added value creation increases, but these changes, especially a customer requirement increase, won't have a reverse way of development. This means that companies and supply chains will rapidly and completely implement the customer-centric approach and create a higher added value for a customer. Also, they will be able to depend on a success and a win in a process of competition which becomes tougher.

Simultaneously, it's appropriate to note that not all operated actions and processes related with them directly take a part in a process of added value creation. Some of them may also indirectly influence on a chain of added value creation for a customer or may be partially connected to this chain. It is important to see their connection to a creation of value for a customer. If such connection did not exist, it would mean that such actions was not necessary. They should be eliminated as those caused groundless expenses, and an employee, who made them, should be fired. It may be explained using completely logic and simple rule: a final customer is willing to pay only for actions that concern with a satisfaction of his needs and solving of his problems.

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