

## BUSINESS TENDENCIES IN SERVICES WITHIN SUPPLY CHAIN

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**Abstract:** Supply chain management has been a major component of competitive strategy to enhance organizational productivity and profitability. Client satisfaction and improvement in profitability are two basic goals while organizing supply chain. In the paper author tried to prove that there is a correlation between organization of supply chain and subjective evaluation of economic situation by enterprises. Logistics integration helps enterprises to find their place in the supply chain.

**Key words:** enterprises, logistics integration, economic situation

The concept of supply chain management represents the most advanced state in the evolutionary development of purchasing, procurement and other supply chain activities [3]. At the operational level, this concept joins functions such as seeking for goods, buying them, storing as well as transporting them to customers.

At the strategic level, supply chain management is a relatively new and rapidly developing philosophy that is converting the way that production and service enterprises meet the needs of their customers. Supply chain management is not only ideas but also processes, which take place between companies.

Globalization as well as more and more competitive markets make suppliers, producers and distributors to integrate their performances through right management of material products and information flows. Due to big diversity of these flows, managers must solve many complicated issues for instance such as structure of supply chain, number of participants and relations between them [12].

Client satisfaction and improvement in profitability are the crucial aims of supply chains even if this involves different changes in management of differently formed flows of material and information. The final result of cooperation within supply chain and taking into consideration business tendencies should be delivery of high-quality good or service. General processes mentioned in Table 1 are defined for supply chain management and due to this classification it is possible to observe functioning of different enterprises in the supply chain. Different metrics can be used in certain processes. For example the most common rates in customer services management are: time of delivery, quality of delivery and its flexibility [11]. Other rates such as number of complains, number of order are supportive in describing strategy for future customer service. All the processes, which take place within supply chain must be coordinated by a leader. They also must be controlled in different ways.

In Figure 1 one depicted knowledge about logistic integration in the companies as well as within whole supply chain. It is underlined the influence of new business tendencies to kind of relationships between buyers and suppliers. Framework presented in figure 2 is grounded on a paradigm of strategic management theory that emphasizes the development of

“collaborative advantage” [1]. In a collaborative supply chain, business units agree on a set of universally defined objectives, and use their corresponding assets to achieve long-term competitive advantage.

Table 1 Definition of general processes in supply chain management *Source: [2], p. 785*

General process	Description
Demand management	Sales forecasting. Aggregated Planning generation: Manufacturing, Purchasing, Resources. Periodical revision of Aggregated Planning.
Order management	Order reception: Finished product to customer.
Manufacturing management	Product manufacturing: From Aggregated Plan to validated order. Capacity establishing: Human and material resources. Re-processing of returned products and materials.
Procurement management	Raw material and services procurement for manufacturing and orders. Stocks and warehouses management. Materials management for shipping to selected operation.
Distribution management	Finished products delivered to the right client. Logistics operator and means of transport selection: Related to materials or service condition
Customer service management	Point of contact with customer. Customer information capturing: Orders, services, problems, complaints.
Client management	Client selection, acceptance and classification. Client contractual relationship. Service metrics. Customer service: Information analysis.
Supplier management	Supplier identification, validation and classification. Supplier–manufacturer service relationship. Supplier service monitoring. Supplier information analysis.

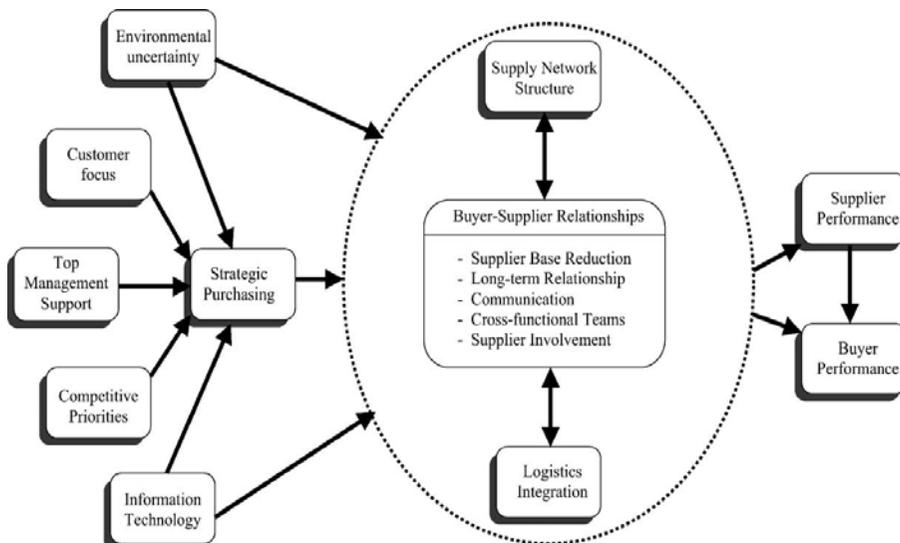


Figure 1. A framework of supply chain management.  
*Source: based on [1], p.121*

The collaborative supply chain has a parity-based dyadic decision-making process [7]. Within the collaborative paradigm, the business world is composed of a network of interdependent relationships developed and fostered through strategic collaboration with the goal of deriving common benefit. Creation of independent relations determines business tendencies, which are evaluated by the top management.

As defined by the Supply Chain Council, a supply chain covers every effort engaged in producing and delivering a final product from the supplier to customer [5]. It is recognized that the conceptual framework, though extensive, may not cover all the aspects of supply chain management.

Sometimes it is necessary to take into consideration such factors as government influence and geographic spreading. These elements are shown in Figure 2.

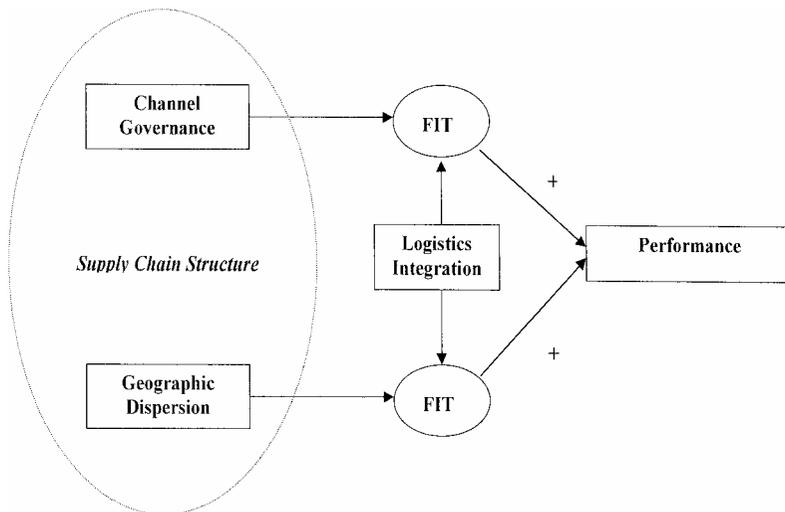


Figure 2. Proposed framework of fit between logistics integration and supply chain structure elements *Source: [10]*

The proposed framework of correlation between logistics integration is shown in Fig. 2. This framework links an enterprise's supply chain structure and logistics integration approach to organizational performance. There are three principal constructs in this framework: supply chain structure, which is characterized by geographic dispersion and channel governance, logistics integration, and organizational performance. The degree of fit between logistics integration and supply chain structure can be expected to affect the enterprise's activities. In other words, it is expected that certain combinations of supply chain structure and logistics integration will result in higher company performance than other combinations of these constructs [10].

In order to check the level of logistics integration in the service companies it is necessary to choose at least one rate. Such metric could be rate of global climate for economic situation in logistics companies. It is calculated as arithmetic average of balanced answers for questions about present and future economic situation of business unit. "Good" economic situation of business unit is when the rate is higher then zero. In the opposite situation the economic situation is evaluated as "bad". Mangers in the questioned enterprises give their subjective opinion about economic situation. Basic elements, which can be chosen to evaluate enterprise environment are effectiveness of management methods and company's functioning as well as strategic position on the market [8].

Metric of global climate for economic situation is in the range from -100 up to 100 [4]. Positive values of the rate means very good or good economic climate for logistics enterprises while negative value means bad situation for those companies. Increase in the value of rate means improvement of economic climate from the point of view of questioned business units. At the same time decrease in the value of rate means deterioration of economic climate. Different factors can change opinion about company's position on the market. S. Krawczyk divides these factors into two groups: external and internal. The first one can be for instance political conditions and new tendencies in technology while in the second one human resources or information resources [6].

For statistical purposes metrics are divided in more specific way. It is possible to distinguish 25 kinds of this rate depending on different factors such as: [4]

1. Economic situation in the field of company's service activity
2. Limits to the company's service activity – none
3. Limits to the company's service activity - insufficient demand
4. Limits to the company's service activity - competition of domestic firms
5. Limits to the company's service activity - competition of foreign firms
6. Limits to the company's service activity - shortage of skilled labor
7. Limits to the company's service activity - costs of employment
8. Limits to the company's service activity - difficulties in obtaining credits
9. Limits to the company's service activity - high payments to state revenue
10. Limits to the company's service activity - unclear legal regulations
11. Demand for services
12. Sale of services
13. Duration of assured activity of the company
14. Company's financial situation
15. Delays of payments for services
16. Prices of services
17. Expected economic situation in the field of company's service activity
18. Expected demand for company's services
19. Expected sale of rendered services
20. Expected employment
21. Expected sources of financing service activity - own funds
22. Expected sources of financing service activity - bank credit
23. Expected company's financial situation
24. Expected prices of services
25. General climate in services

All these kinds of rate depict different aspects of economic climate, which can be evaluated. For empirical research four of these metrics are chosen in order to compare them. The period of research is a year and half from January 2007 to July 2008 and one can observe monthly data. Companies selected in the survey are put into three groups. The first group of enterprises deal with problems in two spheres different kinds of transport and storage, the second one only in land transport and the last one support all kinds of transport.

In Figure 3 one can observe a decreasing tendency in metrics of evaluating global economical situation in logistics services such as transport and storage. It is possible to predict future values of these metrics with use of statistical method moving average with smoothing constant [9] equal to 5. The result of this metrics for transport and storage companies for August 2008 is equal to 18,5. In case of another to groups the results are -1,5 and 17,9. The evaluation of general economic situation is at the moderate level.

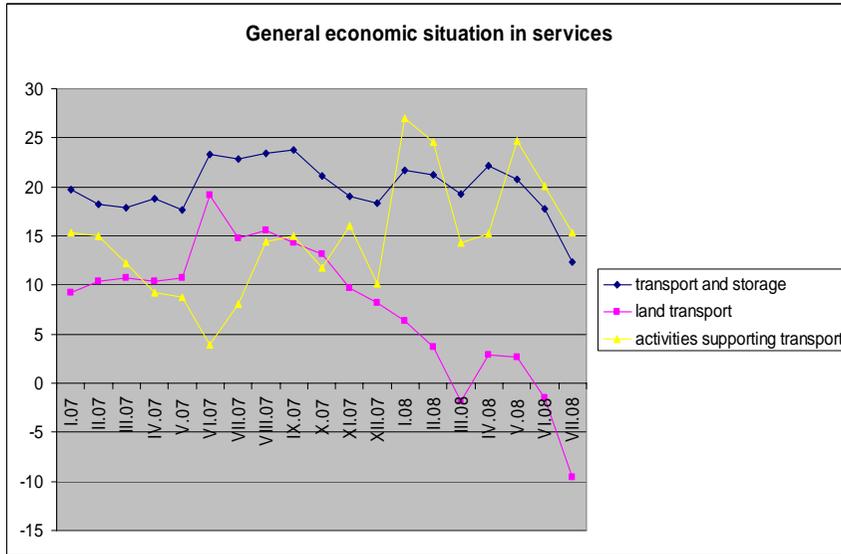


Figure 3 Economic situation in the field of company's service activity *Source: [4]*

As one can depict in Figure 4, it is difficult to point at one tendency in these three groups of enterprises in case of insufficient demand. It is increasing in the land transport group and decreasing in two other groups. It is achievable to forecast upcoming values of these metrics with use of statistical method – moving average with smoothing constant equal to 5. The result of this metrics for transport and storage companies for next month is equal to 27,1. In case of another to groups the results are 37,6 and 23,1.

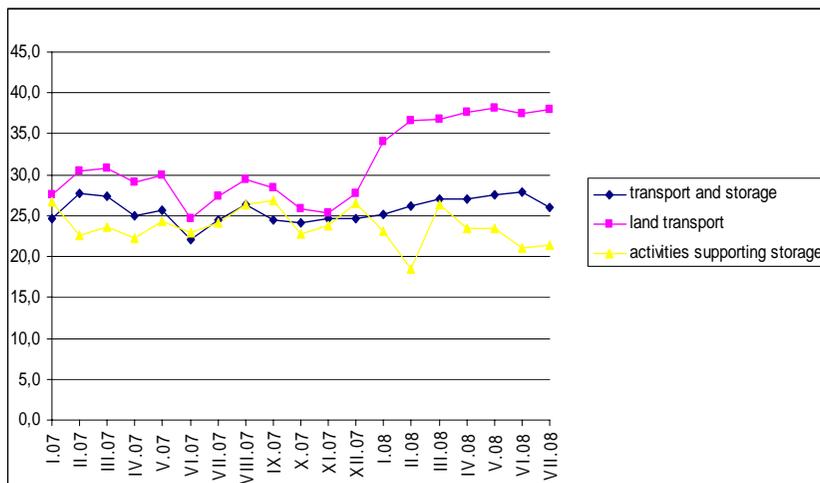


Figure 4 Limits to the company's service activity - insufficient demand *Source: [4]*

As it is shown in Figure 5 there is one increasing tendency in all three groups of enterprises in case of competition of domestic companies. It is worth pointing that only in this set of metrics the evaluation is almost the same in all groups. It is feasible to calculate forthcoming values of these metrics with use of the same statistical method – moving average with

smoothing constant but this time equal to 7. The end result of this metrics for transport and storage companies for eighth month of year is equal to 58,2. In case of another to groups the results are 58,3 and 47,7. Companies judge that competition from domestic firms is on the high level.

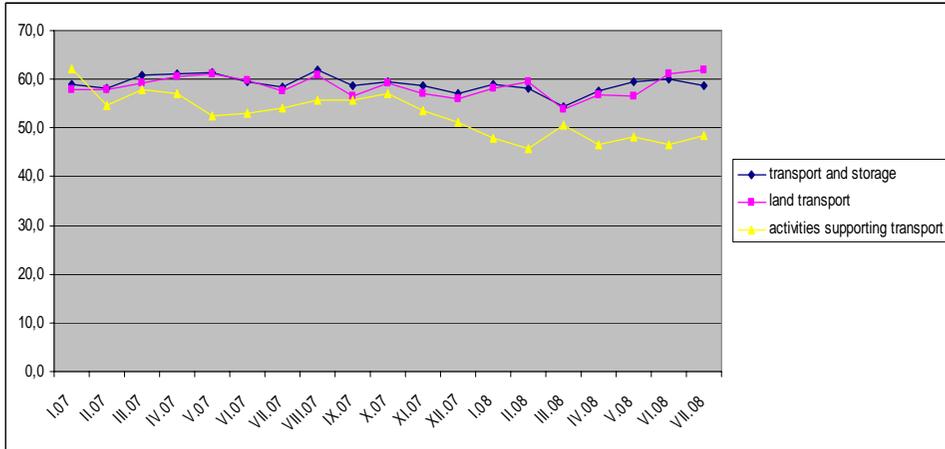


Figure 5 Limits to the company's service activity - competition of domestic firms  
Source: [4]

In Figure 6 one can observe decreasing trends in all three groups of enterprises in case of demand for logistic services such as transport and storage. It is necessary to point that enterprises expect smaller and smaller. For calculating forthcoming values of these metrics one again statistical method – moving average with smoothing constant equal to 7 is used. The end result of this metrics for transport and storage companies for eighth month of year is equal to 12,2. In case of second group – land transport companies the evaluation is low and is equal to -5,1. In contrast to above-mentioned groups the last one estimates the situation at high level 20,4 points. The enterprises are rather pessimistic about demand for logistics services in future.

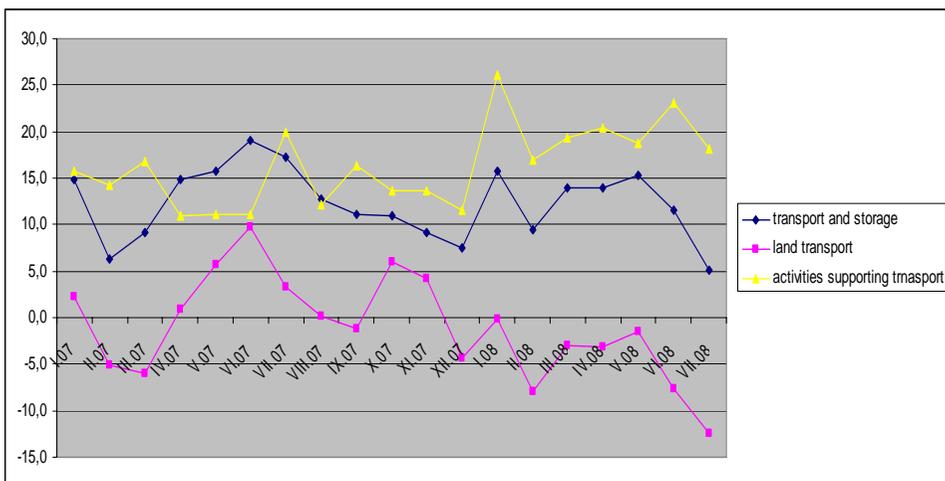


Figure 6 Demand for services Source: [4]

There are many ways to evaluate functioning of enterprises in the supply chain. It is worth looking closer how enterprises in the supply chains evaluate their position both in the supply chain and on the market. In many cases Polish logistics enterprises must change many things in order to improve their position on more and more competitive market. There must be very good logistics integration in many companies in order to increase demand for such services as transport and storage.

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