

LOGISTIC STRATEGIES IN SHAPING COMPETITIVE EDGE OF ENTERPRISE

STRATEGIE LOGISTYCZNE W KSZTAŁTOWANIU KONKURENCYJNOŚCI PRZEDSIĘBIORSTWA

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Abstract: Considerations prove that an issue of competition through logistics is very complicated in a given firm. It results not only from the various ways of understanding and applying logistics in enterprises but also lots of possible combinations of linking logistics with the different trends of management to gain a competitive edge. Therefore, it is a wide spectrum of possibilities. It is not enough to claim that the thing is invisible and difficult to falsify financial assets of enterprise. One cannot base any conclusion on the results obtained by the particular firms presented as examples in the relevant literature because it can be a misleading approach.

When putting an effort in systematizing these issues, as the leading purpose of this elaboration, one should recognize possibilities of various logistic conceptions to make the final assessment of obtained results. There is a wide spectrum of opinions about the essence and role of logistics in the enterprise from the coordination of flows at the operational level through coordination of functions and areas of activity to the final conception of integrated managing the organization and the level at which it is formulated. At the lowest level it is possible only to improve a flow of raw materials and products resulting with reduction of production costs that slightly facilitates elasticity of firm's competitiveness. On the contrary, the widest spectrum of logistics applied in the enterprise allows achieving the very wide range of its activity in favor of various strategies determining the different ways an own position of a firm at the market. It means that the wider range of logistics applied in enterprises, the better possibilities of gaining a competitive edge.

Streszczenie: Rozważania dowodzą, że kwestia konkurencji za pośrednictwem logistyki jest bardzo skomplikowana w danej firmie. Wynika to nie tylko z różnych sposobów zrozumienia i zastosowania logistyki w przedsiębiorstwach, ale także wielu możliwych kombinacji logistyki łączącej się z różnymi kierunkami zarządzania w celu uzyskania przewagi konkurencyjnej. Dlatego szerokie spektrum możliwości. Nie wystarczy stwierdzić, że rzecz jest niewidoczna i trudna do sfalszowania aktywów finansowych przedsiębiorstwa. Nie można oprzeć żadnych wniosków na temat wyników osiągniętych przez konkretne firmy przedstawione jako przykłady w odpowiedniej literaturze, ponieważ może to być mylące podejście. Dokonując wysiłków w usystematyzowaniu tych zagadnień, jako głównego celu opracowania, należy rozpoznać możliwości różnych koncepcji logistycznych, aby dokonać ostatecznej oceny otrzymanych wyników. Istnieje szerokie spektrum opinii na temat istoty i roli logistyki w przedsiębiorstwie z koordynacji przepływów na poziomie operacyjnym poprzez koordynację funkcji i obszarów działalności do ostatecznej koncepcji zintegrowanego zarządzania organizacją i poziomu, na którym jest sformułowane. Na najniższym poziomie możliwe jest jedynie poprawienie przepływu surowców i produktów, co powoduje obniżenie kosztów produkcji, co nieznacznie ułatwia elastyczność konkurencyjności przedsiębiorstwa. Wręcz przeciwnie, najszersze spektrum logistyki stosowanej w przedsiębiorstwie pozwala na osiągnięcie bardzo szerokiego zakresu swojej działalności na rzecz różnych strategii określających różne sposoby własnej pozycji firmy na rynku. Oznacza to, że szersza gama zastosowań logistycznych w przedsiębiorstwach daje lepsze możliwości uzyskania przewagi konkurencyjnej.

Key-words: strategy, standardization, efficient consumer response, elastic production plant.

Słowa kluczowe: strategia, standaryzacja, skuteczna reakcja konsumentów, elastyczna fabryka.

1. STRATEGIES BASED ON LOW COSTS

When tending to gain a competitive edge, logistic strategy can become the basic strategy of enterprise or at least its main component. An analysis of this topic in a chronological approach can be originated from the beginning of second half of XX century

when the strategies based on low costs were dominant. The then firms took advantage from low costs of human labor and searched cheap sources of supply. This way formulated strategy of firm precisely determined tasks of logistics. First of all, it was necessary to reduce prices of transport and storage. An analysis of these costs contributed to defining a principle of minimizing total costs of transport and storage as well as was relevant for defining a term of physical distribution of commodities. Minimization of frozen capital connected with reducing stocks was also more and more important. Just in that time the *Just-in-Time* conception originated its worldwide career. It assumes that supply costs ought to be low and enterprises should order commodities very often to minimize costs of stock maintenance. According to Japanese experts the key to storage reduction is respect for a supplier as a partner in the production process with whom an enterprise has tight relations in form of reserved cooperation, coordination and full confidence. One can distinguish the two main advantages from the *Just-in-Time* system applied in a firm. The first allows reducing own stock of materials and spare parts any time and the second advantage is possibility of quick quality control. Many conceptions of management including the *Just-in-Time* regarded today as Japanese solutions had their beginnings in the US. A need of following this conception was fairly understood by *Henry Ford* who claimed that purchasing more materials than necessary for production is unprofitable. When developing the production plants Ford organized the *Just-in-Time* supplies of iron ore received from the barges.

The same day that ore was processed into a steel in one of his steelworks and then formed as parts of cars and mounted into them some days after delivery of iron ore to the plants in Minnesota. It was possible due to withdrawal from any possibilities of product diversification. But the *Just-in-Time* system gained its perfection in the 50-ties and 60-ties in the production plants of Toyota. The The US experts were interested in this system right after the huge inflow of Japanese cars better in quality and prices than American vehicles. From that time the Americans started research on Japanese reasons for marketing success. By the way they found out that maintenance of American production stock per one car costs 775\$ while in Japan it is only 150 \$. The results of this research motivated about 20% of American enterprises to apply the *Just-in-Time* system in 1987. It is still growing tendency in the US and Japan.

Toyota Motor Company is a perfect example of applying the *Just in time* as a method of gaining the competitive edge on the market since this company reduced its time of production from 15 days to 1 and after 10 years of this system functioning, effectiveness of labor reached 40% of increase.

Implementation of the *Just-in-Time* is an expensive and laborious process. The profits

from such investments are possible after several years. It is worth keeping in mind that the *Just-in-Time* logistic solution is extremely susceptible to any changes in external regulations. Delays in deliveries caused by wrong conditions of transport roads or unreliability of suppliers threaten with considerable losses. It is not a system suitable for every type of enterprise. In the firms producing huge quantities of goods – for instance in automobile industry or electronic the Just-in-Time is the best functioning solution.

Logistic strategies of low prices can be applied when firms strive for being a leader in low prices on the market and also in situation of gaining a competitive edge the other way. It can be observed in the branches like electronics and motorization tending for many years to standardization to obtain considerable savings. It is precisely visible in case of the General Motors, that the the beginning of 90-ties initiated the venture of reducing costs through standardization. The quantity of mounted parts was decreased, that led to shortening time of montage, reducing stocks and finally to reduction of costs per one car production. The standardization process can also cover documents, procedures and organizational structures.

2. STRATEGIES OF DIVERSIFIED SERVICE

Apart from the low costs strategies, different strategies of diversified service were developed because the clients were ready to pay more for products with new features and functions. Among the methods of gaining a competitive edge known so far, the key-important role is played by quality and then the most effective way of supply is as much important. It was a great challenge to logistics. The logistic strategies supported only one main competitive strategy but now logistics becomes the basis for the competitive strategy of diversification. In many handbooks one can find an example of Domino Pizza firm that became the number two when Pizza Hut was the champion in the US. The strategy was based on guarantying a fast delivery in time shorter than a half of hour, pizza delivered after this time was free of charge. This strategy brought very good results. An idea of fast delivery is visible in other markets as well. For instance – new services rendered by the BP Bunkerservice in Linz to supply clients on ships during journey, loading or reloading to gain considerable savings of time. When following the strategy of diversification logistics becomes not only an inevitable part of firm's strategy but also a part of product strategy. In this case a product is not recognized as a thing with certain features but a sequence of rendered services connected with a product. It points at the basic character and purposefulness of creating a strategy of diversification in conformity with customers' requirements.

In the 70-ties of the past century the new source of competitive edge was noticed as “elastic production plant”. The fact that an obstacle in entering new markets was too narrow

spectrum of products decided about appearance of this conception on the market.

Strategy of elastic production caused the new market phenomena like in case of rivalry between Honda and Yamaha selling motorcycles. In front of the newly opened factory of the Yamaha and its announcing willingness of being the leader on the market, the Honda was focused on producing vehicles but took challenge through decrease in prices and increase in expenses on advert covering a product diversification. Within almost two years the Honda widened the range of produced motorcycles from 60 to 113 that was a reason for its total victory. Conception of elastic production plant, *Just-in-Time*, cooperation with suppliers and recipients of commodities enable the modern innovative firms maintaining the wide spectrum of products offered in relatively low prices.

In the turn of the 70-ties and 80-ties the Asiatic firms came up with a better strategy than the alternative of low prices and product diversification. The conception of key-important competencies of enterprise was developed to point at the possibility of gaining a competitive edge through performing one, two or some kinds of activity. The rest of activities was entrusted to better prepared entities. In the sphere of logistics it caused the opposite phenomena, for instance the Gillette and Marks&Spencer. The managers of Marks&Spencer decided that their key-important competencies are sale, marketing and purchases so the supplies were entrusted to the specialized firms. In case of the Gillette its managerial board was convinced about perfection for their logistics, so the separate logistic firm was established for selling the Gillette products on the international market. It was caused by too small scale of activity that did not enable the logistic system to achieve the assumed goals. Determination of key-important competencies of firm is strictly connected with the trend of logistic outsourcing where cooperation is based on contracts, while logistic strategies referred to partnership concept go some steps forward. Cooperation has the basic significance when partners gain a mutual access to their competencies and quality of customer's service is treated as a value. In leads to considerable growth of logistics effectiveness. The general principle of logistics results from a conviction that the best results are achieved by concentration on the key-important (core) business and another activities are entrusted to external firms. Implementation of outsourcing facilitates an access to the newest technologies and service processes. But outsourcing brings some threats connected with risk of improper choice of services supplier or coordinating flows of goods, services and information. In spite of this fact, considerable strategic elasticity, low risk of investment, efficient financial flows and access to new technologies are the reasons for which outsourcing is regarded as as the universal conception of management and method of strategic shaping a structure of economic

activity. Anyway, it is not the golden rule for improving firm's activity and its position on the highly competitive market.

In the 80-ties the most important factor in creation of competitive edge was time. Focus on time was connected with receiving and executing orders, supplies, production, sale and distribution. The new logistic strategies tending to shortening time cycles were implemented by Sony, Sharp, Toyota, NEC, Hitachi, Honda and many other firms. A practical outcome of this strategy is MRP (*Material Requires Planning*) concerning computerized planning of materials demand or DRP (*Distribution Requirements Planning*) – computerized planning a production. The strategy of shortening cycles is referred to managing resources strategy. It implies many solutions in the sphere of using resources planned the way favoring their flows and omitting necessity of storing them.

By the end of 80-ties it was concluded that the firms compete on the more complex basis and time is only one of the competitive elements. The new conception says that the strategic domination results from focusing on one kind of business and diversification, qualitative domination, capability of entering new sectors, geographic regions and new kinds of activity. An example of Wal-Mart shows such a way of competition comprising all elements and functions of logistic strategies. It is also the successive evidence that logistics can become a competency distinguishing a firm.

Due to logistics the Wal-Mart gained a permanent and efficient competitive supremacy after defeat of the main rival - Kmart-Corp who had been the leader in the branch created by this firm. While the Kmart gained profits on large scale the Wal-Mart became a small retailer. During the next decade this firm transformed itself and its branch to increase the annual turnovers about 25% and reach the highest rate of sale per unit of surface, the highest rotation of stocks and maximum of profits. The source of success was focus on customers' needs. The goals of this firm such as providing clients for access to good quality commodities, guarantying an availability of these commodities when clients really need them, obtaining the structure of costs competing with prices and gaining this way reputation of reliable firm were simple but difficult to be achieved. The key to success was the method of completing stocks. The system of direct deliveries was created and called Cross Docking that means a reload completing stocks. In this system commodities are permanently delivered to stores where they are selected, repacked and sent to shops without necessity of making any stocks. A firm gains profits resulting from full using transportation means because an amount of purchased commodities fits cargo capacity of vehicles while storage and costs connected with storage operations are out of question. A reduction of stocking costs favors decreasing prices of

commodities and in turn, reduced prices increase sales and facilitate predicting demands that leads to elimination of stock in the storerooms and increase in profits. The other component of the Wal-Mart logistic strategy is the fast and effective system of transport served by two thousands of own lorries providing deliveries from the store to shop in period shorter than 48 hours twice a week. The Wal-Mart is capable of linking high quality with low prices on account of fast flows of commodities, high rotation of stocks, huge sale and advantageous purchases. Moreover, the additional strategic advantage of firm is also its perfect flow of information and ingenious systems of motivating the employees who also contributed to perfection of their logistic system. It is fairly visible that on the path to permanent competitive domination the Wal-Mart applies various logistic strategies based – among others – on innovation, shortening cycles or consolidation.

3. MAXIMIZATION OF ADDITIONAL VALUE

The next logistic strategy is maximization of additional value aimed at achieving advantages due to specificity and high quality of services exceeding the standards offered by competitive entities. One can consider a flow of information through the integrated and elastic system of data exchange EDI (*Electronic Data Exchange*) or the use of Internet in logistic service of customers. It can be applied – among others- for sale promotions in its network, offering services for clients, delivering information about products and services. One can use the Internet for direct transactions, as well. The spreading use of the Internet gives the enterprises a chance for quick and cheap gathering information about offers of suppliers, reducing costs of distribution and the number of intermediaries, growth in auction force of consumers as well as cheap and individual contact with a client. Some years ago the leading firms noticed that the information systems in managing the supply chains are the source of competitive edge because the firms also apply the intranet and external net (externet).

The new strategic conception concerning effective service of customer was formulated at the beginning of the 90-ties of XX century in the US and called ECR (*Efficient Consumer Response*). It allowed reducing the total costs born by a supply chain that led to considerable profits. The idea was based on the fact that the level of customer's service has the greatest impact on shaping opinions about a firm and offered products because purchasers demand a higher standard of services. In case when enterprises cannot compete through prices or quality because commodities are nearly the same, loss of client takes place during his/her urgent need of immediate buying a commodity or when it is not possible to buy its substitute. Activities taken in a framework of ECR strategy concern implementation of modern methods,

management and supporting technologies aimed at growing quality of customer service with simultaneous reducing stocks and costs in the entire supply chains. So far an achievement of such results was not possible but in the moment of implementing the ECR strategy it becomes possible when basing on a cooperation between trade partners. It requires an automatic data identification and registration, precise exchange of information through the EDI and ECR to become the global strategy of managing a supply chain characterized with extremely fast flow. The basic goal of this strategy is to provoke certain reactions of customer for which producers and suppliers are united to fulfill client's expectations. Quick precise information and an offer comprising a wide range of high quality products flowing through the never bureaucratic system from the production line to cashier desk may considerable contribute to the above-mentioned global strategy.

On the leading global and international markets the modern logistic strategy of paramount importance and wide range impact is being developed. It is a strategy of integrated supply chain. "Supply chain" has become one of the most important logistic terms and it means a network of commodities inflow in the sphere of supplies, production, distribution and customer service in research and development. Management of supply chain refers to the conception of integration, cooperation and shortening cycles but its unique character is based on inclusion of commodities flows and their recipients into management. The key-important role is played by transparent controlling the range of stocks maintained in the entire supply chain. It aims at coordination of maintaining the constant level of these stocks instead of moving them between the cooperating enterprises like in case of the Just-in-Time system. Instead of relocating stocks of commodities to suppliers a producer can share his information about demand or production plans that can have an impact on diminishing uncertainty in scope of managing stocks of commodities.

It imposes a change in perceiving costs and running a business only from the perspective of minding own business. It also requires realizing how an own approach to suppliers and customers influences the final cost of product born by a consumer.

CONCLUSION

Logistics in Poland has been considerably developed within the recent dozen or so years. Managers of warehouses and sectors of materials economy were replaced with logistic directors and (*Supply Chain Management*) SCM departments. They include planning and monitoring a flow of values, materials, information and finances in the logistic network from suppliers through production sites and distribution centers to customers. Lowly voluminous techniques of storage and simple manual completion of commodities are more and more

frequently supported with automatic stores, completion in series, sorters, carriage devices, modern Pick-by-light or Pick-by-Voice systems.

Nowadays storerooms are not perceived as sites for inserting a commodity but links in the supply chain directly influencing an impact on quality of customers service and costs generated by the entire enterprise. In the meantime the dynamically changed conditions of the Polish enterprises functioning, especially concerning last months when the worldwide economy was considerably shaken. It becomes the reason for which the previous optimism and large scale investments encounter new attitudes of waiting for the end of recession. In spite of this fact, many experts in economy still believe in return to the path of economic growth, one thing is certain: *Toady the current crisis written with a small letter c has an impact on the taken business decisions and logistics as a blood circulatory system of economy directly experiences on its own side-effects of such attitudes.*

However difficult times, impeding the economic development, decrease in sale almost in all branches make managers seek savings and reducing costs. Thus, it is a perfect opportunity for optimizing all business processes in enterprises. It mainly concerns logistic processes because they are perceived as one of the main areas of optimization due to contribution of these processes to operational costs and considerable impact on enterprise efficiency. Some managers noticed that innovation in logistics is not profitable, so more and more often the present firms treat a purchase of specialized knowledge as an investment of fast profit rate. It is worth keeping in mind that innovations do not cover only technological achievements but also improvement of organizational structures, logistic networks and supply chains or optimizing stocks. This way understood innovations are reasonable either in time of economic growth or in crisis because competitive edge is achieved by those who can deliver the products to the market faster, more effectively and cheaper. That is why managers should not avoid creativity, permanent improving logistic processes and investing in modern technologies including professional advisory. The examples of applying the modern logistic strategies in the previous sub-chapter are a good evidence that strategic innovation in logistics is not only profitable but also constitutes the main source of competitive supremacy. But they also prove that due to diversity of firms and conditions of their functioning including strong correlations between the logistic strategies represented by these firms, it is not possible to choose one accurate strategy -in a given situation- from all the existing logistic strategies. Nevertheless, it is possible to create the list of agreed logistic strategies constituting a composition of reciprocally connected concepts that can be applied in the process of inclusion of logistics into strategic management in enterprises. When endeavoring to achieve the

assumed purposes the enterprises can focus on one issue of logistics or to prove a more complex approach to problems. These considerations facilitate scheduling the logistic strategies to follow the growing level of logistic management in enterprises:

- strategies of integration and functions of processes;
- strategy of consolidation (transport, storerooms and stocks);
- strategy of elimination or reducing stocks;
- strategy of shortening cycles;
- strategy of client services diversification;
- strategy of cooperation in relations between suppliers and recipients;
- strategy of logistic outsourcing;
- strategy of logistic innovations.

Sometimes a strategy is an effect of innovatory conception of firm's creator or its managers who intuitively feel and perceive more than staffs of analysts and experts. It happens that a strategy is worked out within many years and laboriously improved by hundreds or thousands of people who entrusted their fates to a given organization. After many years they realize that all they achieved is becoming the victorious marketing strategy. Regardless of author and sources of such a strategy it is necessary to keep in mind that it must be an effective tool for shaping a competitive edge coherent with other functional strategies in the firm to create an optimal combination of activities. It should cover all ranges of enterprise activity to harmonize them in logistic aspects.

The modern logistic solutions and launched innovatory strategic plans are not a guarantee of immediate achieving a competitive edge on the market. These strategies are not the only conceptions for improving management. Moreover, all these considerations concerning sphere of firm's logistic strategy are burdened with high risk of mistake. Nevertheless it is worth asking about the future trends of logistic conceptions. It seems that under condition that the current trends in scope of general competitive strategies are developed, the key-word of logistics will be elasticity in the future. This feature bounds to be a boosting chance for enterprises in the unstable current economy encountering the new sectors, new frameworks of activity and new forms of customers service. This is the reason for realizing that broadly understood logistics is a perfect tool for effective taking challenges resulting from the compulsory trends. Apart from reducing costs, increasing the level of supply services, the best shaping economic correlations – logistics adopts quality of managing all activities in a firm as its cardinal purpose. Holistic management covering an organization as the whole, as complexity of reciprocally connected processes is called - modern logistic

management.

REFERENCES

1. Ciesielski M, (1999), *Logistyka w strategiach firm*, PWN, Warszawa.
2. Płaczek E, (2008), *Analiza outsourcingu w praktyce funkcjonowania MSP produkcyjnych*, „Logistyka” nr6.
3. Pierścionek Z, (1995), *Zarządzanie logistyczne w przedsiębiorstwie*,” Szkoła Główna Handlowa, Warszawa.
4. Olszewski J, (2008), *Dobry czas na innowacje*, „Logistyka a jakość” nr 6.
5. Antoniak M, (2004), *Strategie logistyczne*, WSC, Warszawa.