

# Logistics in Shaping the Competitive Edge of Enterprises

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Logistics is today one of the decisive advantages in competition on the markets. Companies and entire supply chains compete more and more often. Logistics, which has ceased to be treated as a set of methods useful for solving operational problems, has gained strategic importance. This study presents the logistics area as a factor in the competitiveness of enterprises against the background of two main trends of competition research, i.e. a trend dealing with two key issues for the economy, namely the general characteristics of the market, i.e. its structure, development, functioning, the situation prevailing on it and the strategic behaviour of enterprises, and the second trend, included in theories referring to the role of the state in a market economy.

**Keywords:** logistics, strategies, competition, market.

## 1. INTRODUCTION

The issue of logistics as the factor shaping the competitiveness of enterprises has already been undergoing many studies. However, while providing very broad substantive and methodological horizons, according to the authors, it still allows for the analysis and putting forward theses that have not yet been scientifically researched.

The theoretical basis of logistics in its dimension of the competitiveness factor can be found at various levels of delimitation of economic sciences: micro, meso or global. The starting point for such focused considerations is the trend of classical competition theory. The basis for consideration in this direction should be the theory of imperfect competition. The methodological assumptions of the new industrial economy (economics of the industry) are extremely interesting and inspiring in the field of logistics research as a factor of competitiveness. The aim of this article is to present the selected trends of economic research in the development of logistics theory and systematization of the theory, constituting the basis of considerations regarding the competitiveness of logistics.

## 2. THEORETICAL BASIS OF RESEARCH ON LOGISTICS COMPETITIVENESS

Looking for the factors of obtaining a competitive advantage, it must be stated that logistics is today one of the basic advantages of competition on the markets. The universality of resource flow processes, and therefore the need to include them in all interactions between enterprises has become the cause of the problems of competition also to the sphere of logistics. It should be noted that the problems of competition are considered in economic research in two main trends, but they also find reference to a certain extent also in the logistics literature. The Two main trends are [1]:

- the first stream dealing with two key issues for the economy, namely the general characteristics of the market, i.e. its structure, development, functioning, the situation prevailing on it and the strategic behaviour of enterprises,
- and the second one, included in theories relating to the role of the state in a market economy.

However, the logistics theory is strongly divided in this area. You can even talk about a

certain scientific gap, about different positions and even understatements. It seems that the majority of studies in the scope of the discussed issues is carried out with an emphasis on the issue of strategic behaviour of enterprises. The subject of the place and importance of logistics in theories relating to the role of the state in a market economy is one of the much less frequently discussed issues, hence all studies in this area deserve further positive evaluation. Further considerations of the study focus on the characteristics of logistics as a factor of competitiveness in terms of two indicated research perspectives.

### 3. THE ROLE OF LOGISTICS IN THE RESEARCH MAINSTREAM OF THE MARKET CHARACTERISTICS

Reflections resulting from literature studies referring to logistics in its dimension of the enterprise's competitiveness factor on the market, lead to conclusions of complex and multidimensional nature. It results firstly from a different way of understanding logistics in the literature, and secondly from possible combinations of the potential use of this concept in order to achieve a competitive advantage in the market, but also from the various possibilities of perceiving the multi-aspect of the competitiveness category itself [19]. An additional difficulty lies in specifying the constitutive factors of logistics competitiveness, and therefore symptomatic and specific to this concept. As it has been previously emphasised, a wide range of opinions present in the literature on the essence and role of logistics in the company, starting from the coordination of goods flows at the operational level, through the coordination of functions and areas of operation in the enterprise, and ending with the concept of integrated organization management and the level of strategy formulation, gives the possibility of a broad perception of its essence also in the dimension of the enterprise's competitiveness factor, the company's success in the market, as well as the factor shaping entire markets.

Accepting the most general observations as to the possibilities of logistics in the field of competition and market acquisition, it may be assumed after A. Harrison and R. v Hoeki that "[...] the main advantage of logistics lies in providing the customer with the availability of an appropriate product" [8]. Therefore, the advantage manifests itself in the form of a competitive

attribute, essential in the area of logistics, which is to ensure the availability of resources [8]. In numerous studies, the factors of logistic competitive advantage are reduced to three basic categories related to quality, speed of delivery or the price of delivery of a given resource [8], so they are referred to the categories of quality, time and cost, or a specific combination in the dimension defined by these three categories [10].

It should be emphasized that "combinations" of different concepts of improving the functioning of enterprises with the logistics concept in order to achieve a competitive advantage [11]. For example, logistics and quality [5], logistics and marketing [6], logistics and innovation management [18], logistics and time management, logistics and slimming management [27] etc. As noted by P. Blaik "[...] all these and other similar concepts, due to the client's orientation at their base, the transparency of action (reduction of complexity), quality, processes, timeliness, cooperation and innovation, etc., are reflected in logistics, determining its structure and dynamics, as well as multidimensional strategic effects". It should be noted that the perception of logistics in the dimension of the factor shaping the competitive advantage on the market, the market success of the enterprise, is perceived in a different way. It should be emphasized that the perception of logistics in the dimension of the enterprise's competitiveness factor on the market, its success on the market, also refers to one of the main measures of this success, which is the company's market share. In the conclusion to look for the relationship between logistics and the market, one can accept the general conclusion that logistics, perceived as a factor in the competitiveness of enterprises, may lead to an increase in the market share of the company and, consequently, to market concentration.

Market structure and - most often expressed in economic literature - the perception of the market structure expressed by the size distribution of competing companies determined by their market share [24] leads to further conclusions, namely that market share is considered to be the motivating goal of the company and affecting its behaviour (strategies). It should be emphasized that the broadly understood problem of competitiveness in logistics and the vast majority of logistics studies in this area is most often focused on the issues related to the relationship between logistics, logistics strategies and corporate strategies. From the perspective of theoretical premises related to market regulation frameworks and the assumptions

of total, or at least considerable volunteer behaviour of market entities, including strategic behaviours, the significance of the strategic dimension of logistics also arises. The need to perceive logistics through the prism of the strategic dimension draws the attention of many Polish and foreign authors of studies in the field of logistics. Establishing the role of logistics in the company in the strategic dimension is the starting point for defining the principles and methods of logistic management "[2]. The importance of the relationship between the competitive strategy and the logistics strategy is important, and in particular the manner in which logistics supports the achievement of competitive advantage (strengthening or creating a special value for the client) "[2]. It should be noted that the often emphasized strategic dimension of logistics is relatively rarely referred to aspects related to the shaping of market structures. In the logistics literature, however, one can point to direct references to the problems of logistics strategies to the aspects related to the shaping of market structures. An example in this respect is the publication of M. Ciesielski entitled Economic power in supply chains. The author writes in it: "The favourable structure of the industry market allows you to take actions that will contribute to obtaining the results desired by the company. The latter, in turn, make it possible to change the market structure in a direction beneficial for the company, which in this way will strive to increase its power. For this purpose, different strategies can be used - a strategy for increasing market share, a strategy for product differentiation, a strategy for building entry barriers for potential competitors, etc. If it is assumed that an enterprise is on a market whose structure has been educated in an incidental manner, it will strive to change it in a beneficial direction." From the above statements emerges the problem of relationship between logistic strategies and company strategy, or more broadly, the relationship between logistics and strategic management.

The company's strategy, relatively broadly defined in the subject literature, is identified as the "ability to deliberately act on the part of the enterprise", which achieves specific goals and conditions of change not only in other enterprises but also in the markets. The role and place of logistic strategies, as a specific skill, and the ability of enterprises to act, which may influence not only the behaviour of other enterprises, but also the

development of entire markets, emerge from the above relationships.

The above conclusion implies the need to define the relationship between logistics strategy and enterprise strategy. The procedure of including logistics in the process of strategic management may take place within particular elements of this process, i.e. formulating visions and missions, setting strategic goals, creating strategies, defining methods and schedules of strategy implementation, monitoring results, evaluation and strategic control. The hitherto achievements of science and practice allow to state that logistics strategies are a direct development of the model of competition strategy of M. Porter. Both the subject literature and business practice clearly indicate that it is difficult to overestimate the importance of any of the strategies, although often the greatest importance is attributed to the logistic strategy of cost leadership, seeing logistics as a serious instrument of cost reduction and rationalization. The logistic strategy of differentiation or concentration [2] is not without significance.

#### 4. LOGISTICS AS A COMPETITIVENESS FACTOR IN THE MAINSTREAM OF THE INDUSTRIAL ECONOMY

Referring the problem of logistic strategies to the broadly understood logistic competitiveness, the perception of logistics through the prism of the enterprise competitiveness factor, it is not difficult to find an important role of logistics in the methodological approach to the assumptions of the new industrial economy accentuating the so-called dynamic approach in market structures related to the issues of entering and leaving the market (market players' mobility), power and market dominance, problems of appearance and disappearance of enterprises (business demography), other than competition forms of market coordination [14].

Concepts, models and logistic strategies refer to the theory of competitive strategies to a large extent, which are mostly the result of convergence of strategic management theories and economic theories, especially the theory of the organization of the industry. [15] searching for its dimension of the competitiveness factor, to aspects related to the so-called dynamics of market structures [14], and thus the problems of entering and leaving the market.

The important role of logistics as a potential source of entry barriers is indicated by M. Porter in

the model of five competitive forces [19]. In each of the six main sources of entry barriers - economies of scale, product differentiation, capital needs, access to distribution channels, worse cost situation or state policy - logistic aspects are indicated as a potential source of entry barriers. In the scope of the first source of entry barriers - economies of scale, the role of logistic aspects can be seen in the benefits of the so-called related costs. Companies competing simultaneously in areas (markets) related to the occurrence of related costs may gain an advantage over enterprises competing only on one of the markets [19].

Diversity of products is another source of barriers while entering the market, in which in many cases an important role is attributed to selected logistics activities. A defined level of logistic customer service, determining the diversification of products (in the sense of the raised utility value of the product for the usefulness of space and time [3], creates barriers to entry and forces the "incoming" to incur large expenses to overcome customer loyalty [12]. customer loyalty based on the aspects of logistics service may acquire a special meaning under certain conditions related to broadly understood logistics service, e.g. cooperation based on a system of intervention deliveries, large distances between contractors, deliveries of specific types of products, e.g. specific types of services, etc.

An important source of entry barriers in the logistics area may be the costs of changing the supplier or access to distribution channels (logistic channels) by the newly entering market [19]. The costs of switching a supplier are an important element of logistics costs related to supplier selection costs, searching for a new source of purchases, employee training, auxiliary equipment, etc. Relevant high supplier switching costs mean that newly entering enterprises have to offer significantly better pricing conditions so that buyers can change the supplier. This is an important barrier to entry. One of the basic logistical reasons for the emergence of barriers to entry is the need to ensure access to products, and therefore logistic channels by the newcomer. Often informal links of competitors with "logistic channels", long-term cooperation based on high-quality services or even exclusivity of relationships, loyalty of cooperating enterprises, constitutes a significant barrier to enter the market for a new enterprise, sometimes so large that a new company must create a new logistics channel.

The source of entry barriers, also referred to in the sphere of logistics, may be a worse cost situation regardless of the economies of scale achieved. Elements of advantage in this area may be such factors as: patents, licenses, specific legal regulations, advantageous locations, experience. The distinguished factors, although they may relate to the area of logistics, on the one hand may be external factors, somehow independent of logistic activities, but directly affecting it (e.g. patents, state subsidies), while others are a direct result of the logistic effect (e.g. experience in the implementation of logistics processes).

The assumptions of the new industrial economy, emphasizing the forms of market coordination other than competition, are also reflected in the logistics literature. The proposal of a complementary approach to the relations between market entities may be the so-called the CCC paradigm (competition, cooperation, control) [25]. The starting point of the paradigm is the category of market coordination defined as a way of linking sellers with buyers and making their decisions coherent with each other. In the definition of market coordination defined in this way, it seems that the "way of linking" can be identified with the concept of relation. It is indicated that the market in its operation generates three forms of coordination (relations) between enterprises [25]:

- competition, understood as a relation of competition, between independent enterprises and consumers;
- co-operation, as the relation of "explicit or implicit agreement" between independent enterprises;
- control, understood as a formal or informal decision-making power between individuals who cease to be independent.

The widely accepted sense of a relationship other than competition, i.e. cooperation, is understood as incomplete control, relaxed competition, and ambivalent competition. Cooperation is a relation of conscious policy and decisions of economic entities, where the relations of control and competition appear "spontaneously". The relationship of cooperation has a variable, but always limited scope (the boundaries create separate "personalities" of enterprises) and duration (even for joint ventures - newly created or bought - the foundation is a cooperation agreement).

The relation of control (market power) is related to the strong market position of the

company, allowing the company to undertake activities that affect market prices. These are mainly activities shaping production volume and price levels [22]. The second aspect related to the relation of control (market power) concerns market dominance, i.e. the relation of the dominant enterprise to smaller enterprises, which have no market power, but which have the ability to compete [21]. This situation is different from the conditions of the monopolistic structure of the market, as the dominant undertaking must take into account the possibility of consumers leaving for smaller competitors. The company may obtain a dominant position in various ways [13]. These can be internal organizational, technological, production activities, improving competitiveness as a result of strategic behaviours aimed at eliminating competitors or by executing merger or other forms of concentration (takeovers, acquisition of majority shares, *join venture*, etc.).

The presented forms of relations between market entities (competition, cooperation, control) are referred to as "clean" forms of relations between market entities. However, increasingly complex market mechanisms often lead to "transient" forms of relationships. Transitional forms of competition and cooperation relations are co-op, control and competition - competition and competition, while control and co-op - cooptrol and reconstruction [25]. Despite several decades of development of views on cooperation and partnership, research on negotiations still indicates greater efficiency of purely (competing) than cooperative relations [20].

## 5. LOGISTICS IN THEORIES REFERRING TO THE ROLE OF A STATE IN THE INDUSTRIAL ECONOMY

The dispute over the role of the state in the economy does not cease. Bankruptcy of the Communism discredited the ideal of a nationalized economy. Opposing a model of centrally managed state property to a market economy model and a fully private one is a useful tool for ordering disputes about the role of the state in the economy, basic state functions in the economy - stabilizing, redistributive and regulatory, and thus the role of logistics in these areas of the state's activities.

The growing importance of logistics in the macroeconomic scale, the importance of the logistics sector in national economies - as one of the key sectors in terms of participation in generating national income and being a synergistic

factor interacting with other sectors on the economy, society, environment requires a radical transformation of traditional transport policy into logistics policy [16,23]. The changing conditions for the functioning of the European Union generate new challenges, including as regards equalizing differences in the development of regions, creating a changed structure of the economy, production and trade links. Hence the need for a skilful "balance" between the government's logistical policy and EU policy.

## 6. CONCLUSIONS

With regard to the above considerations, it should be stated that logistics in many studies is indicated as a factor of the company's competitiveness, creating a competitive advantage of the company, and therefore also the possibility of increasing the company's market share. The role of logistics in creating a competitive advantage of enterprises is perceived by the authors in various ways. It should be noted that the perception of logistics as a factor creating a competitive advantage on the market refers to a specific goal motivating the company's actions and affecting its behaviour, which is maximizing market share, "attempting to build its own monopoly and its defence against similar attempts of other companies". As it was noted, the goals of functioning enterprises or in general market entities may be of a diverse nature. In each case, specific processes implemented by market entities in a specific way determine the structure of the market. An important problem is therefore to determine the role and manner of the impact of logistics on the structure of the market with different objectives, and therefore different behaviours of market entities. It seems, however, that this difficulty is overcome by the assumption regarding the perception of the essence of logistics as '[...] a process aimed at servicing every rational human activity aiming at realizing any goal of providing the necessary resources in the right place and time, in the right quantity and at the right quality and at the right cost.' Therefore, better organization and more effective functioning of logistic support affects the level of competitiveness of all production processes.

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