

THE ECONOMIC DIMENSION OF THE OUTSOURCING APPLICATION IN THE FIELD OF SELECTED LOGISTICS SERVICES BASED ON THE EXAMPLE OF THE EUROPEAN AUTOMOTIVE INDUSTRY

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Abstract

The aim of the article is to present the subject of economic aspects of outsourcing in the field of selected logistics services on the example of the automotive industry. The verification of the following research hypothesis was used to achieve this goal. Outsourcing in the scope of selected logistic services may lead to measurable economic benefits in the form of reduced costs of logistic services. The implementation of this task required the author to apply appropriate research methods and techniques, such as: analysis of available literature sources and internal materials, methods of induction and deduction, and interview methods (computer-assisted telephone interviewing), in order to demonstrate economic benefits from the use of outsourcing in relation to selected logistic services.

The direct recipients of the research results, apart from researchers dealing with the outsourcing and logistics of services, will also be entities from the automotive market, which at the current stage are considering the possibility of implementing the discussed concept in terms of planned organizational changes.

Key words: economic benefits, logistics, outsourcing, automotive industry.

1. INTRODUCTION

The literature on the subject emphasizes that changes in the global economy, both in the economic, organizational and legal spheres have led to the emergence of new concepts and methods of enterprise management, thus making the implementation of individual services an increasingly larger logistical challenge (Hirschheim et al. 2002; Graham 2010).

In the opinion of many representatives of economic thought, the level of complexity of modern production processes as well as constant pressure to reduce costs and the increasingly common tendency of enterprises to focus on key activities caused that more often, logistics services are entrusted to specialized external companies (outsourcing) (Zhu et al. 2017). In particular, this process is noticeable in the strategy of entities conducting manufacturing activity. As the available literature

indicates, one of such sectors of the economy is the automotive industry. For example, suppliers of parts (components) for the production of motor vehicles are obliged to supply individual components in the form of pre-assembled modules and according to the sequence consistent with the order of assembly on the production line (Ciravegna et al. 2013). Therefore, proper organization of logistic processes is of key importance for the operations of these entities.

Although the concept of using outsourcing in relation to logistic services is not an innovative solution, as demonstrated by a thorough analysis of available literature, there are no literature items that would describe the benefits of using this method in the processes of managing selected logistics services in relation to the automotive industry (Becker & Zirpoli, 2003; Ciravegna et al. 2013). What makes this subject even more interesting and worth considering in order to diagnose the positive effects and rightness of the actions taken in this matter. Therefore, discussing these issues seems to be the proper identification of the research problem, covering both the aspects of modern concepts of management and logistics of services.

The approach presented above became the basis for the adoption of boundary conditions and methods of conduct aimed at attempting to dimension the impact of outsourcing as a tool for managing logistics services on the example of the automotive industry through:

- Description of the origins of the concept of outsourcing,
- To present the essence of relations between logistics and outsourcing,
- An attempt to assess economic benefits from the use of the outsourcing concept in relation to selected logistic services based on the chosen research method.

The direct recipients of the research results, apart from researchers dealing with the outsourcing and logistics of services, will also be entities from the automotive market, which at the current stage are considering the possibility of implementing the discussed concept in terms of planned organizational changes.

2. AIM AND METHODS

The purpose of the article is to verify the following research hypothesis. Outsourcing in the scope of selected logistic services leads to measurable economic benefits in the form of reduced costs of logistic services. Implementation of this task required the author to apply appropriate research methods and techniques, such as: analysis of available literature sources and internal materials, methods of induction and deduction, and interview methods (computer-assisted telephone interviewing), in order to demonstrate the real economic benefits of outsourcing in relation to selected services logistics in the automotive industry. The presented market research was conducted on two randomly chosen research samples. Interviews with the first group of enterprises were carried out in December 2017 using the computer-assisted telephone interviewing method, and with the second - in the period January 2018, also using this method. In the case of both attempts, interviews were conducted with representatives of enterprises employing from 10 to 2,000 employees (the size of the first sample $N = 50$ enterprises, the second $N = 50$ enterprises). Among them were

manufacturers, sub-suppliers of car parts and components, car dealers, security system and software suppliers. No division was made due to: size of the entity, form of ownership or type of business. The respondents were: quality engineers, directors, traders, managers, department managers.

3. THE ORIGIN OF THE CONCEPT OF OUTSOURCING

The first organizational initiatives, currently referred to as outsourcing, took place in the 1960s and were associated with the separation of IT functions. The pioneer is the Electronic Data System company R.Perota, which in 1963 was the first to propose to the external company from Pennsylvania a paid implementation of tasks in the field of computer science. At that time, it was a pioneering solution consisting in transferring the entire data processing department to another entity. This service was defined then as equipment management (facilities management). Another term applied to outsourcing in the initial period of its implementation was also the term "enterprise specialization" (Hirschheim et al. 2002).

On the other hand, the concept of outsourcing was introduced to business practice by General Motors in the 1980s to define the external supply of spare parts. In the theory of organization and management, however, it gained an established position in the 1990s (Ili et al. 2010).

As the analysis of available literature suggests, outsourcing was initially treated as a simple modification of the make or buy concept, aimed at reducing the operating costs of the company (Travles & Drury, 2001). The prospect of its application included mainly the tactical level and focused on quick and immediate satisfaction of a specific economic need or solving a specific problem, often caused by increased costs (Tjader et al., 2014). Currently, the objective of this method is primarily to shape the business structures in a strategic way to enable the company to concentrate its efforts and resources on the so-called the key activity that determines the competitive position of the entity to the greatest extent (Wu & Park, 2009). The best practical reflection of this method seems to be the definition of M. F. Greaver Junior, who defines this concept as separating from the organizational structure of the parent company their functions and then transferring them to other entities (Schoenherr, 2010).

Regarding the theoretical foundations of outsourcing, they should be sought on the basis of both economic sciences and management sciences. Analysis of the literature on the subject indicates that the key to developing and implementing this method were other concepts such as:

- The concept of make or buy dilemmas. Is associated with the basic problems of the activities of each organization, that is, do it yourself (make) or buy and outsource (buy). Also, whether to undertake the venture yourself or together with other entities. Making the wrong decision in this respect may result in higher production and operating costs as well as inefficient use of resources (Graham, 2010).
- Theory of transaction costs R.H. Coase and O. Williamson. According to this concept, the basis for determining the boundaries of the enterprise, and thus the

scope of tasks carried out on its own should not be technological conditions, but the amount of costs that must be incurred in connection with the transaction hierarchically (within the organization) or between companies on the market. Emphasizing, therefore, that narrowly specialized entities usually gain economies of scale and are able to provide lower production costs of products offered compared to enterprises in which most of the business areas required to produce specific goods and services are carried out independently (Hirschheim et al. 2002).

- Contrast theory of A.Alchian and H.Demsetz. He describes the company as a combination of contracts concluded by the organizer in order to gain control over the various resources that make up the organization. The main element of the company's construction is in this case a "contract" and the company appears as a special economic system, which can be presented as a bundle of business contracts (nexus of contracts) (Kim & Mahoney, 2010).
- The principle of economies of scale. According to it, along with the increase in the scale of production, the unit cost of manufacturing is reduced, which results from the fact that fixed costs and investment costs are preferably distributed into a larger number of manufactured products or services performed (Tjader et al., 2014).
- The value chain concept. It allows for the separation of the stages of the value added process and the identification of strong and weak links in the enterprise, which allows the identification of potential elements for internalisation or externalization as part of outsourcing (Cong et al., 2018) .
- The concept of key competences C.K. Prahalada and G.Hemela. It assumes that the competitive position of the company depends primarily on shaping competitive advantages, i.e. distinctive competences which constitute an appropriate combination of production, technological and marketing skills, and allow for the selection of a reasonable strategy based on the vision of the future. These competencies determine the ability to efficiently and effectively combine technological solutions and production skills as well as market information in order to quickly adapt to opportunities in the environment and achieve profit and growth. (Schmitt & Van Biesebroeck, 2013)

At this stage of the discussion, it should be emphasized that in today's market reality, outsourcing is not an unambiguous term. Interpretation of this concept is also undertaken by representatives of technical or natural sciences. However, the author agrees with the thesis promoted in the literature on the subject, that the general approach is a management method, which consists in narrowing the scope of tasks carried out directly by the enterprise called the parent company and entrusting them to constant implementation to other economic entities called service companies. It is worth mentioning that thanks to its flexibility the idea of outsourcing assumes that for almost every function, area, process that could be implemented within the classic organizational structure of the company, one can find an alternative in the form of services offered by external, specialized suppliers (strategic partners). Otherwise, the whole process can be understood as a method of permanent external service by specialized entities, externalization, external management or, as a last resort, disintegration of the enterprise (Cong et al, 2018).

According to the author, it is the comprehensiveness of business and the level of complexity of production processes and the constant pressure to reduce costs and the increasingly common tendency among enterprises to focus on core business. Some or all of the processes are more and more often entrusted to specialized external companies in the European automotive industry (Aggeri et al, 2009).

On the basis of the above presented considerations, it can be wrongly assumed that outsourcing is a simple and easy to use method. In reality, however, it is characterized by a very complex character that goes beyond the mere task assignments of subcontractors. The main assumption of this concept is to focus on ensuring long-term partnership cooperation whose fundamental goal is to achieve benefits for both partners. The basis for the proper functioning of this process in practice is the determination of key areas for building the competitive position of the parent company. Most often these are activities related to:

- production, (as the best quality at the lowest possible costs,
- research on development (striving to improve the functioning of the company's units),
- implementing innovations, (using the introduced innovations and technological innovations),
- marketing,
- distribution and logistics,
- customer service,
- quality management (Camuffo et al, 2007).

Observations of market reality clearly show that all the above presented tasks depend on the specifics of the entity (eg business sector), but also on strategic decisions made by the chief "management". In addition, these areas can be modified during operations, as well as in the life cycle of the organization. After their correct determination, it becomes possible to outsource other, selected areas of activity to external, specialized business entities. All these factors result in the restructuring of the parent company's structure towards concentration around the selected key activity while developing sustainable, strategic partner relationships with service companies.

At this stage of the discussion, it is worth mentioning that in accordance with applicable law, the basic condition for the implementation of this concept is to give written consent in the area of cooperation, which leads to a situation where, among others, the transfer of responsibility for providing services to an external company and the distribution of benefits and risks between partners. Many experts emphasize that the relationship between entities should be of a long-term character, enabling establishing long-lasting and strategic business contacts of a partner nature for both parties (Danese, 2011).

As the observations of market reality indicate, another important feature of the use of outsourcing in business practice is cooperation in the implementation of set goals, a two-way exchange of information on cooperation and coordination of activities and a high level of trust. On this basis, the author puts forward the thesis that the concept of outsourcing is aimed at gaining tangible benefits by both parties (service company and parent company), in particular with an economic dimension. A great example is the Fiat Chrysler Automobilies car company, where the beginning of

the Fiat and Chrysler group's cooperation were outsourcing services. (Becker & Zirpoli, 2003).

Summarizing the above considerations in today's market reality, outsourcing is perceived as one of the methods used to improve the optimization of the company's operations.

4. LOGISTICS AND OUTSOURCING

In the available literature, it is emphasized that modern logistics is becoming an increasing organizational challenge, which is why not every market operator is able to carry out this process in an independent and at the same time optimal (Bolumole 2001; Zachara et al, 2011; Chiung-Lin & Pei-Yu, 2016). Given that market reality observations indicate that cost reductions, improved efficiency and quality, and increased market service levels are the basic strategic assumptions of today's enterprises operating in highly competitive markets. As postulated by many authors to achieve success, it is therefore necessary to focus on the core business, while all other activities should be outsourced (if possible and after the analysis of profitability of outsourcing) to external companies (Zirpoli & Becker, 2011). On this basis, the author favors the thesis promoted in the literature on the subject that logistic outsourcing is an important factor in creating a competitive advantage that enterprises want to achieve by delegating some of their competences to specialized entities on the market, such as logistics operators. They take over the role of the link, which is responsible for the efficient and rapid organization of the supply of materials for the production of a given product or its subsequent distribution.

According to one of the representatives of economic sciences (Bolume, 2001), outsourcing in logistics is a "project consisting in separating from the organizational structure of the parent company their logistic functions and transferring them to other economic entities". Similarly, outsourcing defines (Zhu et al.; 2017) , according to which they are "undertakings aimed at separating functions in the field of logistics and transport implemented so far by the enterprise from the organization structure and the implementation of these activities in a more effective way by other economic entities". In turn, M. F. Greaver Junior defines outsourcing as: a venture consisting in separating from the organizational structure of the parent company, the functions they perform and transferring them to other economic entities (Zirpoli & Becker, 2011). Therefore, it can be assumed that enterprises entrusting logistics services to external companies, in principle, also strive to improve the quality of customer service.

On the basis of the considerations presented above, the author puts forward the thesis that, broadly speaking, outsourcing is the transfer of functions related to logistics processes. However, in a narrower sense, this concept should be defined as cooperation being the subject of the contract, consisting in the transfer of the function by the enterprise logistic in the hands of a logistics operator.

The available literature on the subject indicates that the main reasons for the development of outsourcing in the field of logistics services include:

- getting access to skills and technologies not available in the organization,
- improving quality and productivity,

- expansion thanks to the use of the partner's potential,
- focusing on core business, which improves efficiency,
- increasing the ability to react to changes in the environment,
- increasing customer satisfaction,
- reduction of investments for logistics purposes,
- conversion of fixed costs into variables,
- other reasons, eg improving credibility through cooperation with prestigious partners (Chiung-Lin & Pei-Yu, 2016).

Analysis of the available literature indicates that representatives of economic sciences for the most important benefits related to the use of outsourcing in the field of logistics include:

- reduction and control of operating costs,
- increasing the company's concentration on the core business,
- access to top-level production capacity,
- releasing own resources for other purposes,
- obtaining resources that the company does not have,
- acceleration of the emergence of benefits resulting from restructuring,
- raising capital,
- risk sharing,
- inflow of cash (Kim & Mahoney, 2010).

On the other hand, representatives of management sciences emphasize that outsourcing in the field of logistics services despite its many advantages, namely:

- improving the quality of the product,
- sharing risk and responsibility,
- high strategic flexibility,
- accessibility to modern technologies and know - how.

It also carries threats such as:

- less contact with the client,
- lack of control over the distribution system,
- disruptions in information flow between the producer, the operator and the customer,
- addiction to an external company,
- the risk of losing control over certain functions,
- the possibility of losing valuable information,
- showing the impossibility of performing certain tasks,
- the threat of companies losing their image and identity, which would result in reduced competitiveness (Zachara et al., 2010).

To sum up, the author shares the view promoted in the literature on the subject that outsourcing in the field of logistic services creates the possibility of a flexible functioning of the subject on the contemporary competitive market (Cong et al., 2018). At this stage, it is worth emphasizing that the use of outsourcing in the field of logistic services brings both benefits and threats. In the case of not every industry, outsourcing will bring the expected economic or organizational results.

For example, automotive logistics is the key factor determining cooperation with the carrier. In this case, the carrier should take into account its system capabilities

regarding the integration of processes with the client and readiness to report cooperation indicators according to the model adopted in the contractor's industry. In addition, the logistics operator must demonstrate a constant readiness to operate throughout the supply chain. This applies not only to the delivery of components for assembly, but also to the logistics of the spare parts and returns market, where flows are not planned, and the unit size of shipments is usually small. In addition, the operator must be aware of the responsibility that he takes on the services that are key to the automotive industry: Just in time and Just in sequence (Aggeri et al., 2009).

Therefore, according to the author, the implementation of this concept should be conditioned by the implementation of earlier analyzes and research. Both in terms of benefits and threats resulting from the implementation of this concept in practice. Considering that constant service to the automotive industry for any logistics operator means quite a challenge. It is a sector characterized by high dynamics and variety of orders.

5. AN ATTEMPT TO ASSESS ECONOMIC BENEFITS FROM THE USE OF OUTSOURCING IN RELATION TO SELECTED LOGISTIC SERVICES BASED ON THE CATI METHOD

At the very beginning of the discussion, based on a thorough analysis of the outsourcing concept used in logistics services, it was assumed that:

- There is unanimity in the available literature regarding the economic effects of outsourcing implementation, that CATI research can be helpful in the process of assessing the economic benefits of using this concept in business practice. It is worth noting that the available literature on the subject discusses in detail and thoroughly both the conditions, the methods used and the examples of such research referring to individual industries and market sectors in the United States
- The identified processes of growing multi-segment competition and cooperation in the European Union automotive industry resulted in the need to examine the impact of the use of the outsourcing concept in the field of logistics services. Author does not make a mistake if it assumes the following assumption: if using the accepted research method the benefits of using this concept were assessed and in case of this sector of the economy in the United States, then the same research tool can be used to assess the application of this method in relation to the European Union automotive industry. In addition, it was assumed that CATI studies may also be helpful as a tool to assess the competitiveness of the outsourcing application in relation to other entities operating in this industry. They can be used to verify the hypothesis whether the use of outsourcing in the field of logistic services leads to achieving noticeable economic benefits by entities operating on the Polish automotive market.
- For the purpose of assessing the economic effects of outsourcing in the field of logistic services, scientific significance is not only acquired by the adopted and applied research method, but also the data analyzed. For example, comparing financial outlays to particular outsourcing strategies, considering the diverse

nature of business operations and their size would be a logical error. Therefore, in order to maintain the scientific correctness and methodological value of the research, it was assumed that questions will be addressed exclusively to the supply side, which will allow to assess, in the scope of which logistic services measurable economic benefits have been achieved through outsourcing.

- From the point of view of the correctness of exploration and the possibility of capturing the necessary data, the research concerned answering the question of what benefits were achieved due to the implementation of outsourcing in the scope of selected logistic services in a given entity.
- Collective CATI results (average% of grades) are presented in Table 1.

Table 1. Ranking of benefits resulting from the implementation of outsourcing of logistics services in a given company, percentage indicator

Position		Average grades
1	Reduction of logistics activity costs	34%
2	Improving the quality and timeliness of delivery	23%
3	Time saving	16%
4	Employment reduction	11%
5	Development of the company's specialization	9%
6	Access to modern logistics solutions	4%
7	Other unspecified economic benefits	3%

Source: Own study

The analysis of the data presented in Table 1 shows that 35% of respondents consider the reduction of logistics activity costs to be the main benefit of outsourcing in the field of logistic services. In the next position (23%) respondents indicated that the effect of using outsourcing in the field of logistic services is to improve the quality and timeliness of delivery and save time (16%). It is worth emphasizing that in the opinion of respondents, the introduction of this concept in the field of logistics services also led to the reduction of employment costs.

6. CONCLUSION

Undoubtedly, the area of logistics operators' operations will grow as the complexity of production processes increases. This trend has already been observed in the automotive industry, which plays a leading role in the implementation of modern methods of management, production or logistics (Ciravegna et al, 2013). In addition, many authors postulate that the transfer of some or all of the processes into outsourcing made a much greater part of the added value of the product which is the

car are logistics processes, often carried out by external operators (Zhu et al., 2017). Therefore, commissioning some or all services to logistics operators has created the possibility for manufacturers to continuously improve the quality of their products and better allocate resources by shifting them from marginal areas (e.g. transport) to those that determine its proper functioning (service and sale of vehicles), and many times about surviving in such a competitive market (Cong et al., 2018).

At this stage, it is worth emphasizing that the development of outsourcing of logistics services in the automotive industry is determined by the state of the economic situation in EU. The consequence of the increased demand for motor vehicles is the delivery of more products to customers. Thus, in order to concentrate on basic activities, the automotive industry was forced to give some services to external companies. Thus, in the period of a possible economic slowdown, these entities will face the requirement to optimize costs throughout the entire supply chain. During this period, they can drastically reduce the number of service providers and thus give up outsourcing services. It does not change the fact that this concept gives the possibility of flexible functioning on such a competitive market. However, it is worth remembering that the use of logistics outsourcing brings both benefits and risks. In any case, logistics outsourcing will not bring expected results. Therefore, its implementation should be conditional upon the performance of previous analyzes and research both in terms of benefits and threats resulting from the implementation of this method in business practice.

However, the analysis of the presented research results indicates that:

- 35% of respondents consider the reduction of logistic costs to be the main benefit of using outsourcing in logistics services.
- 23% of respondents indicated that the effect of using outsourcing in the field of logistic services is to improve the quality and timeliness of delivery and save time (16%).
- the introduction of this concept in the field of logistic services, according to respondents, also led to the reduction of employment costs.

As part of the interpretation of the test results, questions remain unanswered:

- Was the decision on outsourcing dictated by a thorough analysis or was it the result of a trend in the automotive industry?
- Has the use of outsourcing in any case led to measurable economic and organizational benefits, or were there real threats?
- Will the outsourcing service be permanent or periodic?

Summing up the author's considerations regarding the economic aspects of the use of outsourcing in the field of selected logistic services on the example of the automotive industry in EU, they do not fully exhaust the essence of the issue, but are only an attempt to signal the complexity of the problem. This does not change the fact that many aspects of the development of the outsourcing of logistics services in relation to the European automotive industry still needs to carry out detailed analysis and research and answer the following questions:

- Will the price or quality be still a decisive factor in choosing the logistics operator in the field of logistics services outsourcing in the future?

- What role in the process will be played by trained and qualified staff of companies providing outsourcing services?
- What will the market of logistics outsourcing services look like after global mergers of automotive concerns?

However, the correctness of the proposed assumptions will certainly verify the market within a few years, which will allow for further evaluation of the role that outsourcing plays in the processes of managing entities that conduct their activity in the automotive market.

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