

The Role of ICT in our Daily Life Applications: Obstacles and Challenges

Management in Organizational Structures of Enterprises in the Light of Research Results

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ABSTRACT

Article presents recognition of the field of logistic customer service management in organizational structures of transportation enterprises. The setting in organizational structures of transportation enterprises, the diversity of dependability and functions on the basement of the accomplished investigation, along with the size of the examined business entities as a cognitive factor of the assortment of logistics customer service management are designated. The paper is realized on the basement of the findings of the investigation accomplished on a sample of 147 commercial cargo motor transport enterprises situated in the Silesian Voivodship in Southern Poland.

KEY WORDS: USE LOGISTICS CUSTOMER SERVICE; ORGANIZATIONAL STRUCTURE; TRANSPORTATION COMPANY

INTRODUCTION

In a dynamically changing economic environment, many of today's business success factors have diminished in importance and the current development trends are focused on customer service in logistics management. The shift in interest from quality improvement, price reduction, or territorial product availability to the precise definition of the factors which decide about customer's professional logistic service management is highlighted today by Chen et al. [1], Christopher [2],

Coyle et al. [3], Kempny [4], Nowosielski [5], Skowron-Grabowska [6]. The literature studies, reports or results of research concerning the area of management of logistics customer service in organizational structures of transport companies seem to be rare as in Polish as foreign publications. The article is an attempt to respond to an identified gap in the subject.

The aim of the paper is to present the field of logistic customer service management in organizational structures of transportation enterprises in the light of the research results. The setting in organizational structures

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of business entities, the diversity of dependability and functions on the basement of the accomplished investigation, along with the size of the examined transport enterprises as a cognitive factor of the assortment of logistics customer service management are designated. The paper is realized on the basement of the findings of the investigation accomplished on a sample of 147 commercial cargo motor transport enterprises situated in the Silesian Voivodeship in Southern Poland.

2. Literature Review

The logistic concept as a modern business paradigm [7-11] focuses on satisfying the needs and expectations of the customer [12] through proper service which determines the company's numerous benefits: improvement of profitability, acceleration of development, and increase of competitiveness. Customer service is the essence of logistic activities and processes [13-18] which in current standards of cooperation with the environment, points to the need to direct the enterprise's logistics to increase customer satisfaction [19-20].

Customer service in logistics management can be analyzed in one of respective regards. Frequently logistic customer service is perceived as an activity, as everything that the enterprise offers. Correspondingly logistic customer service management may be examined as a evaluation of performance or philosophy.

The wide-ranging description of the term of logistics customer service should stabilize essentials from all three configurations [21]. Primary, the company should assume on the whole the orientation to the customers philosophy [22]. In other words the management must order capabilities to recognize and meet customers' requirements [23-27]. In view of the fact that it is complicated to determine performance beside a management philosophy, another assignment is to identify particular measures for assessing performance [28-29]. The subsequent analysis categorizes a number of detailed measures and their qualified significance. On the other hand, the designation of logistic customer service measures does not mean simultaneously satisfaction of customers' needs. The last duty is to ascertain a development to achieve and determine logistic customer service activities.

Another example of the term definition is proposed by Ballou [13], who determines customer service in logistics as many logistical operations coupled with customer satisfaction when purchasing a product or service. Then logistic customer service is focused on enabling customers to purchase the product at the right time and place, and the measure of that service is the ability to perform the contract of the current reserves [4, 30, 31].

In relation to the discussed problem, it is worth referring to the results of the research by authors from Polish

and abroad approached below, where the area of logistics customer service is identified with logistics and its references to the location in organizational structures of the analyzed enterprises, performed functions or employment [32-34].

The survey conducted annually by the Council of Logistics Management in years 1993-1999 aimed at the isolation of enterprises whose organization of logistics may be assigned to one of the three degrees of centralization. In the enterprises characterized by the highest degree, i.e. full centralization, there were also included the tasks of logistics customer service in this area. These enterprises amounted to 29% (the sample of 171 entities) in 1993 and 33% (the sample of 234 entities) in 1999. Frequently, the tasks of handling orders themselves were regarded separately from other tasks of logistics customer service in 31% of enterprises in 1993 and in 23% of companies in 1999 [35].

The research concerning the assignment of tasks performed by the company to the "logistics" organizational unit was also conducted among 279 enterprises in Europe, Asia and the USA by Baumgarten and Herter [36]. The area of logistics customer service was split into two separate tasks: processing orders, performed by 63% of entities and customer service, performed by 47% of enterprises.

According to Langford [37] functional, multilevel (hierarchical) organizational structures of enterprises become irrelevant also in terms of logistics and logistics customer service. In opinion of Kisperska-Moron [38] the course of evolution of organizational structures there have occurred matrix organizations and then completely flat organizational forms – dynamic network organizations – and they are the ones to implement the prospective logistics concepts and customer service globally and regionally.

The confirmation of the above opinion is the results of the research of the area of logistics conducted on a sample of 145 transport companies in the area of France and Great Britain by Sowe and Morel [39]. The authors of the research located 12% of horizontal organizations, based entirely on exchange of information in real time, fully applying modern information technologies [40] and the concept of demand-driven logistics [41]. A particular position is also held in here by the area of logistics customer service, performing both headquarters and operational functions by the staff of the operational and executive level.

In the opinion of Skowronek and Sarjusz-Wolski [42], when looking at the functioning of logistics processes in Polish enterprises through the prism of western experiences it can be concluded that they are at the beginning of their way leading to logistics treatment of the processes of flow of materials. Formalized organizational structures, applied solutions as well as the awareness of

managers should be subjected to reorientation towards the complex approach to logistics processes in the company [43].

3. Methodological Basis of Research

The paper is predicated on the results of the research introduced below, realized on a sample of 147 commercial cargo motor transport enterprises situated in the Silesian Voivodeship in Southern Poland.

With regard to recognition of the subjected sphere of logistics customer service, which was in attendance within the examined enterprises, the assessments of such a service were realized on the basement of the inquiry questionnaire [44,45] used in the investigation, intended for the representatives of the examined companies. The practiced comprehensible method was the investigation in the framework of which there was classified the technique to acquire crucial information.

A sample of 147 correctly assigned questionnaire forms of 147 commercial cargo motor transport enterprises from the Silesian Voivodeship formed the adequate representation of the principality tested.

On the basis of the collected primary data, there has been made an attempt to examine the dependence of the range of logistics customer service, occurring in the surveyed cargo transport companies for hire or reward of the Silesian Voivodeship, on the size of these entities. For this purpose, to analyze the primary data in terms of the indicated subject matter, there have been used statistical measures such as [46]:

1. Pearson's correlation coefficient:

$$r_{xy} = \frac{\sum_{i=1}^k \sum_{j=1}^l n_{ij} \cdot (\dot{x}_i - \bar{x}) \cdot (\dot{y}_j - \bar{y})}{\sqrt{\sum_{i=1}^k n_i (\dot{x}_i - \bar{x})^2 \sum_{j=1}^l n_j (\dot{y}_j - \bar{y})^2}} \quad (1)$$

where:

x, y – single samples indexed with i, j

n_{ij} – sample size;

2. χ^2 test of independence:

$$\chi^2 = \sum_{i=1}^r \frac{(n_i - np_i)^2}{np_i} \quad (2)$$

where:

χ^2 – chi-squared dependence coefficient,

r – number of class intervals,

p – probability that the attribute adopts the value belonging to the i th class interval,

np – the number of units that should be included in the i th class interval, with the assumption that the attribute has a distribution compliant with the hypothesis;

3. χ^2 with Yates correction:

$$\chi^2 = \frac{(|ad - bc| - \frac{n}{2})^2 n}{(a+b)(c+d)(a+c)(b+d)} \quad (3)$$

where:

a, b, c, d – values corresponding to the frequency of individual fields of the four-fold table;

4. ϕ -Yule coefficient:

$$\phi = \sqrt{\frac{\chi^2}{n}} \quad (4)$$

5. Czuprow's convergence coefficient:

$$T = \sqrt{\frac{\chi^2}{n\sqrt{(r-1)(s-1)}}} \quad (5)$$

where:

T – Czuprow's convergence coefficient,

r – number of rows,

s – number of columns;

6. Q – Kendall's coefficient :

$$Q = \frac{ad - bc}{ad + bc} \quad (6)$$

Below, there are presented the results of the conducted analysis.

4. The Size of the Surveyed Transport Companies as a Determinant of a Range of Logistics Customer Service

The problem beginning the exploration of the conception of logistic customer service management in the examined enterprises was its isolation in organizational structures of the companies. From among 147 commercial cargo motor transport enterprises located in the Silesian Voivodeship just 7 entities (4.76%) confirmed the isolation of the unit being in charge of logistic service of their customers in their organizational structures.

The research carried out on the basis of the distribution of the obtained responses, included in Table 1, indicated statistically significant relationship between the size of enterprises and willingness to isolate the units dealing with logistics customer service. On the one hand, this is usually associated with more complex organizational structures in larger enterprises and, on the other, with the capabilities of their staff. This relationship, in spite of being strong – 0.696 – is at the indicated level mainly due to lack of willingness on the side of small enterprises.

The next two questions were directed to those 7 respondents who, as answer to the question 1, affirmed the isolation of the unit being in charge of logistic customer service in their structures. In question 2, there was

Table 1. Isolation of the unit dealing with logistics customer service in organizational structures of the surveyed companies by the size of enterprises				
Has there been isolated the unit dealing with logistics customer service in the organizational structure of the company?	Type of the company			
	micro	small	medium	large
yes	0	0	4	3
no	112	24	4	0
Source: own study.				

considered the matter of the functions allocated to the structured organizational form, due to the elements of logistic customer service. From among every one the achieved answers, the preponderance of companies - 63.66% (which is 7 companies having the unit responsible for logistic customer service in their organizational structures), specified the achievement of service functions which maintain other functional spheres through this structured arrangement of management of logistic customer service. Cross-cutting functions, i.e. organizing logistics operations, were achieved by the units being in charge of logistic customer service in 3 companies, while process functions which join together all logistic processes were pointed out only by one respondent (9.1%).

In Table 2, there is indicated the issue of the functions assigned to the structured organizational form, performing tasks of logistics customer service. In practice, only 5% of the surveyed companies possessed the unit dealing with logistics customer service. Nearly 2/3 of them performed service functions and 27.3% - cross-cutting functions. Only one company indicated the performance of process functions, integrating logistics processes and, therefore, assigning the most extensive range of functions to the unit dealing with this service.

The assessment of the settlements derived from the responses for the second question is next number of

Table 2. Function of the unit dealing with logistics customer service i by the size of enterprises				
If isolated, what functions does the unit dealing with logistics customer service perform?	Type of the company			
	micro	small	medium	large
service (supporting other functional areas)	0	0	4	3
cross-cutting (coordinating logistics activities)	0	0	1	2
process (integrating logistics processes)	0	0	0	1
Source: own study.				

the investigation tool, relating to the staff engaged in the unit being in charge of logistic customer service in the inquired companies. The deficiency or occurrence of the employed in the levels: operational, executive, management board may certainly guide to two kinds of endings: the idea of management of logistic customer service is weakly, satisfactorily or appropriately seen in companies; the approved organizational compound specify the level of development of this conception. From the acquired answers, such a the great part as 50% (all 7 companies having the unit being in charge of logistic customer service in their organizational structures), pointed out to the engagement of the employees of the operational level in this prearranged appearance of management of logistic customer service. The staff of the executive level were engaged in the units being in charge of logistic customer service in 5 companies (35.7%), while the board members - in 2 entities (14.3%).

From the point of view of employment, in the unit dealing with logistics customer service, indicated in Table 3, in fifty percent of the cases, the service in the indicated unit was dealt with by the staff of the operational level. In large enterprises, there were also the cases of involvement of the activity of the board members since the lack or the presence of the staff of the levels: operational, executive, management board may lead to twofold conclusions: the concept of management of logistics customer service is poorly, sufficiently or appropriately perceived in enterprises; the adopted organizational solutions indicate the level of advancement of this concept in general.

Next inquiry was directed to those 140 questioners who, in reply to the first issue, did not affirm having of the unit being in charge of logistic customer service in their organizational structures. In response to the question 4, the questioners choose one of the preferences of the answers.

In question 4 of the investigation tool, the companies in which there was not the prearranged appearance of management of logistic customer service were inquired if the activities, processes and/or decisions of logistic

Table 3. The staff employed in the unit dealing with logistics customer service by the size of enterprises				
If isolated, who does the unit dealing with logistics customer service employ?	Type of the company			
	micro	small	medium	large
the staff of the operational level	0	0	4	3
the staff of the executive level	0	0	3	2
board members	0	0	0	2
Source: own study.				

Table 4. The relationships of activities, processes and/or decisions of logistics customer service of entities not possessing the unit dealing with logistics customer service by the size of enterprises

If the unit dealing with logistics customer service has not been isolated, activities, processes and/or decisions of logistics customer service are:	Type of the company			
	micro	small	medium	large
centralized/concentrated	14	19	3	0
decentralized/dispersed	95	5	1	0
do not apply to the activity of the company	3	0	0	0

Source: own study.

service were supposed by the questioners as the ones regarding the activity of the examined enterprises and whether they run in centralized/concentrated or decentralized/dispersed relations. From among 140 enterprises, only 3 of them (2.1%) confirmed the requirement of reference of the activities, processes and/or decisions of logistic customer service to the business performance.

The data illustrated in Table 4 refer to the inquiry of representatives of enterprises, in which there was no structured form of management of logistics customer service, whether the activities, processes and/or decisions of logistics service were regarded by the respondents as the ones concerning the activity of the surveyed entities and if so, whether they took place in centralized/ concentrated connections or decentralized/dispersed ones. In the activity of cargo transport companies for hire or reward of the Silesian Voivodeship in the field of activities, processes and/or decisions of logistics customer service, there is observed significant decentralization. As much as 72.1% of the total number of enterprises and 94.1% of microenterprises indicated the decentralization of activities/processes and/or decisions beneficial for the rapidity of their implementation and mobility of enterprises and efficiency of management of the area of logistics customer service. On the other hand, it is surprising that 79.2% of small enterprises indicated the decentralization of decisions. As far as, in the case of microenterprises, a certain share of central decisions is unavoidable due to sole proprietorship, the result for small enterprises suggests rather a wrong approach to enterprise management.

The study of the relationship between the indicated characteristics was carried out using measures: χ^2 , ϕ -Youle's and Q -Kendall's. The relationship was found statistically important ($\chi^2 = 53.75$) and rather clear ($\phi = 0,434$). After appropriate data aggregation the Q coefficient = - 0.886 allowed to indicate the fact that small and medium enterprises are characterized by signifi-

cantly greater centralization of activities, processes and/or decisions of logistics customer service compared to microenterprises.

CONCLUSION

Central to the implementation of logistics customer service [47, 48] is the pattern of organization adopted. A concern with organization requires a concern for the functions of the organization, the activities involved in performing that function, and a series of operating rules to determine specific system responses to the situations [49].

Mostly enterprises' organization chart finds the responsibility for the management of the elements of logistics customer service that have been identified spread over several functions. What is rarely encountered is the situation where responsibility for the elements of logistics customer service come under an individual manager or department at the corporate planning level.

Many uncertainties of the enterprises' managers are around the question of whether customer logistics service should fill a line or a staff function in the total organization structure. Due the results of the research indicated in the paper, the uncertainties are irrelevant as logistics customer service needs to fill all the functions. However, there is no doubt that initially the staff role is easier to introduce to a company because it does not require any substantial reassignments of people or re-allocation of lines of authority.

Within the enterprises decisions involving logistics customer service area are at three levels: strategic, tactical and operational. The fact that these levels are independent, and that at each levels decisions taken in one area will have impacts on others implies that a means of coordination must be devised in appropriate to the enterprises' hierarchy, the interdependence of decisions, which is reflected in the enterprises' organization structures. The need for the logistics customer service policy in the enterprise that will cut across existing functional boundaries is necessary, especially if logistics coordination takes place at the highest director level. The split between operations and planning/control is often made on a logical basis. The coordination of these two areas is mostly achieved through the director whose responsibility is to translate corporate policy into logistics customer service requirements.

At the operational level coordination of material and associated information flows between the functional areas of purchasing, distribution or marketing is often achieved. The sphere of logistics customer service must be work together harmoniously with the companies' departments areas not only at the top level, but all the way down. In this way it becomes possible to

translate the conceptual model of the firms as a series of interacting sub-systems into a viable organizational framework. From among 147 commercial cargo motor transport enterprises located in the Silesian Voivodeship (Southern Poland), about 95% of the companies did not have the unit which was in charge of the area of logistic customer service in their organizational structures. No more than 2.1% accomplished the deficiency of referral of the activities, processes and/or decisions of logistic customer service to the business area.

The rest of the companies affirmed the discernment of the association of the conception of logistic customer service with the commercial activity, though the companies affirming the centralization/concentration of responsibility for the activities, processes and/or decisions of logistic service of their customers were the marginal group, in view of the fact that they were of 25.7% of the entire number of the questioners. These companies are possibly making efforts to look for organizational forms which would ease the management of the elements of logistic customer service. It is also the confirmation of the fact that the serious efforts are imperative for the advancement of the enterprises' management in the subject. Further helpful future research in the objective area can refer to comparison of the performance received from the customers among the groups of companies.

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