

## THE IMPACT OF LOGISTICS AND MARKETING CUSTOMER SERVICE IN E-COMMERCE FOR FREIGHT FORWARDING AND INTERNATIONAL TRANSPORT

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**Purpose:** The aim of the study is to present the importance of logistic and marketing customer service in e-commerce on the example of the TSL industry. The subject of the study concerns the area related to enterprises in the transport, forwarding and logistics industries in Poland.

**Methodology:** Survey research is the most popular method of social research, therefore, in order to obtain the data necessary to achieve the aim of the work, a research tool, a survey questionnaire, was used.

**Findings:** A detailed analysis confirmed that logistics and marketing activities are a key element of business management, and are also a particularly important tool for competing on the e-commerce market and enabling contact with potential buyers.

**Originality/value:** The publication covers the subject of impact of logistics and marketing customer service on e-commerce. Combining interdisciplinary research in the areas of management and quality science with economics and finance.

**Keywords:** e-commerce, logistic customer service, internet marketing.

**Category of the paper:** Research paper.

### 1. Introduction

The opening of companies to global markets has rapidly increased their logistics needs. The lack of knowledge and appropriate infrastructure about newly entered markets and regulations in these markets has caused companies to turn to 3rd party logistics companies. The fluctuations in the markets and changes in demand force companies to avoid high investments and minimize their fixed costs. Instead of investing for the future they cannot

predict, companies aim to turn their costs into variables by using the resources of a 3rd party and paying as much as they use (Sevim et al., 2008).

The nature of development trends in terms of the nature and opportunities created by the broadly understood electronic market depends on all technological changes that directly shape the specificity of modern trade. The specificity of preferential changes in consumer behavior determines the needs and requirements of business, thus influencing the overall demand for goods and services offered via e-commerce websites (Alt, Zbornik, 2003; Oh et al., 2003).

All protection with the final image of the discussed function are considered to be connectors integrated with the electrical installation, all with notes on the methods used to properly respond to economic changes occurring in the closer system, as well as in each entity present on the market. The conditions that are ultimately dictated by the virus epidemic are determined by the influence that is the basis for occurring in the device, as well as the alternative implementations that are determined to be specific ultimately find their way into the products. By constituting the building block of operating methods and strategies, companies operating in the area of e-commerce provide access to maximize results, as well as advanced performance functions that are a consequence of their business concepts, which not only influence customers in their service, but also all possible logistics and marketing tools to create their products, which are available at the level of companies dealing with substitute products. Excessive liability occurs primarily in the case of activities undertaken as part of the use of TSL, which, due to their nature, require the use of individual actions that concern interdisciplinary rivals (Zunder, Islam, 2011).

Using the considerations contained in the analysis of terminology related to the TSL industry, its essence and impact on the degree of economic development of a given country, all aspects and regularities occurring in the correlation should be taken into account. Referring to the characteristics of the development of logistics, transport and forwarding services, it can be noted that from year to year there is a noticeable increase in the level of popularity of this sector of activity (Anand, Grover, 2015; Pawłowska, 2015).

Moreover, delving into the considerations contained in the literature on the subject, it is worth emphasizing that "the condition of the TSL industry and the enterprises operating in it is always the result of the situation in industry and trade. However, predicting the effects of complex processes on the TSL industry in conditions of serious fluctuations in the economic situation is an extremely difficult issue" (Glistau et al., 2016). Taking into account the history of the last decade, Poland has achieved a relatively high level of expansion of the thematic area (growth by 3.8% per year in relation to GDP) compared to other countries belonging to the European Union. The development of e-commerce undoubtedly contributed to achieving this result, which enabled and intensified the need to use, among others, transport services for transporting goods purchased via the Internet to end recipients (Berg et al., 2017).

Based on the experience created by the situation related to the outbreak of the coronavirus pandemic in 2020, it seems reasonable to emphasize the position that all economic activities conducted during this period were completely subordinated to the conditions then prevailing. Absolute economic stagnation forced enterprises to adapt to a new, unknown reality at that time, which required the implementation of modern solutions in response to changing restrictions and other economic difficulties. Hence, the TSL industry, like other sectors of the economy, is undergoing rapid changes (Di Ciommo, Shiftan, 2017).

A milestone in improving the processes related to transport, forwarding and logistics, as well as increasing the quality of these activities, was the publication by the European Commission of a communication on the "green corridors" mechanism to maintain a stable situation in the field of transport for the benefit of the entire European economy. The presented solutions were primarily concerned with securing the liquidity of the supply chain by reducing the time spent on inspections and additional activities related to border services (Komisja Europejska, 2020).

Summarizing all the above aspects related to the functioning of TSL companies during the coronavirus pandemic, it must be undoubtedly stated that it was an extraordinary period, which consequently led to a significant development of this industry due to a change in society's way of thinking about shopping habits and a shift in preferences towards online trade (Gulc, 2017). The difficulties that have arisen over the years have prevented the full development of transport and logistics organizations, changing their business approach and aspirations solely to survive in an extremely difficult period for the entire world economy. Taking into account the above regularities, it should be stated that the pandemic period has changed and transformed the framework and nature of the TSL industry (Tokarski, Wolak, 2023).

Referring to the international space, it is necessary to emphasize the impact of individual factors on the overall picture of the economy in the area of the title industry. Nevertheless, referring to the considerations contained in the literature on the subject, it is worth emphasizing that "a global logistics network is a physical structure of logistics services for suppliers and recipients on a global scale, integrating this economic space in all dimensions" (Sarkis et al., 2017). All activities undertaken as part of the global functioning of the TSL industry are adapted to the opportunities and needs created by the global market. The second aspect taken into account when modifying logistics processes is the integration of individual market segments. Noticeable connections between various economic spheres are based on broadly understood process flows undertaken as part of their activities, striving to minimize financial outlays and time (Dumas et al., 2018; Kayikci, 2018).

## 2. Motivation and purpose

In the light of technological changes and the development of digitalization, e-commerce as one of the forms of doing business has developed significantly in recent years, thus influencing the way the economy functions in economic terms. The element determining the possibility of access to the tools offered by e-commerce is undoubtedly the Internet, which by its nature influences reality, thus providing new opportunities to operate in constantly changing conditions. In Poland, the discussed trade model gained popularity as it flourished in other countries of the world. This regularity is confirmed by statistical data that show a significant increase in the value of the e-commerce market (Choi, 2019).

The overall value of the e-commerce market has increased significantly, which is undoubtedly due to the development of the Internet in Poland. Based on specific values, it is reasonable to emphasize the relationship between the growth rate and the passage of time. In 2001, the value of the e-commerce market was estimated at approximately PLN 200 million, while in 2010 it reached PLN 15.5 billion. The last period that best illustrates the growing popularity of this business model is 2014, when the total market value in Poland amounted to PLN 27 billion (CBOS, 2020).

Referring to modern times, it should be noted that e-commerce in Poland is still developing from a prospective perspective. However, due to the nature of this trend, one can talk about a complete change in the current cause of growth. Available data from 2018-2021 shows that the intensification of the e-commerce market was caused primarily by technological progress and the desire to learn about various forms of shopping. The changes in 2020-2021 can be considered revolutionary, as the number of stores physically available to consumers decreased significantly (Drapers, 2021). This was primarily due to the coronavirus pandemic, which somehow forced society to modify its current lifestyle, including the issue of making transactions. Due to the introduction of various restrictions in Poland that directly affected enterprises, they were often forced to reorganize the way they conducted trade and even transfer this activity to the virtual space (Forsal, 2021). It is also worth noting that the reason for the rapid increase in the popularity of e-commerce was the fact that older people who had not previously used this form of shopping joined the existing group of users. Moving on to modern times, i.e. 2022-2024, the discussed growth rate of e-commerce has slowed down slightly due to weakening demand caused by, among others, high level of inflation. Nevertheless, the above market needs stabilized at a sustainable level, taking into account the significant number of immigrants, which was directly related to the outbreak of the war in Ukraine (The Expert Sender, 2020).

Anticipating market changes over the next four years, a significant increase in the overall value of the e-commerce market is still expected. Its balance for 2022 amounted to PLN 109 billion, and this year it is expected to increase by 13.7% to PLN 124 billion.

According to forecasts, the following years will also be characterized by an increase in the market value by approximately 10-11% compared to the previous year, which indicates its harmony and balance in the discussed process. The latest data included in the above analysis refer to 2027, when the ceiling is estimated at PLN 187 billion. Based on available statistical data and information on the actual state of the Polish economy, experts do not predict significant breakdowns or slowdowns in the development of the e-commerce market, however, the occurrence of any deviations should not significantly affect these forecasts (CBOS, 2023).

One of the most crucial pillars of retail e-commerce is logistics. A mistake in the logistics field can cause the e-commerce platform or company to lose customers. Therefore, the process from the moment consumers place their product orders to the moment the products in question are delivered to the consumer (forward) and until the product to be returned is collected from the consumer and returned to the system in the most economical way (backwards) must be managed with an effective logistics system. To create such a system, 5 points must be taken into consideration. These are reliability, economy, time, service flexibility and information (Deliçay, 2021).

### **3. Methodology**

The aim of this study was to determine the importance of customer service on the e-commerce market, thus hypothesizing that logistics and marketing activities are a key element of enterprise management and are also a particularly important tool for competing on the e-commerce market and enable contact with potential customers. In order to determine the degree of influence of the verified variable, the frequency of purchases in the virtual space, shopping preferences and the subjective opinion of respondents from a wide range of e-commerce in the TSL industry were also analysed.

The detailed objectives of the study included, among others:

- assessment of the impact of individual customer service activities in the virtual sphere on the purchasing decisions of potential customers,
- analysis of the importance of information and data provided by enterprises operating on the Internet,
- examining the importance of logistics and marketing solutions used in e-commerce,
- comparison of the specificity of customer service in traditional sales channels and online activities based on the subjective experiences of respondents,
- verification of the frequency of use of modern solutions offered by online stores,
- identification of potential difficulties and problems related to the purchase of goods via e-commerce tools.

Returning to the method used in the study, it should be noted that it was based on an anonymous survey that was made available to a selected group of recipients via the Internet (Aponowicz, 2015). Therefore, the research area was the entire country, and the sample selection method was non-random. People were examined, regardless of age and gender. The questionnaire was made available in the third and fourth quarter of 2023. A total of 100 respondents participated in the study, the characteristics of the study population are summarized in Table 1.

## **4. Results**

### **4.1. Interaction between consumer and customer service**

When considering the aspect of the impact of consumer interactions with customer service on social media platforms on purchasing decisions, it should be emphasized that in most cases (64%) it is noted that respondents often verify the level and speed of this service and this to some extent influences their final purchase choices. About 24% of respondents declared that they always analyse the above aspects of their purchasing intentions before finalizing the transaction. Interaction with customer service does not influence purchasing decisions for only 12% of respondents.

Another issue that directly affects research on the importance of logistics and customer service marketing in e-commerce is the impact of information regarding delivery time. Almost the majority of respondents indicated that this factor determines their purchasing decisions, i.e. 51% of respondents indicated that information regarding delivery time is important when making purchasing decisions, while 39% of respondents emphasized that this information is rather important. A total of 10% of the surveyed people believed that the issue of delivery time is not a key factor when making purchasing decisions.

Referring to the importance of e-consumers being able to effectively track their parcels, there is a tendency that buyers value this option in the context of making purchasing choices (85% in total). Only 10% indicated that the examined factor was rather unimportant to them. Only 5% of respondents consider this option completely useless.

As the results below show, the majority of respondents indicated that the ecological and marketing logistics practices used by online stores do not in any way influence their purchasing decisions (46%), while 34% of respondents try to take these aspects into account when making transactions in online stores virtual space. Only 20% emphasized that they always take into account ecological and marketing aspects.

Referring to the aspect of consumer preferences in terms of loyalty programs used by enterprises as part of their activities on the Internet, it should be noted that the majority of respondents (56%) were of the opinion that they try to make purchases in the virtual space in stores offering additional benefits as part of these loyalty programs. The next segment consisted of respondents (30%) for whom this factor is not a reason to choose a specific company or the offer it offers. Nevertheless, as many as 14% of respondents emphasized that they only choose companies that use loyalty programs to encourage potential buyers.

When it comes to the importance of new products and discounts offered by companies, the vast majority of respondents (62%) indicated that they always pay attention to these factors when making final purchasing decisions. Around 32% of respondents chose a neutral answer, that respondents sometimes take into account current news and discounts, while only 6% consider these factors to be completely unimportant.

Starting from research on the subjective assessment of the quality of marketing communication from online stores (e.g. e-mails, push notifications), most respondents are familiar with the marketing content sent (66%), while 29% of respondents claim that this content is promotional tools that are completely unnecessary and they never open them. Only 5% emphasized that they always verify what a given company has to offer.

Moving on to examine the importance of individual logistics and marketing factors, it should be emphasized that the majority of respondents consider fast and reliable delivery (41%) and communication and information about the shipment status (33%) to be the most important aspects of consumer choices. Next, they chose an easy and hassle-free process of returning the purchased goods (14%) and high quality of packaging and product protection (8%). Only 4% of respondents declared that none of these factors affects their loyalty to a specific online store.

#### **4.2. The impact of logistics and marketing customer service in e-commerce**

When analysing the importance of logistics marketing and logistics services in e-commerce for the choice of a given online store by potential buyers, it should be emphasized that the vast majority - 69% of respondents believe that additional logistics services are crucial. About 21% of respondents expressed a similar opinion, stating that these elements are rather important to them. Only 10% of all respondents chose not very much impact or no impact at all.

When asked about their preferences for different delivery options, 45% of respondents indicated that they valued this option when shopping online. For 26% of respondents, a variety of delivery options is rather important. Around 7% indicated the lack of total impact of the examined factor on purchasing decisions, while for 9% this element was rather unimportant. The answer that customers have no major preferences regarding delivery options was chosen by 13%.

Data from this market shows that the majority of respondents have contacted customer service to obtain marketing information about products or promotions (76% in total). Only 8% of respondents are not at all interested in obtaining this information, while 16% of respondents have not had such a need yet.

When it comes to personalized gifts or discounts as part of customer service, as many as 44% of respondents emphasized that they had received such an offer and that it influenced their purchasing decisions. In the case of 22%, the mentioned gifts or discounts had no influence on the final choice of the company. Nevertheless, it should be noted that a total of 34% of respondents did not receive such forms encouraging them to take advantage of a given offer, including 9% of respondents who are not entirely interested in receiving this type of messages.

Referring to the subjective assessment of the impact of logistics and customer service marketing on trust in online stores among respondents, as many as 45% indicated that this business element is particularly important from the point of view of trust in a given seller. About 24% of respondents took a similar position, emphasizing that this factor has a significant impact on their final decisions. As for the remaining answers, 21% of respondents believe that logistics and marketing services do not determine their purchasing choices. Only 10% of respondents base their trust in online stores on factors other than customer service.

Referring to the importance of logistics and customer service marketing in e-commerce, comparing it with the traditional form of trade, as many as 72% of respondents said that in the case of e-commerce this business element is more important. For 17% of respondents, customer service in terms of logistics and marketing is more important in stationary branches, and 11% of respondents see no difference in the above issue.

When examining the influence of other customers' opinions on purchasing decisions made within a given company operating on the Internet, it is worth paying attention to the significant percentage of respondents who often pay attention to the opinions of other consumers (60%). As many as 28% base their purchasing decisions on reviews, while 12% do not take this factor into account when making their own choices and needs.

Taking into account the experience of the surveyed people in terms of improvements in the logistics or marketing of a given online store, after expressing an opinion or complaint, a large diversity of respondents' answers can be noticed. However, the largest number of responses is the belief that respondents saw little improvement in these transactional aspects (27%). Around 21% of respondents received better customer service after submitting comments, and in the area of logistics this answer was indicated by 15% of respondents. As many as 18% of all respondents emphasized that they had not noticed any changes in the level of service, while 19% had not yet had the opportunity to express their opinion on the subjective aspects of e-commerce experiences.



#### **4.3. The impact of the development of e-commerce on improving the quality of freight forwarding services and international transport**

Analysing the degree of use of various technologies (e.g. mobile applications, chatbots) when conducting online transactions in order to obtain better support, the vast majority of respondents indicated that they regularly use these tools to conveniently make purchases and track the status of orders (74%). Only 18% of respondents use modern solutions less often, while 5% of respondents declared that they do not use these methods at all. The last segment is respondents who are not sure whether they use these technologies, because I have not yet had the opportunity to use mobile applications or chatbots when shopping online.

Another analysed aspect was the impact of the development of e-commerce on improving the quality and availability of transport and logistics services. The vast majority of respondents indicated that they had noticed significant improvements in the quality of transport and logistics services in their region since the development of e-commerce. As a result, delivery times have shortened and the availability of various delivery options for goods is also available (54%). About 18% of respondents said that this change was unnoticeable, emphasizing that delays and delivery problems still occur. Around 17% of respondents expressed uncertainty in this aspect, while 11% of all respondents chose the answer that the development of e-commerce could improve the quality and availability of transport and logistics services, but they did not notice it because they use the same company's transport.

Analysing the level of development of logistics and transport services in terms of the requirements posed by e-commerce, the vast majority of respondents (49%) undoubtedly noticed these changes. About 33% of respondents say the same, indicating that they are not sure of their answer, but believe that they have noticed an improvement in the quality of services provided in the TSL industry thanks to the rapid development of e-commerce. Only 18% have not noticed any changes in the logistics and transport industry.

Referring to the subjective assessment of challenges or problems related to e-commerce affecting the quality of customer service in the TSL industry, respondents indicated that, in their opinion, the most noticeable factor is the difficulty of demand, which may lead to restrictions in the availability of means of transport and warehouses (32%). As the second answer, respondents indicated an increase in the number of orders, which may cause delays in deliveries and their implementation (27%). The issue of returns policy was raised by 14% of respondents, stating that it may involve additional logistical burden. Another factor that, according to respondents, affects the quality of customer service in the TSL industry (12%) was the competitiveness of companies determining the need to reduce the prices of services provided. Nevertheless, as many as 15% of respondents agreed with all the above statements, claiming that all these factors may determine the essence of the level of consumer service created.

The last issue examined is the importance of the impact of e-commerce on the traditional shopping segment. In this case, the vast majority of respondents (68%) emphasized that e-commerce has influenced their approach to shopping, which is why they are increasingly choosing this shopping method due to convenience, large selection and easy access to products. The development of the e-commerce industry did not influence further actions of 23% of respondents. Only 9% of respondents emphasized that they did not have a specific opinion on the research topic.

## 5. Conclusions

Taking into account the above research results on the importance of logistics and customer service marketing in the e-commerce space, it can be concluded that e-commerce is undoubtedly a branch of trade that is subject to continuous dynamic transformation and development (Qurtubi et al., 2021). Therefore, in their answers, respondents emphasized that their purchasing decisions made in the virtual space have become the norm, which is increasingly replacing traditional forms of sales. Equally important, respondents noticed a significant improvement in the quality and availability of transport and logistics services, which is a direct result of the requirements and needs created by e-commerce. Entrepreneurs conducting business on the Internet should primarily pay attention to ensuring timely deliveries and the possibility of locating the shipment by buyers, because in the eyes of customers this is of great importance when choosing a potential offer. Nowadays, in which the transport and logistics industry is characterized by a high degree of development, one must also take into account the need to choose the delivery of purchased goods. This is one of the main factors of logistic customer service, which directly affects the final purchase decision, mainly due to everyday duties and other activities that prevent the constant presence of a given entity in a given place (Fajczak-Kowalska, Tokarski, 2023).

Another aspect that should be given special attention is the growing popularity of the use of modern tools and solutions offered in online commerce. This consistently increases the attractiveness of this sphere of trade, encouraging potential recipients to use these methods of concluding and executing transactions. However, due to the breadth of the subject of e-commerce, it is also necessary to emphasize the essence of difficulties and problems related to the purchase of goods, which in the eyes of respondents may interfere with the proper course of purchasing processes. These include, among others: growth in the number of orders, increased demand for transport and storage services, returns policy and competitiveness (Tokarski, Dąbrowska, 2023). All these factors determine the overall shape of the e-commerce market in terms of requirements for preventing possible delays, process burdens or reducing service prices, which may directly affect the quality of consumer service provided. Therefore,

when analysing the above area, it can be concluded that the constant development of e-commerce is also associated with additional, often unplanned struggles, limiting the smoothness of processes carried out in the entire logistics area (Tokarski, Fajczak-Kowalska, 2024).

It is also necessary to interpret the obtained research results directly relating to the sphere of marketing, which significantly determines the competitiveness of a given offer. Thanks to the promotional activities undertaken, a relationship is often created between consumers and the company that goes beyond sales needs and determines the size and quality of the group of target recipients (Tokarski, Bielecki, 2024). Despite the above-mentioned development of e-commerce, it is worth mentioning that organizations selling on the Internet do not always take into account the current problems of buyers and the resulting consequences (Bielecki et al., 2024). The subjective opinions of respondents undoubtedly indicated deficiencies in the appropriate adaptation of their business to the emerging difficulties encountered when shopping on the Internet. Therefore, it seems important to focus on improving the quality of existing customer service processes in order to increase the efficiency and effectiveness of the organization.

Taking into account the above considerations regarding the conclusions of the study, it can undoubtedly be stated that the aspects of logistic and marketing customer service in e-commerce are particularly important for potential buyers, thus creating a basis for making decisions that will meet all their expectations and requirements. The above regularities clearly confirm the hypotheses, therefore logistics and marketing activities are a key element of managing enterprises in the virtual space and enable them to implement the adopted strategies in changing economic conditions. Moreover, logistics and marketing customer service is an important tool for competing on the e-commerce market, and its marketing dimension itself allows entities to establish contact with a potential customer.

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## Appendix

**Table 1.**  
*Characteristics of the study population*

Criterion		Surveyed population	Percentage of respondents
<b>Gender of the respondent</b>	man	44	44%
	woman	56	56%
<b>Age of the respondent</b>	up to 20 years	17	17%
	21-25 years old	41	41%
	26-35 years old	19	19%
	36-45 years old	13	13%
	46-55 years old	10	10%
<b>Marital status</b>	married	31	31%
	single	65	65%
	other	4	4%
<b>Education</b>	basic	0	0%
	basic vocational	6	6%
	medium	26	26%
	higher	68	68%
<b>Professional status</b>	unemployed	3	3%
	learner/student	38	38%
	manual worker	20	20%
	white-collar worker	29	29%
	freelance profession	0	0%
	own business activity	7	7%
	pensioner, retiree	3	3%
<b>Financial situation</b>	good	26	26%
	bad	8	8%
	average	66	66%
<b>Gross monthly income level per 1 person in a household</b>	I have no income	3	3%
	up to PLN 1,000	7	7%
	1,001-1,500 PLN	5	5%
	1,501-2,000 PLN	2	2%
	2001-2500 PLN	6	6%
	2,501-3,000 PLN	17	17%
	over 3,000 PLN	48	48%
I refuse to answer	12	12%	
<b>Place of residence</b>	city	79	79%
	village	21	21%

Source: own study based on empirical research.