LOGISTIC SERVICE QUALITY FROM B2C PERSPECTIVE- POLISH CUSTOMERS' EXPERIENCES

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Abstract

Logistics services are closely connected with customer's satisfaction in e-commerce environment and logistics processes management significantly influences e-customer service quality. The development of online channels is connected with a similar evolution of companies' logistics systems. The paper aims to identify the factors that influence e-customer satisfaction related with Logistic Service Quality (LSQ) from B2C perspective. The paper identifies and analyzes the most common models and methods for measuring e-service quality applied in B2C e-commerce. A literature review is primarily used to determine the conceptual model and to develop the measurement scales. Data were collected through online questionnaire survey conducted among Polish customers. This paper provides empirical results as regards the impact of LSQ and its elements as potential drivers for customer satisfaction from the B2C perspective in Poland. Statistical analysis was used to analyze the collected data and test the proposed research hypotheses. The results revealed that all the operational dimensions of LSQ evaluated in the study influenced customers' satisfaction in e-commerce. The results indicate that e-service quality, website features and logistics service quality are strongly connected with customer satisfaction. The research results show that e-retailers should not only focus on e-service quality, but also take into consideration the logistics service quality. The study recommends that the determinants identified in this research are employed by e-commerce companies, which will improve quality of their logistic processes and aid them in serving their customers effectively.

Keywords: Logistics Service Quality (LSQ), e-commerce, e-service quality, consumer satisfaction, business to consumer (B2C)

1.   INTRODUCTION

Quality is one of the most important and complex components of e-business strategy, especially in the context of customers' experiences. The most important aspect of providing of e-commerce customer needs is fast delivery and high quality of service. Internet has not only an important impact on consumers' ordering processes, requirements, expectation and shopping behaviors, but also creates new opportunities for e-commerce, especially in B2C (business to customer) relations. With the rapid development of internet retailing, service quality of e-retailers has been recognized as an important factor in determining success levels of e-commerce companies. Understanding and measuring e-service quality has become crucial since a growing volume of business to customer relations takes place in the online environment. B2C refers to e-commerce model in which businesses sell to individual shoppers [1] and the concept of logistic service quality regarding B2C marketing is an important component of this study. Service quality in e-commerce can be defined as the consumers' overall evaluation and perception of the excellence and e-service quality offerings in the virtual marketplace [2]. Customer satisfaction in e-commerce is dependent, similar to traditional services, on the difference between customers' expectations and the real e-service experience [3]. Researchers suggest that logistics service quality (LSQ) can influence customer satisfaction and indicate that the quality of the logistics service can have a positive and significant impact on fulfillment of customers requirements in e-commerce transactions [4]. Most of the studies on e-retail service quality, have concentrated on developing measures for the evaluation of websites, but measuring e-service quality should go beyond the website interface. Customer's online experience consists of everything from information search, product evaluation,

decision making, transaction security, delivery, returns conditions, and customer service. It is apparent that measures for evaluating just websites may not be sufficient for measuring service quality across various stages of the online retail service delivery [5]. Therefore researchers purpose of developing scales for e-service quality is measuring the whole customer experience regarding the e-service [6]. General LSQ concepts are usually investigated in B2B settings, but there are a lot of contributions dedicated to B2C contexts, but online retailers are increasing in number and type and they are increasing their service quality in order to attract greater number of customers. The rise of B2C e-commerce has introduced challenges in retail logistics, especially in the physical distribution to the final customer. In traditional retail businesses products are selected by the consumers from the local store at any time they want. In contrast, e-commerce enables consumers to select the products online and creates new possibilities to order a product and choose its delivery way [7].

With a dearth of studies on LSQ and the impact on customer satisfaction in the online retailing business, it is therefore imperative that a study be conducted to examine the impact of LSQ on customer satisfaction as well as identify the specific dimensions of LSQ that mainly contribute to the customers' satisfaction. Understanding the most influential elements for customers' decision-making is not only beneficial for future development of e-logistic but also for increasing customer satisfaction in B2C e-commerce. The paper aims to identify the factors that influence e-customer satisfaction related with Logistic Service Quality (LSQ) from B2C perspective on example of Polish customers' experiences.

The study is structured as follows. After this introduction, the theoretical foundations and hypotheses that support the study have been described. Next section details the methodological procedures, followed by an analysis of data and defines the dimensions of the proposed framework and its indicators. Than the results of research have been presented and discussed. Finally conclusion and suggestions for the continuation of the research have been presented.

2.   LITERATURE REVIEW AND HYPOTHESES

E-commerce platform is a primary basis for multi-channel transactions in which product or service information is provided by multiple third-parties and transactions are processed by the platform operator. Because of the role in providing product and service information, EC platform operating company can also be considered as a service provider. Therefore, an e-platform consists of the diverse characteristics as a service provider and thus can be evaluated through its service quality [8]. LSQ is the result received comparing customers' expectations with customers' perception of service quality. Clients, prior to ordering the service, already have expectations of what the service provider should offer them. Therefore the quality of logistical service perceived by the client is the difference between the perceived expectations of a service and perceived performance [9]. In order to deliver superior service quality, it is necessary to understand how consumers perceive and evaluate online consumer service [10]. Traditional service quality assessment is based on the famous SERVQUAL model and proposes five dimensions of quality evaluation: Responsiveness, Assurance, Tangibles, Empathy, and Reliability [11]. But this service quality assessment model focuses on the traditional buyer-seller interaction, but does not embrace the interaction between customer and website, which is one unique character of e-commerce service quality. Therefore, researchers extended this model added by other dimensions, which are specific for online environment, such as: information quality [12], transaction security, transaction cost saving, convenience, reliability, accessibility, ease of use, responsiveness, usefulness or interaction possibilities [13]. In the B2C e-tailing industry, the mainly connection platform between customers and retailers is website. Therefore, creating and realization of customer expectation, value transferring, and communication are occurred on online shopping websites. Therefore a good e-commerce site design can attract more customers with positive first impression and makes consumer's journey more easier to access to any parts from the searching, ordering, paying, tracking, receiving, and after sales services [14]. Research about service quality has been popular for many years, but it is only recently that it started to take place in e-commerce environment. In fact there is a vast range of ideas regarding the most important factors affecting

online consumer's behaviors and satisfaction. The dominant factors which influences consumer perceptions of online purchasing are the website characteristics, privacy, security and the quality of logistic services, which is one of the most important elements that help to satisfy completely the customers' needs in e-commerce [15]. Customer concerns about several important elements with a close relationship to the customer value: time, dependability, communication and flexibility. Therefore, researchers distinguish three key elements of logistics customer services: pre-transaction, during transaction, and after-transaction period [16]. After transaction services are important not only for customers but especially for e-commerce companies, because they can improve their logistic customer services by collecting feedbacks from customers and then improve the quality and customer satisfaction in online shopping. Based on the review of e-commerce quality evaluation criteria the following hypotheses for the causal relationship between the Logistic Service Quality and its resulting customer satisfaction and online sopping experiences have been proposed:

Hypothesis 1 (H1). Website features of e-commerce platform have a positive effect on high quality customer experiences in online shopping.

Hypothesis 2 (H2). Communication with customer has a positive effect on high quality customer experiences in online shopping.

Hypothesis 3 (H3). Customer service during order and product choice has a positive effect on high quality customer experiences in online shopping.

Hypothesis 4 (H4). Transaction security has a positive effect on high quality customer experiences in online shopping.

Hypothesis 5 (H5). Delivery procedures and conditions have a positive effect on high quality customer experiences in online shopping.

Hypothesis 6 (H6). After-sales service has a positive effect on high quality customer experiences in online shopping.

This paper reviews the most recognized evaluation criteria of logistic service quality assessment in the context of e-commerce environment, and proposes a general comprehensive framework for evaluating the quality of any e-commerce service regarding to website features, communication with customer, customer service during order and product choice, transaction security, delivery procedures and conditions, and after-sales service.

3.   METHODOLOGY OF RESEARCH

The objective of this research is to develop a theoretical, comprehensive, and measurable framework for assessing of logistic service quality from B2C perspective, and to indicate factors, which are significant for customers satisfaction and high quality online shopping experiences. The analysis of literature enabled to identify key elements of logistic service quality in the context of e-commerce environment.

The following dimensions of logistic service quality in B2C perspective have been selected: website features, communication with customer, customer service during order and product choice, transaction security, delivery procedures and conditions, and after-sales service. The detailed criteria of Logistic Service Quality assessment from B2C perspective have been presented in **Table 1**.

Data were collected through online questionnaire survey conducted among Polish customers. They were asked to indicate the dimensions which influence their evaluation of Logistic Service Quality in online shopping and have a positive effect on their satisfaction and fulfilment of requirements. The questionnaire was structured on 28 items using a five point Likert scale. Each measurement variable varies from 1 to 5, among which 5 means very important, 4 important, 3 neutral, 2 unimportant, 1 very unimportant. Data were collected from customers who bought products from the online retail shops in Poland and accepted to answer the survey questions. The survey was conducted from August to October 2018. Totally 287 customers replied, but 43 of them indicated that they have little experience of online shopping, and 64 online questionnaires were

uncompleted. The remaining 180 surveyed respondents are the basis of the study. Completed questionnaires have been used in the analysis of determinants of Logistic Service Quality in B2C e-commerce by using V-Cramer's Correlation Coefficient. Respondents included 63 % males and 37 % females. 56 % of the respondents were under the age of 25, 23 % were ages 26-40, 17 % were ages 41-55, and 4 % were over age 55. Correlation analyze was used to estimate the unique effect of e-commerce website features, communication with customer, customer service during order and product choice, transaction security, delivery procedures and after-sale service on Logistic Service Quality assessment and positive customers' shopping experiences in e-commerce environment.

Table 1 Dimensions of Logistics Service Quality assessment in B2C e-commerce [own elaboration]

Category of assessment	Detailed criteria
Website features	Website content, design and aesthetic; Convenience; Reliability; Accessibility; Ease of use and navigation; Functionality; Responsiveness
Communication with customer	Information accessibility, quality and relevance; Effective communication and contact possibilities with staff; Accessibility of communication tools in online and mobile channels; Interaction possibilities
Order and product choice	Accessible online help and customer support service; Accessibility of other customer opinions and recommendations; Product availability; Recommendation systems; Convenience of order procedure
Transaction security	Financial data security; Personal data security; Payment security; Possibility of payment method choice
Delivery procedures	Freely choice of delivery or pickup method; Order status tracking possibilities; Short delivery time and timeliness; Order accuracy and quality
After-sales service	Product returns and warranty conditions; Rapid and effective error handling; Easy and convenient contact with customer service; Rapid response time

4.   RESULTS

Influence of Logistic Service Quality dimensions on customers' satisfaction in online shopping (**Table 1**) have been analyzed with help of V-Cramer's Correlation Coefficient. The correlation between all investigated factors and customers' satisfaction level in B2C e-commerce is statistically significant, because the χ^2 - value is higher that critical value.

Regarding the importance of the website features, this research clearly shows that reliability is the most important factor (V=0.912). The results confirm that the dimensions connected with website functionality are important elements for quality assessment and the critical factor for fulfilment of consumers' requirements. For surveyed consumers the most important factors are: website functionality (V=0.893), easy use and navigation (V=0.869), accessibility (V=0.857), convenience (V= 0.841) and responsiveness (V=0.826). Less important are website content, design and aesthetic (V=0.712). Regarding the importance of communication with customer, information accessibility, quality and relevance have the great positive impact on customers' shopping experiences (V= 0.876). For surveyed customers very important on all stage of e-commerce transaction are: accessibility of communication tools in online and mobile channels (V=0.865), interaction possibilities (V=0.843) and effective communication and contact possibilities with staff (V=0.837). The data analysis also demonstrate that dimensions connected with order and product choice significant influence customer satisfaction in online shopping. Product availability (V=0.912), accessible online help and customer support service (V=0.893) are the most important determinants of customer satisfaction in e-commerce. Essential for customer satisfaction in online environment are recommendation, opinion and sufficient information, because of lack of physical contact with product. For surveyed customers significant are: recommendation systems implemented in e-commerce website (V=0.697) and accessibility of other customer

opinions and recommendations (V=0.795). The results confirm that convenience of order procedure (V=0.897), connected with simplicity of product search, ordering, and payment process, has a strong influence on the perceived quality assessment. The obtained result indicates that transaction security is fundamental dimension for customers' online shopping satisfaction, especially when it comes to electronic payments. This aspect is one of the most important in the evaluation of an online service quality, and one of those that have the most influence on customer satisfaction. Surveyed customers confirm the considerable importance of their financial (V=0.997) and personal (V=0.993) data security, and payment security (V=0.995). The possibility of payment method choice (V=0.573) is of less practical significance for e-customers satisfaction assessments. Logistic Service Quality in e-commerce is strongly connected with delivery procedures, because customers expect to gain the ordered product as less time as possible, and in simply and convenient way. The assessment of Logistic Service Quality in online shopping revealed the importance of order accuracy and quality (V=0.793). The data analysis also demonstrates that short delivery time and timeliness (V=0.747), order status tracking possibilities (V=0.637), and freely choice of delivery or pickup method (V=0.529) are crucial for Logistic Service Quality assessment in B2C e-commerce. Essential importance for online shopping experiences have factors connected with after sale service. The survey results confirm that product returns and warranty conditions (V=0.871), rapid and effective error handling (V=0.789), easy and convenient contact with customer service (V=0.724), and rapid response time (V=0.687) influence customers' satisfaction connected with Logistic Service Quality in online environment.

According to conducted analysis all considered factors have positive influence on Logistic Service Quality and customer experiences in online shopping. Therefore, all research hypothesis are accepted. There is a positive correlation between high quality customer experiences in online shopping and website features (H1), communication with customer (H2), customer service during order and product choice (H3), transaction security (H4), delivery procedures (H5) and after-sale service (H6). The results revealed that all the operational dimensions of LSQ evaluated in the study influenced customers' satisfaction in e-commerce. The study indicates that e-service quality, e-commerce website features and logistics service quality are strongly connected with customer satisfaction. The research results show that e-retailers should not only focus on e-service quality and website features, but especially take into consideration the logistics service quality.

5.   CONCLUSIONS

In the B2C e-commerce, end-customer is important as the core of value chain and also as the final value receiver. Logistic service in online shopping is aimed to deliver value, thus, it is necessary to learn about customers' expectations. Empirically, the results obtained clearly indicate very strong impact of logistics service quality on customer satisfaction in B2C perspective. The results revealed that all the dimensions of LSQ evaluated in the study influenced customers' satisfaction in e-commerce. The positive correlation between high quality customer experiences and website features, communication with customer, customer service during order and product choice, transaction security, delivery procedures and after-sale service has been confirmed. The research results show that e-retailers should not only focus on e-service quality and website features, but also take into consideration the logistics service quality, which is one of the most important factors that help to satisfy completely the customers' needs in e-commerce However, because of the complexity of the considered problems, further research becomes imperative. A future study should try to validate and generalize the findings of this study by using a wider sample. Future research lines could be developed to evaluate if the logistic service quality in B2C e-commerce differ according to other factors connected with different characteristics of online shoppers. The results provide an important foundation for improvement of logistic service quality in B2C that will allow to assess the strengths and weaknesses of each e-commerce service in order to know where to focus further development to achieve the high quality customers' experiences.

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