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QUALITY ASSESSMENT OF E-COMMERCE SERVICES IN TERMS OF PROCESS DIGITIZATION

Abstract: Industry 4.0 is driving a massive transformation across all types of businesses, including those in the service sector. An important component of this transformation is the digitization of individual processes within organizations. The recent Covid-19 pandemic has accelerated the digitization of processes, with many businesses forced to pivot to online distribution channels in order to weather the crisis. The digitization of services, particularly in e-commerce, has been a key factor in the adaptation and survival of businesses during these challenging times. The aim of the article was to evaluate the performance of a selected e-commerce website in terms of changes related to its website functionality and the introduction of new options available to potential customers. The evaluation was conducted through surveys administered both before and after the website changes were made. Through these surveys, it was possible to identify which changes were particularly well-received by customers, as well as to gain insights into the additional changes they expect to see in the future.

Keywords: *service, service quality, e-commerce, digitalization, Industry 4.0.*

1. Introduction

The Fourth Industrial Revolution, commonly known as Industry 4.0, has been gaining global momentum in recent years. Its goal is the comprehensive integration of all production areas through digitization and the creation of new communication channels (Wachnik, 2022). The revolution also aims to implement modern solutions that enhance business operations, particularly in terms of automating and digitizing production processes (Kleszcz, 2018).

As a result, interest in the impact of Industry 4.0 on companies has increased. Firms are eagerly attempting to introduce new technologies into their production processes (Efimova & Briš, 2022; de Souza et al., 2023). However, they encounter numerous challenges along the way (Ingaldi & Ulewicz, 2020).

It is worth emphasizing that Industry 4.0 relies heavily on various technologies such as: traceability, autonomous robots, human-robot interaction, drones, cyber-physical systems, cybersecurity, renewable energy, cloud technologies and simulations, big data analysis, blockchain, internet of things analytics, virtual and augmented reality, artificial intelligence, mobile and cloud computing (Richnák & Fidlerová, 2022). All of these technologies are crucial for the development of Industry 4.0.

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Currently, the digitization of processes is one of the key elements of the strategy for most businesses. This is due to the rapid development of technology, particularly the Industry 4.0 revolution and the Covid-19 pandemic (Gue et al., 2020; Kmecová et al., 2021). In the initial phase of the pandemic, many businesses were forced to expand their operations and move online to continue operating. It can be observed that the Covid-19 pandemic has accelerated the digitization process of many companies, including those that were previously not interested in digitization. Automation and digitization have become not only goals, but also means enabling business development towards an intelligent company (Grznar et al., 2020; Pekarcikova et al., 2021; Wiśniewska-Sałek, 2020). Currently, there is a trend that if a company does not have its own website or is not digital, it does not exist.

Industry 4.0 is driving the integration of digitization across all production areas, with the goal of enhancing business operations and automating production processes. This has significant implications for service industries, which can also benefit from the integration of advanced technologies and data analytics to optimize and customize their offerings.

The development of e-commerce is one of the most visible effects of the trend of opening new distribution channels. Nowadays, companies use a strategy of combining sales in brick-and-mortar stores with e-commerce to increase the usability of their websites and gain a competitive advantage (Garbarova et al., 2017; Corejova et al., 2022). This strategy can help companies increase accessibility for customers and streamline sales processes, leading to revenue growth. The significant growth of e-commerce is related to the use of modern technologies such as artificial intelligence, big data, or IoT analytics, which allow companies to better understand their customers' behaviors and tailor their offerings to their needs (Bawden et al., 2020; Senthil et al., 2021).

Success in the global economy is often perceived in terms of competitiveness, risk, and innovation. Business success is based on the speed of decision-making and solid information support in this process (Krynke & Klimecka-Tatar, 2022). Dynamic changes in the market area and intense competition are also associated with the evolution of customer expectations. Therefore, the area of product quality improvement must aim to achieve customer satisfaction (Siwiec et al., 2022). The need for continuous improvement of the organization is a consequence of continuous and dynamic changes occurring in the organization's environment and within it. Introducing continuous improvement into management practice means starting the process of building an intelligent and self-improving organization continuously (Knop, 2022).

In addition to the importance of website design and functionality, e-commerce shops need to adapt to changing market conditions and customer preferences to remain competitive. One way to achieve this is by expanding access channels to include electronic ones, such as e-commerce platforms. This is particularly important in the context of Industry 4.0, where digitization of purchasing processes is becoming increasingly necessary.

To evaluate the performance of e-commerce websites and identify areas for improvement, various tools and methods can be used. One such method is the Servperf method, which measures service quality from the customer's perspective. The results of surveys conducted using this method can provide insights into how well a company meets its customers' needs and expectations and which service attributes require improvement.

Regular assessments of website performance and customer satisfaction are crucial for e-commerce stores to stay competitive and adapt to changing market conditions. By utilizing research findings, companies can make strategic decisions to improve service quality and ensure customer satisfaction,

ultimately leading to increased customer loyalty and higher revenue.

As part of the evaluation of e-commerce and e-services quality, specific attributes are taken into account. According to many authors (Cristobal et al., 2007; Kim et al., 2006; Lee & Lin, 2005; Yoo & Donthu, 2012; Ghosh, 2018), attributes directly related to the e-commerce website are particularly important, as the entire transaction process takes place there. The most frequently mentioned attributes include: website design, ease of use, reliability, security, personalization, and customer service quality.

The purpose of the study was to assess the performance of a selected e-commerce website in relation to changes made to its website functionality and the introduction of new features available to potential customers. The research was conducted through a survey administered before and after the implementation of changes to the website of the e-commerce store under study. The survey allowed the identification of the areas where customers were least satisfied, which were taken into account by the company developing the new website. It also enabled the evaluation of whether the new website meets customers' requirements and preferences. Additionally, the results of the survey conducted in the second period allowed for the identification of areas where further improvements are still required for the website. Findings from this research could be utilized by other organizations to enhance their online platforms.

2. Literature review

Assessment of e-commerce operations is extremely important because it allows for the identification of areas that contribute to customer satisfaction as well as areas that lead to customer dissatisfaction. Therefore, conducting research in this area, especially regarding the functioning of the websites on which customers make purchases, is

essential as the entire service delivery process takes place on these platforms.

"During the evaluation of the quality of e-services and e-commerce, specific attributes are taken into account. Many authors (Cristobal et al., 2007; Kim et al., 2006; Lee & Lin, 2005; Yoo & Donthu, 2012; Ghosh, 2018) point primarily to attributes directly related to the e-commerce website platform, as it is on this platform that the entire transaction takes place. The most frequently mentioned attributes include: website appearance, ease of use, reliability, security, and personalization. One of the characteristic features of e-services and e-service quality is the departure from traditional quality dimensions. The first difference is the lack of direct contact with the service provider. A very important aspect of e-services is the internet platform on which services are offered and orders are placed. In the rest of the text, when referring to a website or web application, the term "internet platform" will be used.

During the process of providing traditional services, the customer has contact with the service provider, who advises on the choice of service, its features, and handles most of the formalities. In the case of e-services, such contact does not exist, and the customer performs individual actions on their own. They contact the service provider through various available channels, and in case of doubts or problems, there is no typical direct interaction between the customer and the company. Therefore, areas such as empathy or professionalism cannot be evaluated. The second important difference is that the customer chooses and orders e-services from any place where they have access to the Internet, without the need to visit the service provider's headquarters. Therefore, attributes such as tangibility, which are important in the case of traditional services, cannot be taken into account.

Due to the increasing popularity of e-services, a hierarchical model has also been developed for their case. This model was

developed by Blut and his colleagues (Blut et al., 2015) and subsequently verified by Blut himself (Blut, 2016). This model is presented in Figure 1.

E-service quality			
Website design: Information quality; Website organization; Purchase process; Website convenience; Product selection; Merchandise availability; Price offerings; Website personalization; System availability	Fullfilment: Timeliness of delivery; Order accuracy; Delivery conditions	Customer service: Service level; Return policies	Security: Security; Privacy

Figure 1. Hierarchical model of e-service quality (Blut et al., 2015, Blut, 2016)

Based on conducted research, attributes that, according to the authors, should be taken into account during the evaluation of the quality of e-services were identified and verified. Four groups of attributes were distinguished: website design (9 attributes), content (3), customer service (2), security/privacy (2). It is worth noting that the developed model includes attributes not included in existing scales. One very important detail should be noted. A lot of emphasis in this model, and therefore in the quality of services, is given to the website itself. This is an element that often influences whether a customer decides to purchase a service in a particular store. It takes into account not only the appearance of the website, but also the information that can be found on it and how to use it.

This model should be treated separately because it does not apply to traditional services that are ordered, performed, and delivered in a traditional way. It can be said that it is a kind of complement to the other service quality models, but due to its application, it must be treated separately.

One of the authors, during her research on various service quality models and the evaluation of e-service quality, also created her own model (Fig. 2) and presented it in her work (Ingaldi, 2022b). The model was partially verified in the work (Ingaldi, 2022a).

E-service quality		
Physical aspect: Convenience; website; Accessible offerings; Possibilities for personalization; Information compliancy	Quality of service: website performance; website capabilities; possible payments; possible contact with the service provider	Quality score: waiting time; tangibles; safety; delivery reliability; compliance with order

Figure 2. Author's hierarchical model of e-service quality (Ingaldi, 2022b)

The quality of e-services consists of three elements: the physical aspect, service quality, and outcome quality. In terms of the physical aspect, it is important to consider the convenience of purchasing the e-service, as well as the appearance of the website through which the client will place the e-service order. When placing an order, the client takes into account the available offer, the possibility of personalizing the e-service, as well as the completeness of information about the offered products.

Since the customer makes the choice and order independently, they take into account the website's functionality (e.g. availability, navigation) and capabilities (e.g. search engine, cart, registration). For online orders, customers would like to have a variety of payment options available. Some people prefer, for example, to pay cash on delivery in the case of home delivery. The last element, which is probably the most important, is potential contact with the service provider. This means that the customer knows who they are ordering the service from, can easily find the service provider's contact details and, if necessary, contact them.

The final component of the model is outcome quality. This group includes waiting time, both for electronically and traditionally delivered e-services. In the case of the latter, the materiality, i.e. what the customer receives, will also affect the outcome quality. One cannot forget about safety either. In the case of e-services, the importance of this factor clearly increases. This is related not only to hackers or malicious software but also to the website itself, which may turn out to be fake. Customers also want to be sure about the delivery of the service and whether it will be delivered successfully (e.g. in the case of e-software purchase). The last factor that affects the outcome quality is, as in the case of traditional products, the conformity of the realized e-service with the order.

This model is very general and can apply to various types of services offered online, including e-commerce services. It can be expanded, and the use of its elements to assess service quality can serve as the basis for selecting attributes for such an assessment.

Electronic service quality is very diverse because it involves interactions between a person and technology, and its dimensions do not correspond perfectly to the dimensions of "offline" service quality (Cotîrlea, 2011). Many scientists have tried to indicate the most important dimensions related to e-service evaluation, in most cases, they indicated the dimensions that directly relate to the functioning of the website through which customers make purchases (Table 1).

Previous research by one of the authors on the attributes of e-services, presented in a work (Ingaldi, 2022b), based on available literature (analysis of WoS, Scopus and researchgate), allowed for the compilation of 84 attributes into 13 groups. Currently, research is underway to verify this list and create a list of approximately 30 universal attributes that could be used in studies related to the evaluation of e-services. This article used this list and selected those that directly relate to the website and its actions (Table 2), which were used to evaluate the website of the surveyed e-shop twice.

Table 1. Selected dimensions of e-service quality (Ingaldi, 2022b)

Author	Proposed dimensions of e-service quality
Dabholkar et al.(1996)	website design, reliability, presentation, ease of use, user enjoyment, and control
Ziethaml et al. (2002)	performance, reliability, efficiency, personalization, quick response to inquiries, communication, security, interactive honesty
Madu i Madu (2002)	Performance, appearance, structure, aesthetics, reliability, fulfillment, security, credibility, responsiveness, personalization, accessibility, reputation, pleasure

Table 1. Selected dimensions of e-service quality (Ingaldi, 2022b) (continued)

Author	Proposed dimensions of e-service quality
Loiacono et al. (2002)	information, interactivity, reliability, personalization, responsiveness to inquiries, appearance, interactive honesty, communication, procedural honesty
Yang i Jun (2002)	website design, security, reliability, personalization, prompt response to inquiries, accessibility
Santos (2003)	ease of use, design, links, structure, components, performance, reliability, communication, security, incentives, customer banking
Lee i Lin (2005)	aesthetic design, reliability, quick response to inquiries, credibility, personalization
Kim et al. (2006)	performance, fulfillment, accessibility, privacy, personalization, speed of response to questions, exchange, communication, accuracy of information, honesty of results
Cristobal et al. (2007)	appearance, implementation, reliability, accuracy of orders
Zavareh et al. (2012)	accessibility, interactivity, proper functioning, user-friendliness, security, attractive appearance

Table 2. List of evaluated attributes (Ingaldi, 2022b)

No	Group of attributes	Attributes
1.	Appearance and operation of the website	The website is visually attractive.
2.		The website looks professional.
3.		The website is convenient and easy to use.
4.		The website is organized in an intuitive way.
5.		The website does not experience any malfunctions.
6.		The website is designed in a way that can be used by people with different disabilities.
7.	Website content	The information on the website is current and comprehensive.
8.		The website contains a description of the ordering process.
9.		The regulations of the e-shop are accessible and understandable.
10.		The website contains the full range of e-service provider's offers.
11.		The website contains appropriately selected product categories.
12.	Products	The website contains a wide variety of products.
13.		The website contains an exact description of the products.
14.		The website contains photos of the products.
15.		The website includes price information.
16.		The website contains information about the delivery date.
17.	Search engine	The website features a product search engine.
18.		Product search is simple.
19.		The search includes option for filtering results.
20.		The website has personalized selection features.
21.		The website includes order history options.
22.	Making orders	Registration on the website is not mandatory to place an order.
23.		The process of placing an order is simple and fast.
24.	Contact with e-shop	The website contains accurate contact information for the e-service provider.
25.		The e-service provider offers after-sales support.
26.	Payment methods	The website contains accurate bank details.
27.		The customer has the option to choose the payment method.
28.		The customer has the option to choose the "cash on delivery" payment option.
29.		The customer has the option to choose various forms of electronic payment.
30.		The transaction on the website is fast and efficient.
31.	Security	The website requires a reasonable amount of personal data.
32.		The website has a security system that protects all customer information.
33.		Financial transactions on the website are secure.
34.		Information about customer's credit/debit cards is secure.
35.		The website protects all information about customer behavior during online shopping.

3. Methodology

The research was commissioned by an e-shop. It was conducted twice, which was related to the introduction of changes to the functioning website of the e-shop. These changes were made by an external company, also commissioned by the surveyed e-shop, and included a wide range of new solutions related to improving the appearance of the website itself, its functionality, content, as well as the purchasing process. It was decided to introduce a more subdued colour scheme, high contrast, and solutions that would facilitate the use of the website by people with special needs. Although the investigated e-commerce store is a private enterprise, the management decided that the new website would be designed according to the WCAG 2.1 standards, which would allow the e-commerce store to open up to a group of people with special needs and be more competitive on the market. Attention was also paid to user safety, and greater options were introduced regarding payment and delivery methods.

Customers of the e-shop, who used the website before and after the changes, were asked to evaluate its performance. The assessment was carried out using a questionnaire, the attributes of which were presented earlier in Table 1.

Customers were asked to assess individual attributes on a scale of 1-7, where 1 meant "completely disagree" and 7 meant "completely agree." Additionally, they had 100 points to allocate among the different groups of attributes to indicate their importance. The survey also included basic characteristics of customers, which allowed the profile of customers of the surveyed e-shop to be determined. The characteristics included gender, age, social/professional status, education, and residence. The survey was created using a Google survey form, which facilitated collecting responses from customers.

The Servperf method was used to analyze the obtained results. Due to the length of the survey, which contained 35 attributes divided into 8 groups, more commonly used methods such as Servqual or IPA, where customer expectations are taken into account in addition to the actual service evaluation, were not used.

The Servperf method was developed by Cronin and Taylor, and its name comes from the words Service Performance (Cronin, Taylor, 1994; Anand & Selvaraj, 2013). It is considered an attempt to overcome some of the weaknesses of the Servqual method (Dziedzic, 2015; Lupo, 2015). The authors of this method questioned the measurement of customer expectations, as they believe that expectations are an ambiguous and variable category. Although the authors of the method took into account the importance of individual attribute groups during the research to indicate what is most important to customers when it comes to the functioning of e-commerce websites.

The Cronin and Taylor concept is based on the assumption that perceiving the actual service is sufficient to provide a measure of service quality evaluation (Guglielmetti, 2010). Therefore, this concept emphasizes measuring and evaluating the current state - only measuring and evaluating the level of quality of the performed service in relation to individual categories, and then relating it to the ideal image (Cronin & Taylor, 1992; Cronin & Taylor, 1994; Cronin et al., 2002; Jain & Gupta, 2004). This method is most commonly used when there is a high probability of relatively maximum customer expectations for each of the analyzed criteria (Czajkowska &Ingaldi, 2021).

The first study was conducted between May-October 2020 and involved 267 customers. Afterwards, an external firm started working on changes to the e-commerce website (between March-October 2021). The second study was conducted between September-December 2022, this time involving 327 customers. It was assumed that only

responses from adults would be taken into account for the analysis, as only such persons have legal capacity. The authors decided that the second study would not take place immediately after the website changes, but after a few months. Most people are resistant to change, including customers, so they needed time to become familiar with the new website of the e-commerce store being studied, as well as its features.

After checking the responses, only 244 surveys from the first research period and 307 from the second research period were taken into account.The analysis of the results began with conducting a Cronbach Alpha test and calculating basic statistics for all attributes together (separately for each stage of the study). The obtained results were interpreted according to the assumptions presented by (Hair et al., 2003), where data suitable for analysis were those for which the test result was at least 0.7.

Then, an analysis of respondents participating in both stages of the study was performed. The average ratings were calculated for individual attributes and groups of attributes, as well as for all responses combined. The average importance for customers was also calculated, which allowed for the calculation of the weighted average of all attributes together. The results were presented in the form of bar charts and radar charts.

4. Results and discussion

Due to difficulties in collecting results related to low willingness of customers to participate in the research, it was not possible to verify the same respondents in both research periods.

In Table 3, the results of the Cronbach Alpha test and basic statistics are presented. According to the assumptions, data with a Cronbach Alpha test result of at least 0.7 should be considered reliable. In both cases, the result was above 0.7, which means that

all the dimensions obtained can be further analyzed.

The initial results of the study already allowed to indicate that the respondents assessed the e-commerce website much better after the changes were introduced (a difference of over 1.7 points). This means that the changes were well-received by the customers and had the expected effect. However, the standard deviation decreased, which means that in the second research period, the respondents were more consistent in their answers.

Table 3. Cronbach Alpha and statistical analysis (own study)

	Cronbach Alpha	Mean	Standard deviation
Assessments before the website change	0.726	4.129	1.3901
Assessments after the website change	0.803	5.849	0.9188

In Table 4, data on the respondents are presented. Proportional shares were calculated for each characteristic before and after the website change.

There were some minor differences in the structure of respondents in both research periods. However, it should be emphasized that they were similar to each other. Among the respondents, women predominated, most of them were young, under 40 years of age, with secondary or higher education, working or studying, and living in larger cities. Such a structure of respondents is dictated by the nature of the research object. It is an e-commerce platform where purchases are made online. Statistics emphasize that it is usually young, educated people from larger cities who make online purchases (Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce, 2020).

Table 4. Characteristics of the respondents (own study)

Feature	Answer	Percentage	
		Before the website change	After the website change
Gender	female	56.1	64.6
	male	43.9	35.4
Age	up to 20 years	24.2	25.4
	21-30 years	29.3	26.2
	31-40 years	28.7	29.3
	41-50 years	14.3	13.3
	51-60 years	5,4	3.2
	61-70 years	3.4	2.6
	Over 70 years old	0.1	0.0
Social / professional status	pupil/ university student	37.2	33.2
	I work	38.1	41.6
	unemployed	9.3	8.1
	entrepreneur	12.8	14.7
	pensioner	2.6	2.4
Education	primary education	0.3	0.2
	lower secondary education	2.6	2.1
	vocational education	15.8	17.4
	secondary education	47.4	43.2
	higher education	33.9	37.1
Residence	village	8.1	9.4
	city up to 50k residents	13.2	12.6
	city 51 to 100k residents	10.3	8.6
	city 101 to 200k residents	20.8	18.4
	city 201 to 400k residents	23.4	27.2
	city with over 300k residents	24.2	23.8

At the beginning, the average assessment for each group of attributes were also calculated for both research periods and presented in Figure 3. Before the changes were made to the e-shop website, respondents assessed products the highest, followed by the appearance and operation of the website. They were least satisfied with their contacts with the e-shop. After the changes were implemented, the average ratings improved significantly. Respondents assessed security and products the highest, followed by contact with the e-shop. Thanks to the fact that the research was conducted twice, both before and after the changes, the company could take the customer's voice into account when designing the new website. It can be seen, for example, that the average rating for contact with the e-shop was lowest before the changes, but after the changes, this attribute was highly assessed.
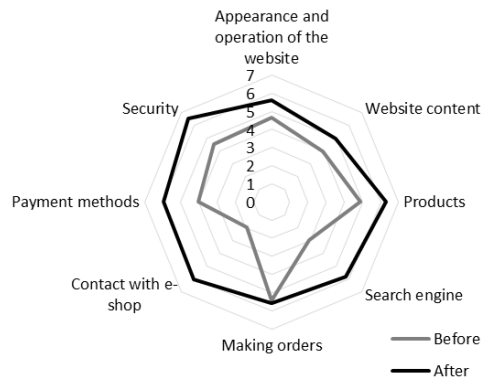

Figure 3. Average assessment for individual attribute groups of attributes: a) before the website change, b) after the website change (own study)

Then, the mean values of the ratings for individual attributes for both research

periods were calculated. These results were presented collectively in Figure 4.

Before the changes were introduced, only four attributes received average assessments above 6, i.e., 15. The website includes price information; 14. The website contains photos of the products; 22. Registration on the website is not mandatory to place an order; 32. The website has a security system that protects all customer information. This meant that respondents were very satisfied

with the performance of the website in these four areas. Moreover, for most of them, the changes resulted in an even greater level of satisfaction, except for attribute 22. Registration on the website is not mandatory to place an order. It should be emphasized, however, that this decrease was small and could have been due to changes in the structure of the respondents. Especially since virtually nothing changed on the website in this area.
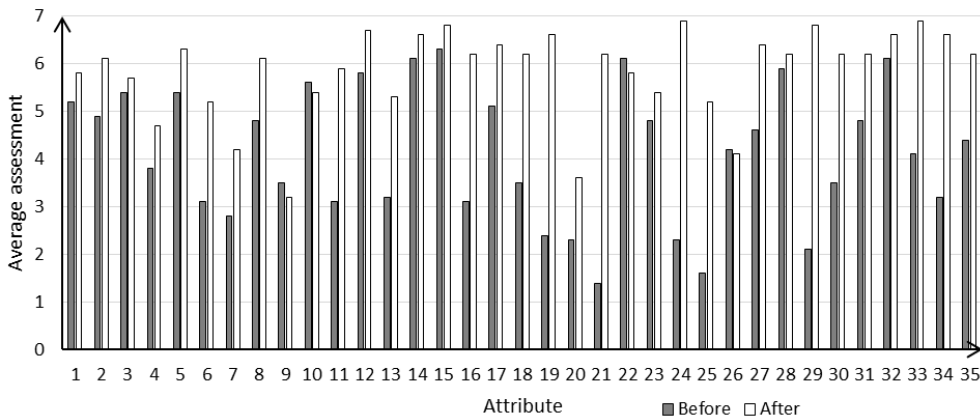

Figure 4. Aggregate results of survey research using the Servperf method (own study)

Two attributes were assessed below 2 before the website changes, namely 21. The website includes order history options; 25. The e-service provider offers after-sales support. This information was obtained by the company responsible for the changes on the e-shop website. Importantly, in the second research period, the rating for both attributes increased to over 5. Therefore, customer satisfaction in these areas increased, and the changes implemented can be observed, although the average rating level shows that there is still room for improvement in this area.

Analyzing the average results for the second research period, a certain correlation was noticed: 21 out of 35 attributes obtained average scores above 6, which means high or very high satisfaction with the functioning of the new website of the researched e-shop. This indicates that the changes introduced

contributed to increasing its attractiveness in the eyes of customers. Two attributes received scores below 4, i.e. 7. The regulations of the e-shop are accessible and understandable; 20. The website has personalized selection features. Respondents often complained in their emails about difficulty finding the regulations of the e-shop on the website during both research periods, as it was not intuitive for them. The lack of personalization of selected features makes it difficult for customers to find and choose products offered by the researched e-shop. These are potential areas for improvement and further changes.

Next, the average weights of each group of attributes for both research periods were calculated, as shown in Figure 5. One can notice a certain correlation. In both research periods, respondents indicated that the most important thing for them is the security of

using the website. It can be assumed that this is related to frequent customer data leaks or financial frauds on the Internet. Next, respondents pointed out payment methods, placing orders, and products as important factors. The appearance and functioning of the online platform are the least important for customers. In both periods, despite small differences, the structure of importance is similar.
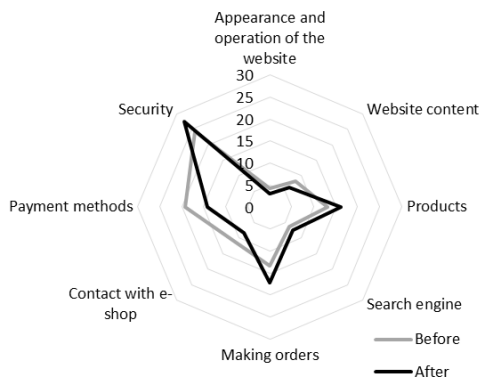

Figure 5. Weights of individual attribute groups of attributes: a) before the website change, b) after the website change (own study)

The mean assessments for all attributes were also calculated. These calculations were done in two ways: as the arithmetic mean XA and as the weighted mean XW. The means for data collected before the website change were calculated (before the website change):

$$XAB=4.129$$
$$XWB=4.179$$

The difference between the two averages was small. However, it should be noted that customers did not assessed the e-shop's website very highly before the changes were made.
And the averages for data collected after the website change are as follows:

$$XAA=5.849$$
$$XWA=6.025$$

In this case, a greater difference was observed between the arithmetic mean and the weighted average. This is due to the fact that customers gave high ratings to attributes that were very important to them.

Overall, it can be said that the average rating is quite high, although it is not the maximum rating. However, it can be concluded that the investment in improving the website by the surveyed e-shop has yielded expected results. Respondents rated the website better after the changes were implemented than before the changes were made.

5. Conclusions

To meet the demands of today's customers and remain competitive in the marketplace, it is crucial for store owners to embrace electronic access channels and digitize various processes, including the purchasing process.

E-commerce offers a vast array of benefits, from increased competitiveness to enhanced shopping convenience, which can significantly improve customer satisfaction. Nonetheless, a well-designed and functioning website remains a critical factor in determining the success of an e-shop.

The article describes a study conducted to assess the operation of a selected e-shop's website before and after making changes to it. The study involved gathering feedback from respondents who evaluated 35 attributes related to the website's performance, and the Servperf method was used to analyze the results.

The Servperf method is a tool used to measure service quality. The overall results of surveys conducted using this method show service quality from the customer's perspective. The survey results allow for an assessment of how well a company meets the needs and expectations of its customers in terms of the services provided. Individual service attributes as well as overall service quality are analyzed. Based on the results, it is possible to determine which attributes are

most important to customers and which require improvement. The results of surveys conducted using the Servperf method are often used by companies to make strategic decisions on improving service quality. This tool allows companies to better understand the expectations of their customers and adjust their services to meet their needs.

The study's findings enabled researchers to identify the changes that were particularly well-received by customers and gain insights into the additional changes they expect to see in the future.

However, there are limitations associated with the study, such as the potential subjectivity of the survey and the small research groups used for analysis. Nonetheless, the authors believe that the amount of data collected was sufficient to conduct a reliable analysis.

To maintain the website's performance and attractiveness to customers, it is essential to conduct periodic research aimed at assessing its effectiveness and identifying areas requiring improvement. This will enable businesses to remain competitive and meet the ever-evolving needs of their customers.

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