JPMNT

THE IMPACT OF WEBSITE DESIGN ON CUSTOMER SATISFACTION AND PURCHASE INTENTION

Tamara TOMIĆ[1], Igor LAVRNIĆ[2], Dejan VIDUKA[3*]

[1]*University Business Academy, Faculty of Applied Management and Finance, Belgrade, Serbia,*
tamaratomic1000@gmail.com
[2]*Academy of Applied Studies of Kosovo and Metohia, Leposavic, Serbia, igor.lavrnic@akademijakm.edu.rs*
[3]*Alfa BK University, Faculty of Mathematics and Computer Sciences, Belgrade, Serbia,*
dejan@viduka.info

Abstract: *As e-commerce continues to grow, businesses are realizing the significance of having a strong online presence through well-designed websites. This study aims to establish a comprehensive understanding of the key factors that contribute to website quality and their importance from the consumer's perspective. The main objectives of this research are to identify and prioritize these factors. To achieve this, a questionnaire was distributed among a younger demographic, and participants were asked to rate the importance of 11 parameters related to website quality. The data collected from the survey were analyzed using various statistical tests, including descriptive statistics, Chi-square independence test, and factor analysis. These tests were employed to rank the parameters, examine the influence of gender on respondents' answers, identify areas of disagreement among participants, and determine if certain parameters could be grouped together. The quality of a web page is greatly influenced by various features, including its layout, visual complexity, colorfulness, user-friendliness, speed of processing visitor requests, and reliability. To analyze these features, a feature vector was created. Conducted as exploratory descriptive research, this study utilized a survey to gather data from 117 participants across different social networks. The research encompasses both qualitative and quantitative stages. The qualitative phase aims to identify variables that impact consumer engagement in social commerce, while the quantitative phase involves data collection, validation, and analysis.*

Keywords: *Website, quality of e-service, user experience, e-commerce.*

1. Introduction

The impact of e-commerce is a boundless global market, offering the opportunity to reach a vast user base regardless of geographical location. It enables businesses to engage in round-the-clock marketing, while also benefiting from cost-effectiveness and the ability to easily measure outcomes. By leveraging their website, companies can enhance communication with consumers

---

[*] Corresponding author

and effectively promote their products to drive business growth (Palmer & Koenig- Lewis, 2007).

Online shopping, as previously stated, offers a multitude of benefits as well as potential hazards. In traditional brick-and-mortar settings, trust is typically placed in individuals or organizations, whereas in the digital realm, trust is centered around technology, specifically the Internet (Kaplan & Haeninen, 2011).

The emergence of social networks has given rise to new business prospects in the realm of electronic commerce, commonly referred to as social commerce. This study endeavors to establish a comprehensive framework of factors that have a substantial impact on website quality, with a particular focus on understanding their significance from the consumer's perspective. By utilizing a questionnaire, the research focused on the younger demographic and aimed to assess and prioritize various parameters associated with website quality. The primary goals were to identify and rank these specific factors (Dobele et al., 2005).

Statistical tests, such as descriptive statistics, Chi-square independence test, and factor analysis, were utilized to process all the research data. The outcomes of these tests were employed to determine the ultimate ranking of the parameters and investigate the influence of gender on the responses. Additionally, the tests were used to identify areas of disagreement among the examinees and examine if certain parameters were classified under the same factor. (Anjum et al., 2012).

The research methodology employed in this study can be classified as exploratory descriptive research. A survey was conducted among 117 participants from different social networks to gather data. The research consisted of two stages: qualitative and quantitative. The qualitative stage aimed to identify potential variables that impact consumer participation in social commerce, while the quantitative stage involved data collection, validation, and analysis. Our research focuses on establishing a comprehensive list of factors that have a substantial impact on website quality, as perceived by consumers. The main goals of this study are to identify and prioritize these factors. To achieve this, we conducted a survey among a younger demographic, utilizing a questionnaire that assessed the importance of 11 website-related parameters. All the data collected during the research underwent rigorous statistical analysis, including descriptive statistics, the Chi-square independence test, and factor analysis. The practical identification of the research topic involves translating the theoretical identification into tangible elements, resulting in the breakdown of the research subject into specific factors.

The initial structural factor (website quality) is further subdivided into the following components: 1. Visually appealing website design 2. User-friendly interface 3. Efficient response time for site visitors' requests 4. Dependability of the website 5. Payment methods available 6. Quality and quantity of information provided on the site 7. Ensuring the safety and privacy of visitors 8. Promptness of technical support services 9. Regularity of site updates 10. Customization options on the site 11. Responsiveness of the site.

2. Website design that focuses on aesthetics

When it comes to website creation, the design is a crucial factor that encompasses more than just visually appealing graphics. Functionality is now an integral part of the design process. It is essential to create a design that offers users a distinct and enjoyable experience. One of the primary hurdles is to discover a user interface design that users not only appreciate but also effortlessly embrace (Arman & Salah, 2014; Cvjetković et al., 2020).

The arrangement of elements on a webpage, including navigation, font, color harmony, and overall aesthetic design, plays a crucial role in attracting users and creating a satisfying experience. Often, consumers are unaware of the psychological impact these design elements

have on their browsing experience. If a website lacks attractiveness, it can significantly impact users' satisfaction and hinder their ability to navigate and search effectively. Modern web pages typically employ one of four design approaches. The different types of web page layouts include fixed layout, where the width is predetermined in pixels, fluid design, where dimensions are set as a percentage of the total space, elastic design, where elements change size based on the font size in the browser, and hybrid design, which combines elements from the previous three (Jevremović et al., 2017).

HTML, CSS, and JavaScript are the primary programming tools employed in the creation of web pages. CSS, or Cascading Style Sheets, is responsible for the visual presentation of elements on the page, including their color, positioning, and appearance. By separating the style from the content, CSS enhances the flexibility and accessibility of the page's content.

Through the use of CSS, the visual presentation of an HTML document can be defined. This allows for the control of a website's appearance using a single external file. With just one line of code, it becomes possible to alter the style of multiple elements simultaneously. In essence, CSS instructs the browser on how to display the page (Dobrić et al., 2023).

The utilization of JavaScript allows for the incorporation of dynamic elements or animations into specific static components of a webpage. Colors, which possess significant psychological and physiological impacts, hold a crucial position in both individuals' lives and society as a whole. By incorporating color into a page, one can effectively highlight the significance of certain information. However, it is essential to recognize that relying solely on color to convey meaning is not advisable.

A crucial element in the process of selecting colors is ensuring a significant contrast between the background color and the color of the foreground objects (Frey, 2017).

There are various tools available for automatically testing the contrast between text and background, such as Access Color. These tools are designed to enhance readability by providing a clear distinction between the two elements. However, it is nearly impossible to find the perfect color combination that will satisfy every user's preference. Often, color choices are influenced by factors like the current situation, mood, or surroundings.

The meaning of grades: First "completely unimportant'", Second "partially unimportant'", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
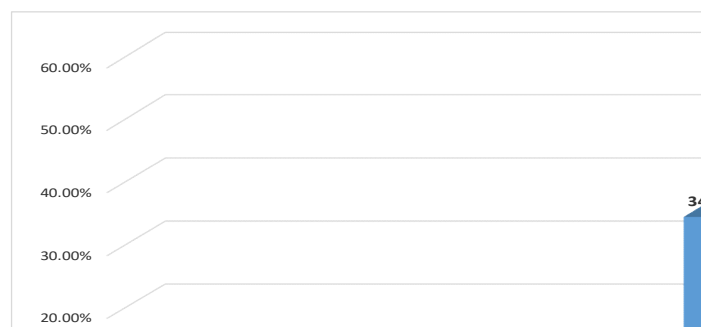

Figure 1. Aesthetic website design, how is it important?
Source: Tomić (2021)

3. User-friendliness

When it comes to ease of use, this product excels. The user experience is seamless and straightforward, making it effortless for anyone to navigate and utilize its features. Whether you are a tech-savvy individual or someone who is not as familiar with technology, you will find this product to be incredibly user-friendly. The intuitive interface and well-designed layout ensure that you can easily access all the functionalities without any confusion or frustration.

With this product, you can say goodbye to complicated processes and hello to simplicity and convenience.

The ease of use of a website is a critical factor examined in this study, encompassing its intuitiveness and comprehensibility. It is vital to ensure that the website's interface is flexible and user-friendly. Users should be able to effortlessly navigate the site and swiftly complete transactions.

If users encounter difficulties in searching the site or performing transactions, they are likely to become frustrated with the time wasted, increasing the chances of them avoiding future visits to the site. Smooth interaction with the system is crucial for a seamless transaction experience, enhancing the user's perception of efficiency and control (Frey, 2017).

Facilitating straightforward communication with clients through online forms available on the site is also essential. When designing these forms, it is important to prioritize transparency and minimize the effort required from users to complete them (Jevremović et al., 2017).

Simplicity also extends to accessibility, ensuring that users can easily access the site. Additionally, prices should be clearly displayed alongside the products being sold.

The meaning of grades: First "completely unimportant'", Second "partially unimportant'", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
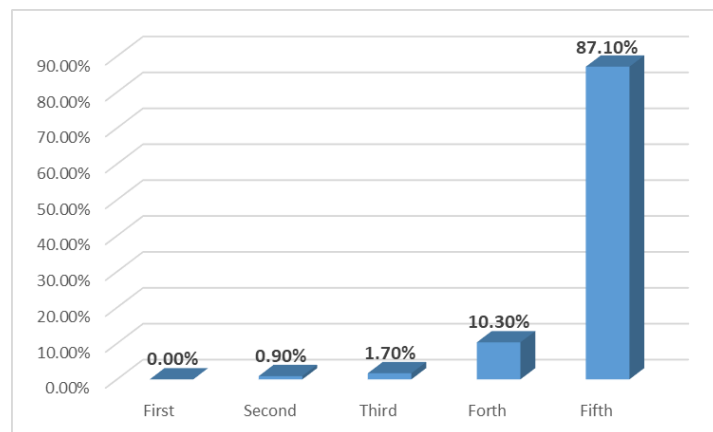

Figure 2. User-friendliness
Source: Tomić (2021)

4. Website customization

The process of tailoring the website to individual users is an essential aspect of enhancing user experience. By personalizing the website, we can create a unique and engaging online environment for each visitor. This customization allows us to cater to the specific needs and preferences of our users, ensuring that they have a seamless and enjoyable browsing experience.

One of the main benefits of website personalization is the ability to deliver relevant content to users. By analyzing user data and behavior, we can understand their interests and preferences.

With this information, we can then present them with personalized recommendations, articles, and product suggestions that are most likely to resonate with them. This not only increases user engagement but also improves conversion rates as users are more likely to find what they are looking for.

Furthermore, personalization on the website can also enhance user engagement by creating a sense of familiarity and belonging. By addressing users by their names and providing personalized greetings, we can make them feel valued and connected to our brand. This human

touch helps to build trust and loyalty, encouraging users to return to our website and engage with our content.

In conclusion, personalization on the website is a powerful tool for improving user experience and driving user engagement. By tailoring the website to individual users, we can deliver relevant content and create a sense of connection with our audience. This ultimately leads to increased user satisfaction and improved business outcomes.

The evaluation of personalization or interactivity, the third aspect under scrutiny, focuses on customizing the website to cater to the distinct requirements and preferences of individual visitors, thereby elevating the quality of their overall browsing experience.

Upon logging in, users are greeted with dynamically generated content that takes into account previously acquired data about them. This dataset comprises their preferences, interests, knowledge, goals, and desires. There exist a minimum of four approaches for gathering this kind of information (Sofronijević, 2021).

- Conducting interviews or administering questionnaires to directly gather user preferences, interests, and desires.
- Incorporating socio-demographic data, including age, education, and occupation, to better understand the user.
- Assessing the user's lifestyle by gathering details about their general interests and hobbies.
- Examining data obtained from the user's past interactions on the website.

User satisfaction is elevated when the site delivers content that meets their specific needs. The level of interactivity on the site allows for a dynamic exchange between the user and the platform, enabling users to actively engage with and modify the online environment in real-time (Polewsky, 2022).

This interactive experience creates a personalized impression for users, fostering a greater sense of satisfaction and involvement with the content presented.

The meaning of grades: First "completely unimportant"', Second "partially unimportant", Third"neutral attitud", Forth"somewhat importan", Fift "very importan".
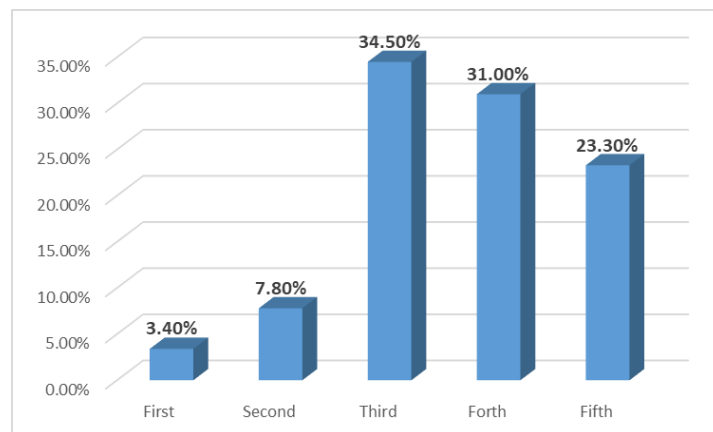

Figure 3. Website customization
Source: Tomić (2021)

5. Website's ability to respond

The responsiveness of a website is a crucial aspect to consider. It is essential for a website to be able to respond effectively to user actions and requests. The ability of a website to quickly load and display content, as well as navigate smoothly, greatly impacts the user experience. A responsive website ensures that users can easily access and interact with the information and features they need. It is important for a website to be optimized for various devices and screen

sizes, allowing users to have a seamless browsing experience whether they are using a desktop computer, laptop, tablet, or smartphone. A responsive website not only enhances user satisfaction but also contributes to improved search engine rankings and increased conversion rates. Therefore, it is imperative for website developers and designers to prioritize and invest in creating a highly responsive website.

The website's responsiveness is the fourth factor taken into account, encompassing its capability to effortlessly adapt to various screen sizes. This ensures that users can browse the internet and make purchases on any device, be it a desktop computer, tablet, or mobile device. Achieving this involves either creating separate versions of the site for each device or designing the site elements to dynamically adjust to the screen width. The goal is to ensure that page elements expand or contract based on the available display space, rather than being fixed in size.

The enhanced browsing experience is the main benefit of responsive design. Nevertheless, there are drawbacks such as longer load times and limited compatibility with older device versions. When it comes to developing responsive web projects, Bootstrap stands out as the preferred framework. It makes use of HTML, CSS, and JavaScript to provide a comprehensive set of resources for adapting layout and design to different devices. This framework greatly simplifies the process of creating responsive websites.

The meaning of grades: First "completely unimportant", Second "partially unimportant", Third "neutral attitude", Forth "somewhat importan", Fifth "very important".
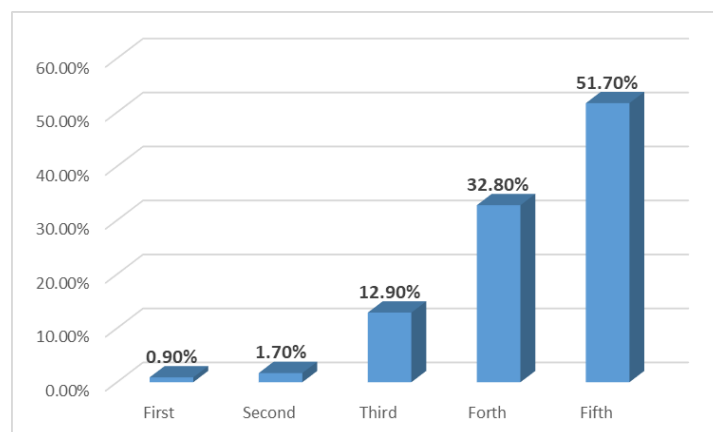
Figure 4. Website's ability to respond
Source: Tomić (2021)

6. Speed of request processing

The speed at which a website processes visitor requests is a crucial factor in determining its reliability and professionalism, making it the fifth criterion under consideration. This criterion highlights the importance of providing visitors with timely feedback for their interactions to minimize any potential delays.

Just like the significance of simplicity in website design, if visitors perceive the site as slow and time-consuming, they are likely to feel frustrated and develop a negative perception of the site. As a result, this can negatively impact sales as visitors become less motivated to complete transactions on the site (Kocić et al., 2022).

To tackle this issue, businesses should employ various tools and strategies to optimize their site's loading speed, ensuring a fast and efficient user experience.

The meaning of grades: First "completely unimportant", Second "partially unimportant", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
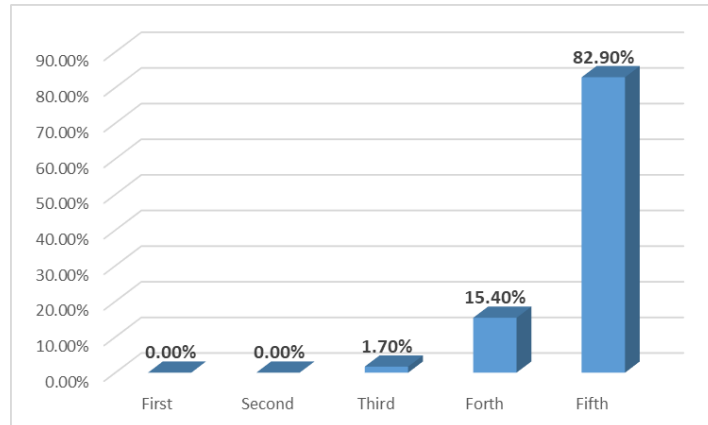

Figure 5. Speed of request processing
Source: Tomić (2021)

7. The reliability of websites is a crucial factor to consider

The dependability of a website is another important factor to consider. Website reliability pertains to its ability to consistently facilitate purchases and provide accurate and dependable services. One of the main challenges in online shopping is the possibility of receiving a package that contains an item of no value instead of the expected and paid-for goods.

In the literature, the quality of electronic service is often defined as the extent to which e-commerce enables efficient and effective communication with customers, encompassing functions such as searching, purchasing, ordering, and fulfilling consumer orders (Kovač & Petković, 2023). Ensuring a high level of reliability is crucial for establishing long-term and profitable relationships with customers.

The meaning of grades: First "completely unimportant", Second "partially unimportant", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
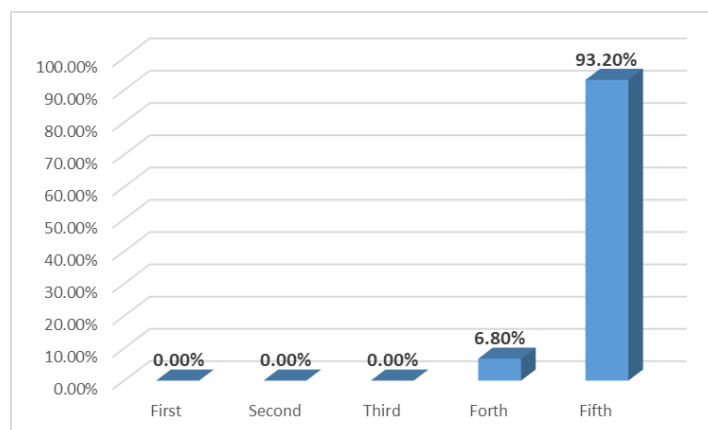

Figure 6. The reliability of websites
Source: Tomić (2021)

8. The preferred method for making payments

The safety and security of payment processes are vital factors to consider when evaluating different criteria. With the advancement of online shopping, electronic payment systems have

also evolved, offering a wide range of payment methods for internet transactions. These methods include electronic payment cards, electronic checks, electronic cash, electronic wallets, P2P payments, voucher payments, micropayments, mobile payments, gold-based systems, and cryptocurrencies (Krunić & Solomon, 2017). Despite the availability of these options, concerns about the misuse of payment cards persist among consumers. To address this, many companies now provide alternative payment methods, such as cash on delivery (Majstorović et al., 2022).

The significance of secure information transfer is highlighted by the occurrence of Internet fraud, where individuals are manipulated online to suffer financial losses. It is crucial to prioritize the protection of users' credit card information to ensure their peace of mind and trust during transactions. The misuse of this data can result in substantial harm for the rightful owners, making it imperative for companies to take proactive measures in preventing such incidents. The meaning of grades: First "completely unimportant", Second "partially unimportant", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
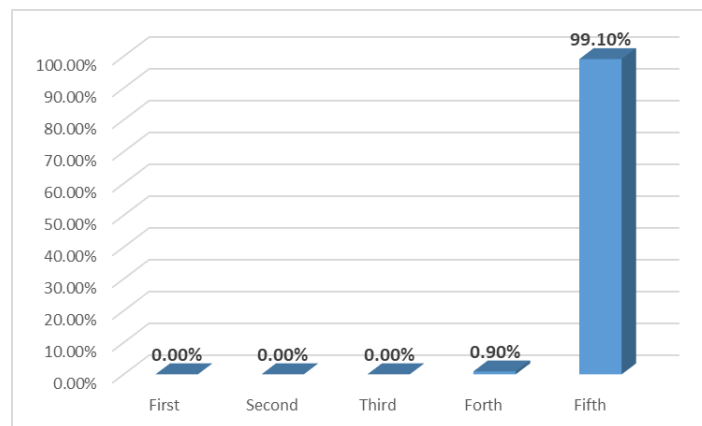

Figure 7. The preferred method for making payments
Source: Tomić (2021)

9. Quality and quantity of information

When it comes to information, both its quality and quantity are important factors to consider. Respondents also take into account the availability of information on the website, both in terms of quality and quantity. A crucial aspect of online promotion is the development of a comprehensive website that covers the entire range of products and provides valuable content to attract a large audience. It is essential for the information to be easily accessible, relevant, and precise, as internet users tend to be unforgiving when it comes to inaccuracies. Furthermore, the information should be logically structured and presented in a user-friendly manner. When it comes to selling products, it is of utmost importance to offer sufficient details regarding product warranties (Majstorović & Đuričin, 2022).

The information showcased on the website is accessible worldwide and can be swiftly and effortlessly updated, often presented in various multimedia formats. This requirement holds immense significance as users rely on the quality of the provided information to make decisions about conducting transactions on the site. Guaranteeing that the information is thorough and trustworthy can greatly impact users' confidence and their eagerness to participate in transactions.

The meaning of grades: First "completely unimportant", Second "partially unimportant", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
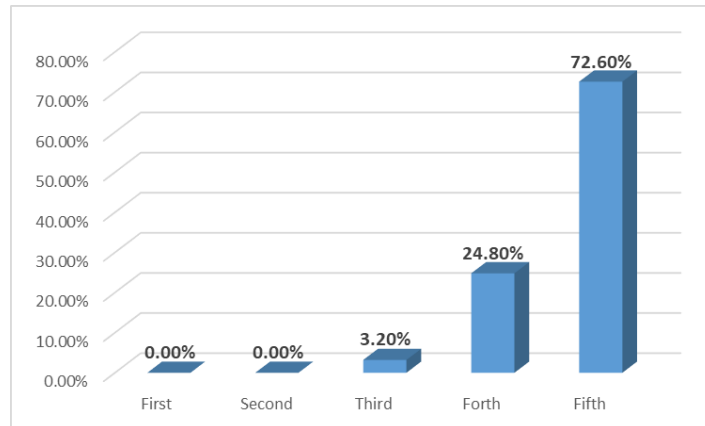
Figure 8. Quality and quantity of information
Source: Tomić (2021)

10. Security and privacy

The concepts of security and privacy are closely intertwined and of paramount importance in today's digital age. Another vital factor that came to light was the significance of ensuring security and privacy on the website. This encompasses the secure retention of personal data belonging to visitors in order to prevent any unauthorized access or misuse. It underscores the need for customers to have complete trust in the service provider's capability to protect their confidential information. The risk of fraudulent activities is increased due to the lack of face-to-face interaction between buyers and sellers, as it hampers the analysis of body language and verbal cues (Mladenović et al., 2014).

Moreover, the website employees play a crucial role in instilling confidence in consumers, thereby fulfilling this requirement. To establish trust and safeguard user information, it is imperative to implement strong security measures and maintain transparent privacy policies, which ultimately improves the user experience on the website (Tetec, 2018).

The meaning of grades: First "completely unimportant", Second "partially unimportant", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
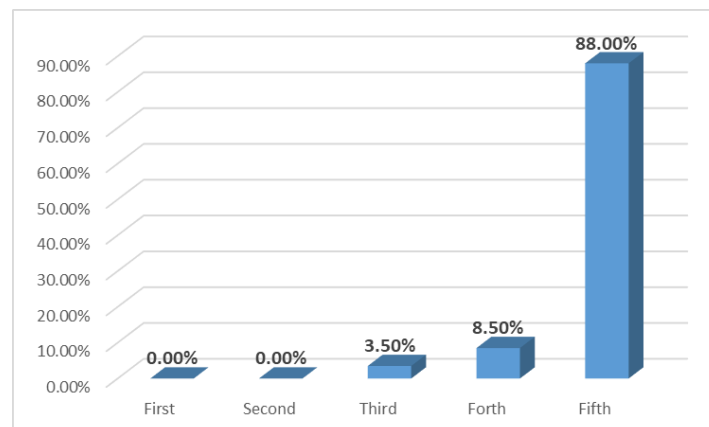

Figure 9. Security and privacy issues
Source: Tomić, 2021

11. Promptness of the technical service

The technical support team is known for their exceptional promptness in addressing customer issues. The next aspect to be evaluated is the timeliness of the technical service. This factor includes the speed and effectiveness with which the technical support team handles inquiries from visitors to the site. It involves assessing how quickly and efficiently the technical service responds to user queries. Additionally, it relates to the website's ability to provide individualized assistance to each customer and the level of understanding exhibited by the technical support team when addressing the user's unique concerns (Palmer, 2007).

Ensuring a positive user experience on the website requires prioritizing a responsive and empathetic approach to resolving user queries. This not only enhances user satisfaction but also fosters trust and loyalty among customers. Therefore, it is imperative to have a seamless and prompt technical support system in place (Sutcliffe, 2022).

The meaning of grades: First "completely unimportant", Second "partially unimportant", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
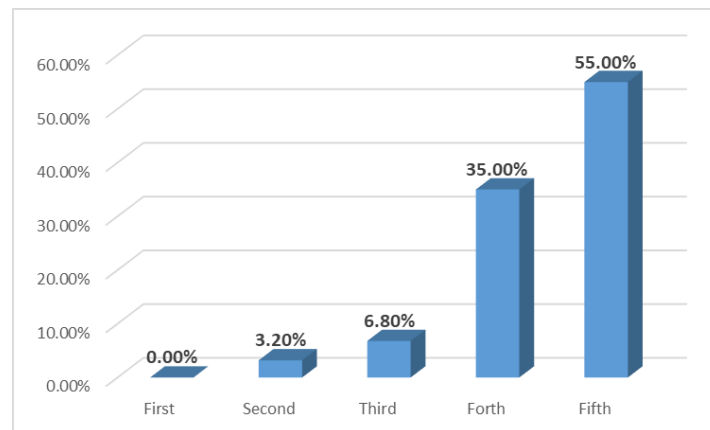

Figure 10. Promptness of the technical service
Source: Tomić (2021)

12. Frequency of site updates

The frequency at which a website is updated plays a crucial role in its overall performance and success. The frequency of site updates is the last factor being evaluated. It is imperative to regularly update the website in order to stay current and keep visitors interested. This aspect highlights the significance of refreshing content, eliminating outdated information, and consistently incorporating new material. Regularly updating the website ensures that consumers have access to the latest information regarding products, ongoing promotions, and any pertinent updates regarding specific items. This practice not only improves the user experience but also contributes to maintaining customer interest and loyalty in the long run (Njegomir, 2020).

To summarize, by giving priority to regular website updates, the site can maintain its dynamic nature, provide valuable information, and attract visitors, resulting in a positive user experience and increased customer satisfaction (Đurić & Gligorić, 2017).

The meaning of grades: First "completely unimportant", Second "partially unimportant", Third "neutral attitude", Forth "somewhat important", Fifth "very important".
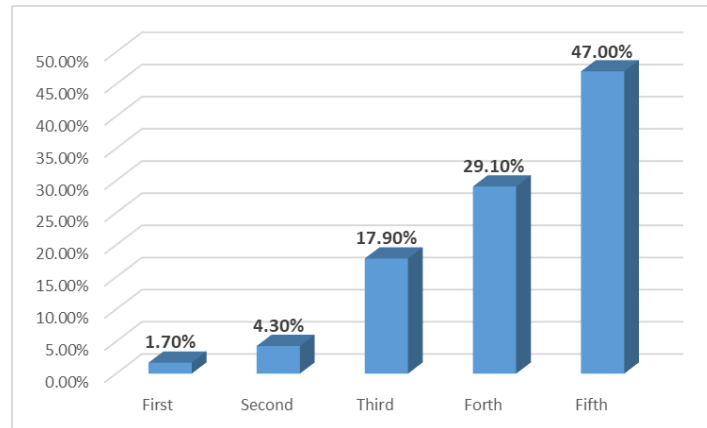
Figure 11. Frequency of site updates
Source: Tomić (2021)

3. Conclusion

With the emergence of the Internet, the commercial realm has undergone a complete transformation, compelling businesses to utilize their websites as the main hubs for marketing and transactions. The accessibility of online shopping, available 24/7, has become a significant benefit, allowing for a broader audience to access products and services. Although website development may appear to have become standardized, designers must constantly adjust to ever-changing user preferences.

To effectively engage and maintain a customer base, organizations must customize their products and services to accommodate the varied requirements and expectations of their target demographic. The level of customer contentment with a website plays a vital role in establishing enduring partnerships and fostering loyalty. Extensive research has been conducted to evaluate a specific set of standards designed to measure and prioritize the elements that contribute to the overall quality of a website.

Although the evaluation of website quality is an ongoing process that lacks universally accepted measurements, it is clear that taking these factors into account has measurable effects. These include a greater likelihood of customers making purchases, returning to the site, and experiencing higher levels of satisfaction. Ultimately, this fosters a sense of loyalty towards the website. These valuable insights can help marketers assess the quality of their website from the perspective of visitors and customers.

Various statistical analyses support the valuable insights provided by this research, highlighting the significance of payment methods for customers. Surprisingly, personalization was found to be a less crucial factor in this highly competitive landscape.

References

Anjum, A., More, V., & Ghouri, A. M. (2012). Social media marketing: a paradigm shift in business. *International Journal of Economics Business and Management Studies*, *1*(3), 96-103.

Arman, S. M. (2014). Integrated model of social media and customer relationship management: A literature review. *International Journal of Information, Business and Management*, *6*(3), 118.

Cvjetković, M., Jovanović, Z., Stepanov, S., & Cvjetković, M. (2020). Digitalne marketing komunikacije u funkciji kreiranja konkurentske prednosti na tržištu. *Marketing*, *51*(1), 43-50.

Dobele, A., Toleman, D., & Beverland, M. (2005). Controlled infection! Spreading the brand message through viral marketing. *Business horizons*, *48*(2), 143-149. 10.1016/J.BUSHOR.2004.10.011

Dobrić, M., Đurđević, S., & Golubović, G. (2023). Upotreba veštačke inteligencije prilikom izrade dizajna grafičkog interfejsa. *Zbornik radova Fakulteta tehničkih nauka u Novom Sadu*, *38*(09), 1292-1295.

Đurić, L., & Gligorić, M. (2017). Poverenje potrošača u elektronskoj trgovini: Oznaka poverenja (E-trustmark) u Republici Srbiji. In *Sinteza 2017-International Scientific Conference on Information Technology and Data Related Research* (pp. 422-426). Singidunum University.

Frey, F. (2017) *The International Encyclopedia of Communication Research Methods*. SPSS software.

Jevremović, M., Vasić, Ž., Štrbac Savić, S., & Staletić, N. (2017). Istraživanje uticaja digitalnog marketinga putem društvenih medija. *Informacione tehnologije, obrazovanje i preduzetništvo–ITOP17*, 185-192.

Jović, M., Filipović, V., & Štavljanin, V. (2013). Istraživanje faktora poverenja onlajn kupaca. *ИнфоМ-Часопис за информационе технологије и мултимедијалне системе*, *2013*(48).

Kaplan, A. M., & Haenlein, M. (2011). Two hearts in three-quarter time: How to waltz the social media/viral marketing dance. *Business horizons*, *54*(3), 253-263. 10.1016/j.bushor.2011.01.006 54

Klisara, O., & Keresteš, N. M. (2020). Komparativna analiza aktuelnih CSS tehnika za raspored elemenata na veb stranicama. *Zbornik radova Fakulteta tehničkih nauka u Novom Sadu*, *35*(04), 705-708.

Kocić M., Šapić S., Sofronijević K. (2022). Uticaj kvaliteta web sajta na kognitivne i afektivne stavove prema organskoj hrani. *Ekonomski horizonti*, 24, 313-327.

Kovač, V., & Petković, G. (2023). Uticaj internet oglašavanja putem pametnih telefona na materijalizam potrošača. *Ekonomske ideje i praksa*, (48), 23-36.

Krunić T., & Solomon T. (2017) Dostupnost informacija kao važan faktor optimizacije koverzija web sajtova za elektronsku trgovinu. *INFOTEH Jahorina.*

Majstorović V., Đuričin D., & Mitrović R. (2022). *Industrija 4.0 Renesansa Inženjerstva.* Beograd: Univerzitet u Beogradu, Mašinski Fakutet.

Mihajlović, D. (2021). Upotrebljivost sigurnosnih mehanizama veb aplikacija. *Zbornik radova Fakulteta tehničkih nauka u Novom Sadu*, *36*(09), 1521-1524.

Mladenovic, S., Zoranovic, A., Uzelac, A., & Jankovic S. (2014). Unaprdjenje procesa izrade web sajtova u kontekstu prilagodljivog web dizajna,. *Postel 2014.*

Njegomir, V. (2020). *Digitalni marketing*. CIVITAS.

Palmer, A., & Koenig-Lewis, N. (2009). An experiential, social network-based approach to direct marketing. *Direct Marketing: An International Journal*, *3*(3), 162-176.

Polewski, M. K., Rachwał, A., Dzieńkowski, M., & Plechawska-Wójcik, M. (2022). Usprawnienie interfejsu serwisu e-commerce dzięki zastosowaniu zasad projektowania uniwersalnego. *Journal of Computer Sciences Institute*, *25*, 337-344. https://doi.org/10.35784/jcsi.3019

Predojević, D. (2023). Upotrebljivost progresivne veb aplikacije. *Zbornik radova Fakulteta tehničkih nauka u Novom Sadu*, *38*(07), 923-926.

Sofronijević, K. (2021). Determinante poverenja i namere o kupovini u onlajn okruženju. *Ekonomija: Teorija i Praksa*, 38-56.

Sutcliffe, A., & Alistar, A. (2022). *Designing for user engagement.* Penn State University: Synthesis Lectures on Human Centered Informatics.

Tetec, P. (2018). *Praćenje korisnika na webu - Doktorska disrtacija.* Zagreb: Fakultet organizacije i Informatike , Univerzitet u Zagrebu.

Tomić, T. (2021). *Uticaj kvaliteta website na korisničko isustvo i kupovne namere kod mladih – master rad.* Novi Sad: Univerzitet Privredna Akakdemija Novi Sad, Fakultet za primenjeni menadžment, ekonomiju i finansije Beograd.