The impact of personalized user experience on customer satisfaction and loyalty in eCommerce

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Abstract and key words

In this study, the impact of personalized user experience on customer satisfaction and loyalty in eCommerce was examined. A structured online questionnaire or a survey, modeled on the basis of research conducted in the following papers: (Pappas, 2018) (Bol, et al., 2022) (Park, 2003) (Pappas, et al., 2014) (Treiblmaier & Pollach, 2007), was designed and distributed to a sample of 107 respondents via Google Forms. The results indicated that customers view personalized user experience as beneficial and personalization features as important when deciding where to shop online, although concerned about data privacy related to sharing their personal information for the purpose of getting a personalized user experience in eCommerce. Furthermore, the study showed that personalized user experience positively affects customer satisfaction in eCommerce and that it contributes to customer loyalty. Finally, managerial implications and recommendations for future research were proposed.

Key words: personalization, customization, user experience, eCommerce, customer satisfaction, customer loyalty

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1. Introduction

1.1. Aim and purpose of the thesis

Identifying the most important eCommerce trends for 2022, one of the main strategies businesses need to implement in order to stay ahead of the competition are personalization efforts, while being transparent about how consumer's data is being used. (Shopify, 2021) Personalization at scale often delivers more than 2% lift in total sales for retailers, predominantly by driving up loyalty and wallet share among already loyal customers. Furthermore, successful personalization programs result in more engaged customers and drive up the top line; a positive customer experience is critical to a retailer's success, resulting in 20% higher customer satisfaction rates (McKinsey&Company, 2020).

Although customers expect customized shopping experiences, they don't want their privacy to be violated and their personal data to be misused. Businesses need to meet customers' needs without compromising their data privacy, which is challenging as new regulations are making data tracking harder, and will be even more challenging in the coming cookieless world. The sooner companies adapt to these changes and revise their personalization strategies, the more competitive they can expect to be in this fast growing and ever-changing industry.

The goal of the thesis was to examine how personalized user experience in eCommerce affects customer satisfaction and loyalty and the importance of aligning web personalization with user privacy and data protection, one of the main determinants of consumer trust and loyalty.

The main contribution of the thesis is a better understanding of the effect of different personalization features on customer satisfaction and loyalty in eCommerce and gaining a deeper insight into the extent to which users are willing to share their personal information to get personalized user experience.

1.2. Data sources and methodology

In the thesis, both primary and secondary research were used in order to closely examine the proposed topic.

As a secondary research, available literature including books, papers, dissertation/thesis and articles covering the topic were investigated in detail.

As primary research, a structured online questionnaire was distributed to 107 respondents and covered questions regarding customer's view on personalization and security in eCommerce. The goal was to gather necessary insights to conduct data analysis and present key findings important for future personalization strategies by eCommerce businesses. It investigated the perceived benefits and costs of personalization with emphasis on users' privacy concerns, as well as how specific personalization features impact customer satisfaction and loyalty.

1.3. Contents and structure of the thesis

The thesis consists of theoretical part, covering the importance of user experience in eCommerce and the industry evolution and trends, as well as relationship between customer satisfaction and loyalty in eCommerce with factors affecting them, and finally, personalization strategy and data collection, and the main benefits and challenges of providing personalized user experience.

It also includes an empirical part investigating customer satisfaction and loyalty in relation to personalized shopping experience, and providing results to what extent are users willing to share their personal information to get personalized user experience.

Finally, recommendations for future studies are proposed.

2. User experience in eCommerce

2.1. Definition and importance of user experience

User experience is defined as a person's involvement with any technology, product, or service. It involves the user's interaction with the product, but also the person's interaction with all the brand's touch points or points of contact that can include brand's advertisements, physical stores, website or webshop, mobile application, customer support, etc. User experience refers to taking into consideration all of the points of contact between the user and the brand, and taking the user-centric approach, or building the overall experience around the user (Rosenzweig, 2015).

The term user experience must be distinguished from term usability. Usability is a part of the user experience and it expresses if the product is easy to use. However, it is only one of the factors making the user experience meaningful, positive and successful.

According to Morville's User Experience Honeycomb, a meaningful user experience can be defined as:
- Usable which refers to the simplicity and the ease of use of the system in which the product is delivered;
- Useful meaning the product must fill a user's need and have a purpose;
- Desirable, including the product's or system's aesthetics that must be appealing to the user;
- Findable when it comes to necessary information and its navigation;
- Accessible to every user, including the ones with disabilities;
- Credible, or trustworthy as a brand and its product;
- Valuable to deliver a desired value to the user.

Figure 1 demonstrates the user experience process lifecycle, a cycle of the four elemental user experience activities, including analysis, design, implementation, and evaluation.

Figure 1. User Experience Process Lifecycle
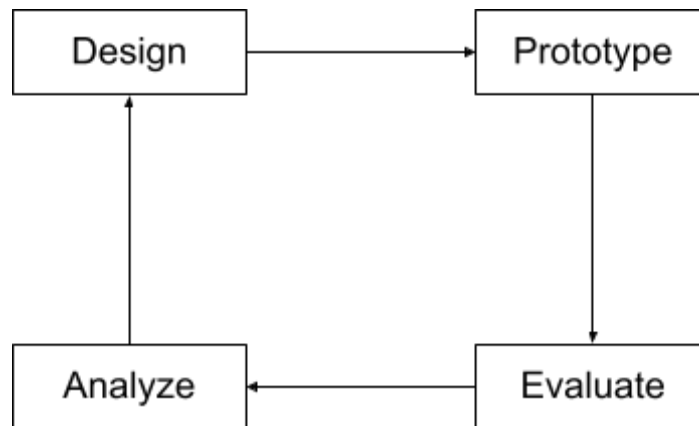
Analysis, as a first step of a user experience design process, refers to gaining an understanding of the user's wants and needs through user research, while design implies concept creation and determining interaction between user and system, system or product aesthetics, and feel. Later steps of the process involve implementation, i.e. prototyping the user experience design, and finally evaluation, which means determining if user experience is designed successfully and if it meets the user's wants and needs (Hartson & Pyla, 2012).

User experience has evolved to be an important field to consider in various industries, from healthcare, transportation, and education to eCommerce and retail, especially in today's industry of rapidly growing interfaces, which is why today the term often implies website user experience.

2.2. eCommerce evolution and trends

Electronic commerce or eCommerce as a term applies to commercial transactions between companies and customers that are conducted electronically over the Internet, and is considered to be a disruptive technology. In different market

segments (business-to-business, business-to-consumer, consumer-to-consumer, consumer-to-business) and over various smart devices (mobile, desktop, tablet) nowadays almost anything can be purchased online, making eCommerce a highly competitive industry.

Ecommerce has allowed companies to obtain a wider market presence, made a distribution of products and services less expensive and more efficient, and made entering the market easier for many small-sized businesses. It has also provided consumers with many benefits, making the buying process faster, allowing easier product and price comparison, etc. It transformed shopping behavior and habits, and disrupted the retail landscape, having more and more people ordering online and abandoning traditional shopping from brick-and-mortar stores today.

Amazon and Alibaba were among the first eCommerce companies to become popular and gain significant success, forcing traditional retailers to transform their business models (Bloomenthal, 2022).

According to Statista, in 2021 over 90% of internet users globally used the internet from a mobile device. This increased use of mobile has transformed eCommerce further, allowing users to shop online anywhere and anytime from their mobile device now. That shift from desktop to mobile drove the emergence of mobile eCommerce apps and reshaped customer experience, making it more convenient for users to shop online from their mobile devices.

Figure 2 shows the share of mobile commerce in total retail eCommerce sales worldwide from 2016 to 2021.

Figure 2. Mobile retail commerce shares as percentage of retail eCommerce sales worldwide from 2016 to 2021
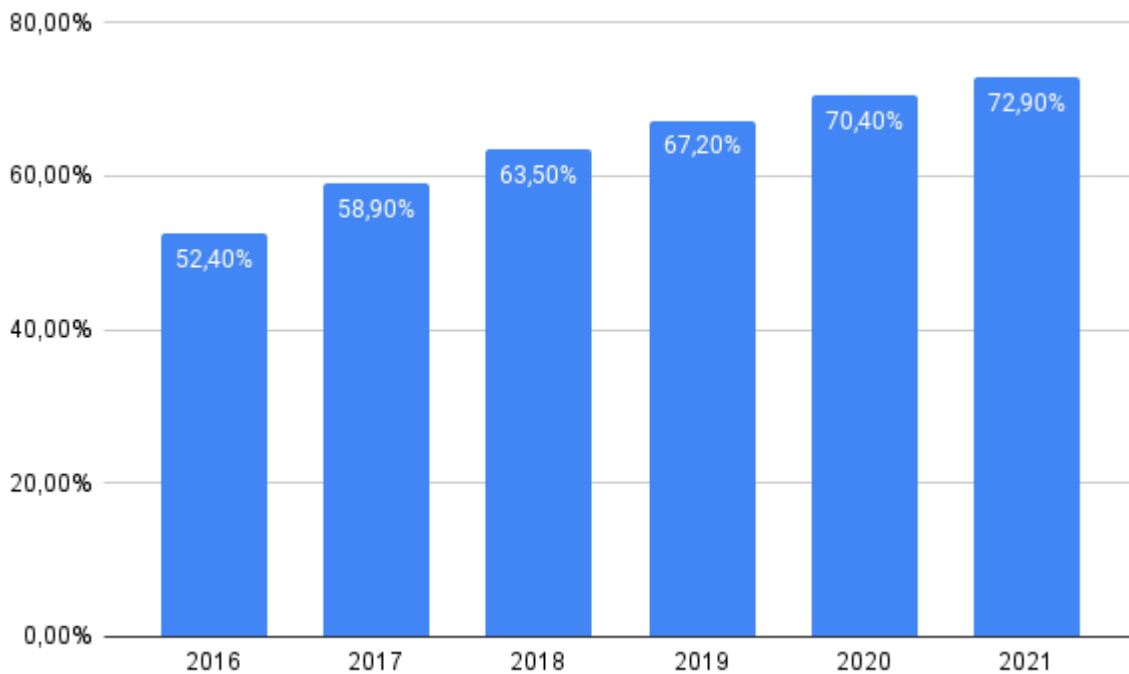
Source: *statista.com*

In 2021, 72.9 percent of all retail eCommerce was generated via mobile commerce, up from 52.4 percent in 2016.

During the COVID-19 pandemic, the online presence was proven to be inevitable for businesses in order to survive and stay competitive. As more people turned to online shopping and more businesses came online, the eCommerce industry experienced a significant growth and is expected to continue growing by almost $11 trillion between 2021 and 2025. New online stores are being opened daily, with an estimated 12-24 million eCommerce sites worldwide. Figure 3 demonstrates the global retail eCommerce sales in billion U.S dollars from 2014 to 2024.

Figure 3. Retail eCommerce sales worldwide from 2014 to 2024

Year	Value
2015	1,548
2016	1,845
2017	2,382
2018	2,982
2019	3,354
2020	4,28
2021	4,891
2022	5,424
2023	5,908
2024	6,388
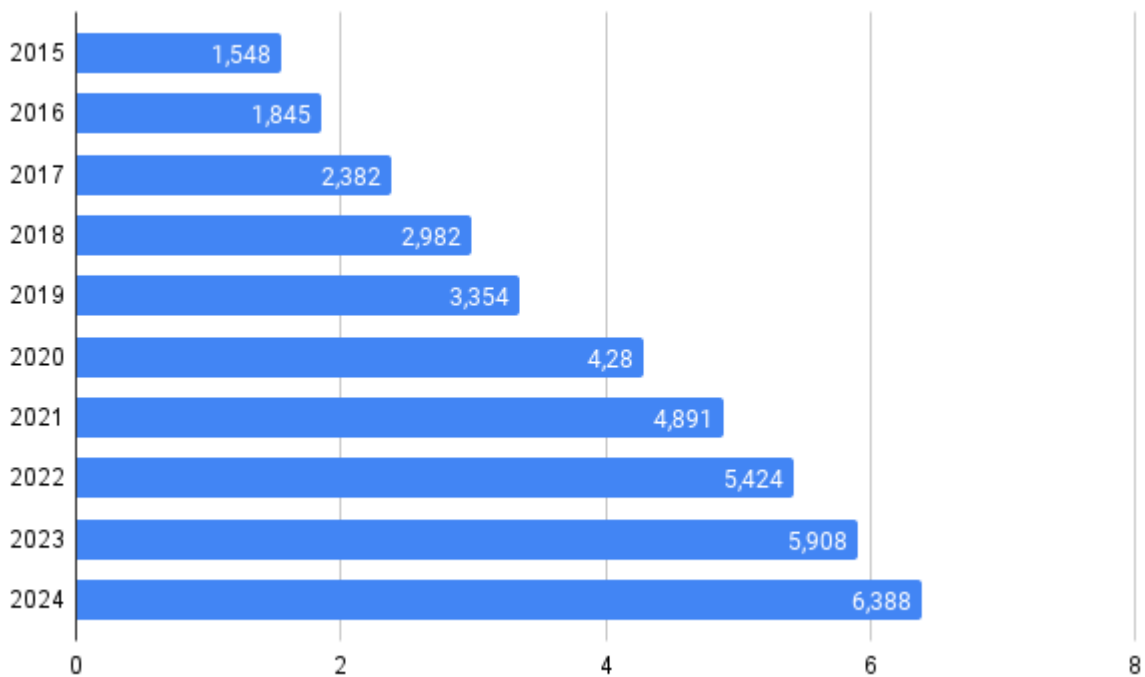
Source: *shopify.com*

The industry growth is driving the competition and rising costs of customer acquisition. According to Shopify eCommerce Market Credibility Study (2021) identifying the most important eCommerce trends for 2022, competition is the biggest obstacle to achieving growth in 2022, and the businesses need to find a way for their brands to stand out.

According to a recent industry report (Statista, 2022), eCommerce will account for 20.4% of global retail sales by the end of 2022, doubling from five years ago when it accounted for only 10%. Market growth and new competitors entering the market have resulted in increasing advertising costs, and businesses need to put effort into customer retention and maximize their customer lifetime value to customer acquisition cost ratio (Hung, 2022).

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2.3. Elements of user experience

The five elements of user experience is one of the most common frameworks in user experience design. The framework describes the steps that should be considered in user experience design, and the challenges that should be taken into account at each step. It consists of (Garrett, 2002):

1. Strategy which is the foundation of the user experience design. It consolidates the site objectives, i.e. business objectives, as well as the wants and needs of the users, and can require user research to gain a better understanding of who the end users are.

2. Scope defining different features and functions, as well as content that must be added on the website. The question whether a feature should be included on the website is considered to be a question of scope. It consists of functional specifications which refer to the system's features, and content requirements referring to different content elements.

3. Structure referring to how the design is being organized and how the system will behave once the user makes an interaction with it. The structure defines how did the users end up on a specific page of the website and what are their options from that point, where they can go next. It involves interaction design determining how the system responds to the user, and information architecture which specifies how the content is being arranged on the website.

4. Skeleton which is a placement of elements on the website, designed to optimize the elements so that their arrangement is effective and efficient, that the website navigation runs smoothly and displayed information is easily understandable to the end-user. It is composed of information design displaying information, interface design enabling users to interact with the system, and navigation design which makes the user able to navigate, or to move through the system or the website.

5. Surface, or a visual design, consisting of various elements of the website that are visible to the end-user, including website images, text, different clickable and non-clickable elements, logo, typography, styling, and colors. The surface needs to be designed in a way that is visually appealing to the end-user.

In early phases, the user experience designer deals with more abstract questions, each stage becoming less abstract and dealing with more concrete issues as the designer approaches the final step.

Also, each step is dependent on the previous one, having surface dependent on the skeleton, skeleton depending on the structure, which depends on the scope, that finally depends on the user experience design strategy.

Although the steps of the framework need to be aligned for a user experience to be designed successfully, decisions for issues from the latter stages can also be made and defined without necessarily deciding on the upper questions before. Decisions at each level should be dependent on the research findings, what the competition is doing, and what are the industry's best practices that have been learned from the past.

Considering the ever-changing technology, as well as data driving today's websites, user experience needs to be adapted to those changes and a more sophisticated approach is required. However, the discussed fundamental user experience elements will prevail.

2.4. User experience measurement and optimization

To be able to measure if the user experience design can be considered successful, user experience metrics need to be introduced and observed. A metric is defined as a mean of measurement and evaluation of an object in question.

Every industry has its own set of metrics that it is interested in observing, and the same applies to the user experience. What makes a user experience metrics different from other metrics is that when it comes to user experience metrics, personal experience of a user is in question so user experience metric considers a few aspects: effectiveness of object in question or a system (user is able to complete a task), efficiency (user's effort needed to complete the task), and satisfaction (the degree of user's happiness with the experience of performing the task). Furthermore,

user experience metrics evaluate the user's behavior and attitudes, which is hard to measure so they require introducing confidence intervals exposing the data variability. Critical questions which user experience metrics can provide answers to can be the following (Tullis & Albert, 2013):

- Will the user recommend the product?
- Is the new product more efficient than the previous one?
- How can the user experience of the product be compared to competitors?
- How is the user feeling after using the product?
- What are the most crucial usability problems of the product?
- Are improvements being made from one design iteration to the next?

User experience measurement framework proposed by Rodden, et al. (2010) includes following sets of metrics:

- Pulse metrics which are the most commonly used metrics tracking the product or system's health, focusing on technical aspects of the product or system. This set of metrics include tracking page views, uptime, latency, seven-day active users and earnings.
- Heart metrics serve as a complementary set of metrics to pulse metrics by measuring quality of the user experience and providing actionable insights. Heart metrics consist of happiness or satisfaction, engagement, adoption, retention, and task success or effectiveness and efficiency.

Happiness relates to subjective aspects of user experience, like satisfaction, visual attractiveness, recommendation likelihood, and perceived ease of use. The proposed mean of measurement for happiness is a survey tracking the same metrics over time.

Engagement refers to the degree of which the user is involved with the product or system. Engagement metrics usually include frequency, intensity, and depth of interaction over time, and are reported as an average per user.

Adoption and retention metrics can be used to distinguish between existing and new users. Adoption metrics track the number of new users over time, while retention

metrics measure how many existing users are still present over a specific period of time.

Task success incorporates efficiency which is, as previously defined, user's effort or time needed to complete the task, effectiveness (the user's ability to complete a task or percent of completed tasks), and an error rate. Measuring task success can be done through a remote usability or a benchmarking study, in which the user can be assigned a specific task.

Before defining the metrics, goals and signals must be identified. Goals should reflect what the businesses are trying to achieve with the user experience design or redesign and what is the most important to them - attracting new customers or customer retention by engaging the existing ones. Furthermore, by defining signals businesses are defining specific actions signaling that the goal had been achieved. They should also consider the ways of gathering the data or define signal sources - that can be done through logs and surveys.

There are various tools available for measuring and evaluating user experience on the website, Google Analytics being one of the most commonly used ones to observe the relevant metrics and track the changes in the users' website behavior over time, as well as comparing the web analytics before and after the change in user experience design. In addition to observing the data, surveys can be conducted to get more meaningful insights into the changes caused by the website changes.

User experience optimization is crucial for retaining and engaging existing users and preventing losing them due to poor user experience, but also for driving the results (e.g. sales in eCommerce). User experience optimization requires getting to know users better, which can be done through analyzing the website behavioral data and through surveys as already mentioned, and identifying core tasks - what is a desired final output or a goal from the moment a user first lands on the website until leaving it (e.g. a transaction).

Besides surveys, one of the ways to collect data for optimizing the user experience on the website is to set a hypothesis and test it through a/b tests, multivariate tests,

using control groups, and random sampling. The collected data will either confirm or reject the set hypothesis and should be the basis for defining next steps or action points, e.g. full implementation of the change that had been tested or setting up and testing a new hypothesis.

Additional user experience optimization techniques and methodologies include conduct task analysis, interviewing stakeholders, UX and usability testing, test for accessibility, and heuristic evaluation (Valdellon, 2019).

User experience optimization should be viewed as a never ending process and businesses should strive to make continuous improvements on their websites on both desktop and mobile and desktop, as well as their web and mobile applications in order to retain their customers and stay ahead of the competition.

3. Customer satisfaction and loyalty in eCommerce

3.1. The importance and relationship between customer satisfaction and loyalty in eCommerce

"Satisfaction is the consumer's fulfillment response. It is a judgment that a product or service feature, or the product of service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment..." (Oliver, 2010).

There are several models of customer satisfaction that have been introduced, linking customer satisfaction and its determinants and showing the relationship between them. One of them, American Customer Satisfaction Framework (ACSF) is shown in figure 4 (Bryant, 1995).

Figure 4. American customer satisfaction framework (ACSF)
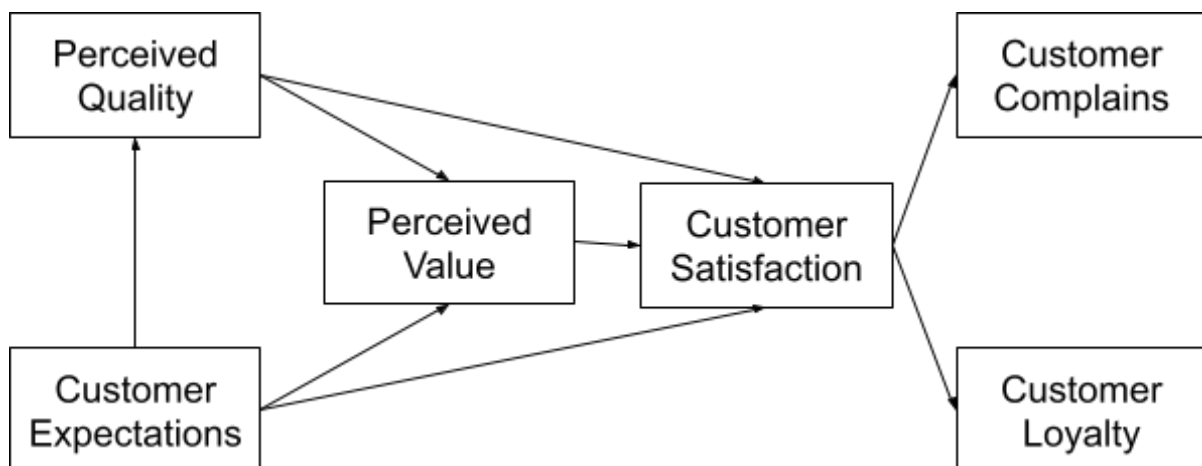
Source: *Bryant (1995)*

American customer satisfaction framework (ACSF) shows how customer expectation, perceived quality and perceived value link to the overall customer satisfaction with the product or service.

Customer expectations, as one of the determinants of customer satisfaction, implies the consumer's prediction of the product's or service's quality. Customer expectations can be based on advertising or word of mouth.

Perceived quality refers to the market's evaluation of recent consumption experience, and is affecting the customer satisfaction directly and positively.

Perceived value can be defined as the perceived quality of the product or service compared to the price paid for the product or service. Price is usually an important factor influencing the consumer's decision to make a first purchase, however, it is considered not to have a significant effect on the overall customer satisfaction and intention to make a repurchase of the product or service (UKEssays, 2018).

Customer loyalty, on the other hand, measures a degree to which a customer is likely to make repeat purchases of the product or service in the future, and is positively correlated with the customer satisfaction. One of the questions that are frequently used to measure customer loyalty is How likely are you to purchase this product/service again in the next three months? (Allen, 2004)

According to Allen (2004), customer loyalty has two dimensions, affective and cognitive. Affective drivers refer to the consumer attaching emotionally with the product or service brand, while cognitive drivers are more rational in nature and describe customer's evaluation of the product's or service's quality, price, and other factors that might be considered.

The high cost of attracting new customers in eCommerce has made the customer retention and creating customer loyalty inevitable for online vendors. Customer loyalty increases profitability and growth, especially in eCommerce, and loyal customers are more likely to convert more customers through word of mouth (Gefen, 2002).

3.2. Factors affecting customer satisfaction and loyalty in eCommerce

Since customer loyalty is in a positive correlation with the customer satisfaction and, as previously mentioned, a perceived value is the most important determinant of the customer satisfaction, there is a positive correlation between customer's perceived value of the product or service and the customer loyalty as well, which have been confirmed by the previous studies.

In their research, Jiang, et al. (2015) have suggested that each of the key e-service quality dimensions, shown in figure 5, has a significant positive effect on the customer's perceived value of e-service.

Figure 5. Key e-Service Quality Dimensions
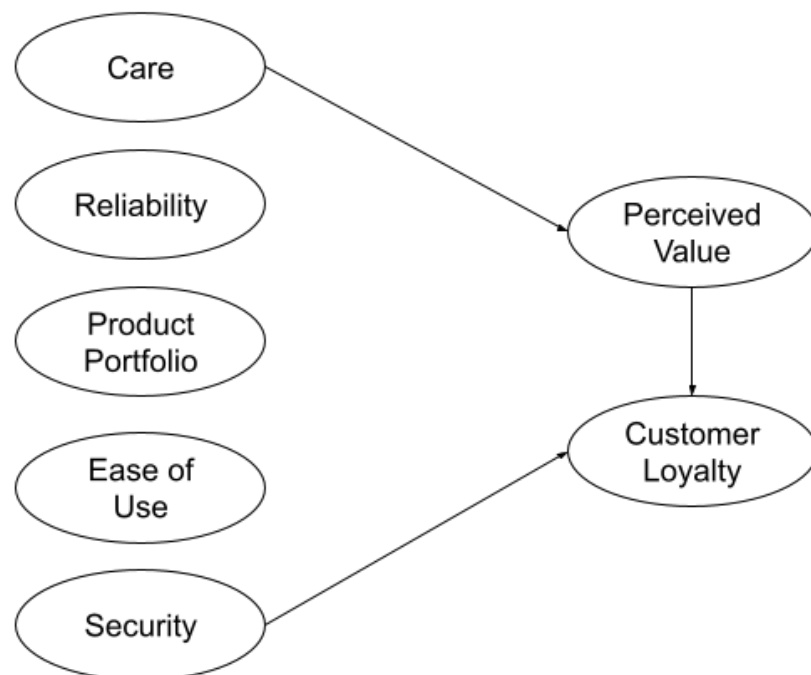
Source: *Jiang, L., Jun, M. & Yang, Z. (2015). Customer-perceived value and loyalty: how do key service quality dimensions matter in the context of B2C e-commerce? (pp. 2)*

They defined five key dimensions of e-service quality, including care, reliability, product portfolio, ease of use, and security, that are considered to be constituting customer's perceived value of e-service.

Care dimension refers to an online vendor's understanding of the user's needs and its ability to answer user questions and solve problems that the user faces. It is a degree of e-service personalization that meets the specific needs of users.

Reliability dimension concerns accurate e-transactions, accurate records, correct initial performance, and promise accomplishment.

Ease of use dimension refers to the effort required to navigate through website and information, and to complete a purchase.

Security dimension is concerned with online payment security and user privacy.

Finally, product portfolio refers to the additional free services offered by online vendors, product offer, and available e-service features.

They found out that the care dimension is the second most important factor influencing the customer's perceived value, right after the ease of use, and the most important driver of customer loyalty. Based on the findings, online vendors are advised to think of a website personalization as a way to differentiate their e-service from their competitors and to attract and retain customers.

3.3. Measuring customer satisfaction and loyalty in eCommerce

There are three most commonly used methods in eCommerce measuring customer satisfaction and loyalty. Methods include surveys, reviews, and statistics.

Satisfaction surveys are one of the most accurate methods of measuring customer satisfaction. By sending satisfaction surveys, businesses can receive feedback directly from their customers. In eCommerce, satisfaction surveys can be used in a

way that customers, after completing a purchase, can receive a satisfaction survey on email, and can also be provided with additional incentives (like 5% coupon code) that will encourage the customer to complete the survey. When analyzing the survey results, businesses can use Net Promoter Score (NPS), Customer Satisfaction Score (CSAT), or another system for breaking down the customers' satisfaction levels.

Customer reviews are one of the most insightful methods of measuring customer satisfaction. Depending on the review system, customers may be able to provide online vendors with a rating as well. Customer reviews have multiple positive effects - not only that they provide businesses with insights into the customers satisfaction, but positive reviews from customers can also be used for promotional purposes and for attracting new customers by displaying them on the website, advertisements, etc.

Finally, paying attention to statistics, i.e. observing relevant metrics, can also be used to measure levels of customer satisfaction and loyalty on the website. Metrics like return rate, which is the rate of customer returns of purchased products; tracking support inquiries that reveal to what extent are users experiencing problems or needing assistance when shopping on a specific website; conversion rate showing the share of users that have made purchase in all website visitors; cart abandonment rate showing the percentage of users that have entered the checkout process, but haven't completed purchase; and many others can all be used as signals of customer satisfaction (Vassilyovska, 2021).

4. Personalization strategy in eCommerce

4.1. Designing personalized user experience

"A personalized eCommerce website promises benefits for both the customer and the owner of an online business. Ideally, a personalized website can present content and products that are more relevant to the individual customers' needs and interests, thus reducing the necessary navigation behavior and increasing customer satisfaction while facilitating product sales" (Karat, et al., 2004).

Karat, et al. in their paper (2003) developed a personalization strategy that is based on the following policies:
1. Website users are in control of their data
2. Permission marketing
3. Users are able to choose their identity level, depending on the task that is going to be performed

The first policy, website users being in control of their data, implies that users are the owners of their personal information. Users must be able to view, edit and delete their personal information and data provided to the website at any point in time. On the other hand, online businesses can use the users' personal data only if they were given a permission to do so, and only for the purposes they were specifically given a permission to use the data for by the users.

Second policy, permission marketing, refers to users being asked for personal information only when necessary and, after users provide the information, they are immediately provided with value in return.

Third policy can be further described as a degree to which users are willing to provide personal information to a service provider through the specific identity level the users have selected. The lowest identity level would be invisible user where user has turned off cookies when visiting the website and can be interpreted as a user with the lowest level of trust, while the highest level would be differentiated user

which is a user with a multiple website profiles (e.g. home profile and a business profile), showing the highest level of trust in the website.

In addition to the above listed policies, authors of the paper (Karat, et al., 2003) have also identified nine more personalization features that are of a high value to both users and businesses. The features include automatic support, products that I own feature with recommendations for out of stock items and for complementary and upgraded products allowing users to track in progress transactions and view the completed ones, help me find what I need feature enabling users to use filters and make context sensitive searches on the website, log-in feedback making it transparent that the system recognized the user after logging in, universal profile making the provided personal information active across the entire website, future purchase considerations combining saved shopping carts and wish lists, personal book being created after users provide website with personal information, adaptive presentation making the display of pages on the website adapted to the user's previous navigation path, and finally, contact in context feature that would allow support to see the user's profile and current task, if given permission, to ease the communication and speed up the customer's issue solving process.

Furthermore, Desai (2016) made a distinction between information, navigation and presentation personalization in her study stating that they have a different role in generating user's cognitive or hedonic experience. Information personalization is defined as unique user-tailored information on the website based on user's needs driving cognitive experience, navigation personalization refers to modifying the website navigation based on user's needs and generates both cognitive and hedonic experience, and presentation personalization includes modifying the presentation features like layout and background, driving the hedonic experience.

Poole (2006) and Desai (2021) demonstrated three dimensions of personalization implementation, including information system's aspect of personalization (what is being personalized), the target of personalization (for whom is it being personalized), and whether personalization is explicit or implicit (who does the personalization, the user or the system).

Poole (2006) has introduced four ideal types of personalization, demonstrated in figure 6, that differ by the motive and the goal of personalization, and therefore each of them should implement different personalization strategies. Each of the types is assigned a corresponding purpose and personalization design (utilitarian or affect oriented), as well as design priorities (e.g. form and function).

Figure 6. Personalization design paradigms

	Affective	**Utilitarian**
Individual	*Architectural (form and function)*	*Instrumental (functionality and usability)*
Interactional	*Relational (meaning)*	*Commercial (content)*

Source: *Poole, M.S. (2006). What Is Personalization? Perspectives on the Design and Implementation of Personalization in Information Systems (pp. 196).*

To be able to successfully design a personalized user experience, businesses should set a goal and business objectives and specify what they expect from and want to achieve with personalization (why do they want to personalize user experience), as well as have a clear picture of who their customers are and what are their expectations to be able to meet them and respond to their needs (for whom are they personalizing user experience for and what is being personalized on the website).

4.2. Data collection for personalization

In order for online businesses to be able to implement personalization strategies, first they need to collect data about the users. Depending on the source from which businesses can obtain such data, there are three data types.

First party data is obtained directly from businesses' customers or their website users and it allows businesses to capture accurate information on their users'

behavior and generate insights based on that information that can form a basis for decision making when it comes to personalization design. The first party data is behavioral, individual, reliable, actionable and, most importantly, based on a user's consent. However, it is not always easy to collect. A critical approach to be able to collect first party data is employment of customer data platform (CDP). "A CDP is a unified source of first-party data that stores, analyzes, activates, and orchestrates behavioral insights from across channels to support real-time activation in marketing campaigns and customer experiences" (Lytics, Inc., 2021).

Second party data is another company's first party data that is also captured directly from users, but is then provided directly to another organization. This data can come from activity on websites and apps, social media, user surveys, etc. Although the first party data is of an extreme importance and value for businesses, it is often low in volume. By adding second party data, businesses can increase their data scale and reach new audiences (Lotame, 2019).

Third party data is, as secondary party data, data provided by outside parties, but the difference between third party and second party data is that third party data providers (outside parties) are not the owners or the original collectors of the user data. Similar to second party data, larger scale and broader scope are one of the main business benefits of using third party data. It mostly originates from online activity such as interactions on social media, history of searches, online transactions (Lotame, 2019).

Although many online businesses are taking advantage of third party data, they should start reconsidering their data collection strategies and adjust them to the coming cookieless world. User privacy protection and transparency about the user's personal information collection have experienced a major push over the recent years. In addition to data protection regulations and laws (such as GDPR), companies like Apple and Google have made some major changes as well that are now dictating the ways companies are collecting data about their users. With its iOS 14 update, Apple has allowed its users to opt out of app tracking, disabling apps to collect data about them. The company even started offering randomized email addresses to users which can be used for signing up for news apps and services.

Furthermore, Google has announced that it will stop the use of third party cookies by the end of 2024, as part of its Privacy Sandbox strategy. With all these changes happening, businesses need to adapt and develop and implement new data collection strategies. Although it takes more time, companies should focus on first party data collection and, with the right tool to manage the data, companies can get meaningful insights about their customers and be able to provide them with a better user experience (Newman, 2021).

4.3. Personalization benefits and challenges

Many researchers have studied positive effects of personalization on users which in turn bring benefits for businesses providing personalized experience on their websites and applications. In their paper (2003), Karat, et al. developed the personalization value model, demonstrated in figure 7, showing the value personalization is providing for businesses, and for website end-users.

Figure 7. Personalization Value Model

Source: *Karat, C.M., Brodie, C., Karat, J., Vergo, J. & Alpert, S.R. (2003). Personalizing the user experience on ibm.com (pp. 697).*

After providing the system with the personal information required to provide users with personalized website experience, users, in turn, experience improved ease of use, they feel in control of their personal data which enhances trust in a company, complete tasks successfully more quickly which saves them time, get help in solving problems and decision making, they experience increased satisfaction with their on-site user experience, and financial and organizational benefits. Personalization also brings value for the business pursuing it, in terms of improved marketing effectiveness and stronger customer relationships, which finally produce financial and organizational benefits for the business.

In their recent article, Riegger, et al. (2021) stated that customers expect utilitarian or functional benefits, as well as hedonic or emotional benefits from personalized user experience on websites. They expect personalization to provide efficiency, effectiveness, simplicity and relevance to their user experience, but they also expect to get a positive emotional value from their personalized shopping experience. The authors have also stated that users are more likely to make a purchase and purchase more expensive products in a personalized shopping environment in which a system recognizes them.

According to survey results conducted by Forbes Insights and Arms Treasure Data, 40% of marketing executives have stated that they have experienced maximized sales, basked size, and profits in direct-to-customer channels as a result of personalization.

On the other hand, personalization poses challenges that need to be considered, which are primarily related with user privacy concerns.

Forbes survey has revealed poor quality of data, inability to locate the right data, additional investments for data sources management and validation, and difficulty with calculating return on investment from personalization efforts, as significant obstacles for implementing personalized user experience that businesses face.

Riegger, et al. (2021) stated that exploitation of customers (customers fearing of being manipulated and taken advantage of), customers' discomfort with technology trying to build a relationship with them, and their lack of confidence and trust in the technology, pose barriers for personalization.

Businesses need to be aware of the challenges and obstacles they may face when deciding on implementing personalization strategy and find ways to minimize or avoid its negative effects to be able to take advantage of all the benefits and opportunities of personalization.

4.4. Trust and privacy concerns

As previously mentioned, one of the main challenges and obstacles businesses face during personalization implementation are user privacy concerns.

Privacy is defined as "the ability of the individual to control the terms under which personal information is acquired and used" (Westin, 1967). Goodwin (1991) introduced two dimensions of control upon which consumer privacy is based, and the dimensions include control over disclosure of information and control of unwanted intrusions into the consumer environment.

Hoffman, et al. (2006) examined the importance of enforcing opt-out information policies in their study, which has shown that informed consent policies are likely to bring the greatest benefits to online businesses. Furthermore, Milne and Rohm (2000) stated that improving the exchange of information will better inform users about the personal information sharing trade-offs. Phelps, et al. (2000) noted that publicized data management policies can help dealing with consumer privacy concerns.

Additional findings of the prior studies include businesses' reputation and their privacy policies' completeness reducing the level of concern over sharing the personal data (Andrade, et al., 2002), perceived vulnerability, trust and personal interest being the ancendents to users' privacy concerns (Dinev & Hart, 2003), and value of personalization exceeding the users' privacy concerns (Chellappa & Sin, 2005).
In the recent study, respondents noted a strong aversion to identity disclosures resulting from the collection of their personal data, and to retailer's uses of data that they did not explicitly provide. They want to be in control and choose to reveal personal information or be personally approached (Riegger, et al., 2021).

According to Awad and Krishnan (2006), users who find information transparency important are less likely to share their personal information for personalized services. However, the benefit of personalized service appeared to be more important than the privacy intrusion risk. Thus, businesses need to focus on maximizing the value of

personalized service provided to users to outweigh the perceived risk of being profiled online, as perceived benefits of provided personalized service affect the users' willingness to share personal data with online businesses.

4.5. The relationship between personalization and customer satisfaction and loyalty

Many research have examined the relationship between personalization and customer satisfaction and loyalty in different industries, including eCommerce.

Adolphs and Winkelmann (2010) research showed that customer loyalty depends on customer satisfaction, including service and support that are being delivered to the customer, and that personalization is the adaptation of the service to meet each user's needs.

Tong, Wong and Lui (2012) in their study proved that the personalization of online service positively affects customer satisfaction and loyalty. The results of their study also suggest that the implementation of personalization can reduce the possibility of a customer switching to competitors' online services and, in turn, enhance loyalty towards personalized service provider as, once users learn how to use the customized service, are satisfied with it and get used to the service, they can find it either demanding to switch to a personalized service provided by a competitor and adjust to it, or difficult to settle for service provided by a competitor who is not providing them with a personalized user experience. The authors advocated that, to be able to improve customer satisfaction and retention and, in turn, enhance the business profitability in the long term, online businesses should develop, implement and provide their customers with the personalized online service.

A more recent study of the relationship between eCommerce websites personalization and user satisfaction showed that implementing personalization features enhances positive user experience which ultimately significantly improves customer satisfaction and the likelihood of users returning to the website in future (Desai, 2016). As shown in Figure 8, the author discussed that personalization boosts positive utilitarian and hedonic experience of customers, which in turn

increase their satisfaction rates, by increasing the perceived ease of use, usefulness and positive feelings resulting from the use of personalized service, as well as the feeling of being in control by being provided with the ability to determine the display of information they find relevant and that is suited to their interests and preferences.

Figure 8. The impact of positive utilitarian and hedonic experience on customer satisfaction

Source: *Desai, D. (2016). A Study of Personalization Effect on Users' Satisfaction With E-Commerce Websites (pp. 59).*

However, Treiblmaier & Pollach (2007) in their paper highlighted the importance of user privacy concerns and argued that personalization can have different outcomes, positive or negative, depending on the way businesses collect and use the customers personal data and on the level of transparency about the data collection and use, as well as businesses' responsibility when it comes to the data management.

The recent study also acknowledged that personalization can also have a negative impact on customer satisfaction by strengthening user privacy concerns and

therefore increasing the users' perceived cost of personalization (Riegger, et al., 2021).

In their work, Bol, et al. (2022) recognized that personalization can have a negative effects in the long run, as it can negatively influence consumer trust towards the personalized service provider and can also potentially decrease users' expected benefits to some degree, as well as the likelihood of them sharing their personal information with the online business again in the future.

In the earlier study, Pappas, et al. (2014) demonstrated that personalization significantly impacts user's positive feelings and hence their purchase intention, but isn't an important factor affecting customer's negative feelings, implying that the significance of positive feelings overcomes the negative feelings when it comes to user's purchasing intention in personalized online environment and that personalization doesn't have a negative effect on the final purchasing outcome in eCommerce. Finally, the authors linked the user's positive feelings when shopping online with the likelihood of making repeat purchases in the future based on the personalized service.

In his more recent work, Pappas (2018) confirmed the findings from their earlier study and found that the benefits of effective personalization are likely to exceed the negative effects related to data privacy concerns and customer's fear of sharing their personal information with the company, leading to customer satisfaction resulting from personalization efforts. Additionally, he emphasizes the importance of the user's positive feelings related to customized experience, in addition to customer's trust in the online retailer. However, he argues that positive feelings are an insignificant factor among experienced customers who are less concerned about their data privacy. Among experienced customers with negative past experiences and less experienced customers with high concerns related to their personal data being misused, he states the trust in the company as the most significant factor affecting their intention to purchase online.

Tyrväinen, et al. (2020) stated that personalization has a significant and positive impact on customer experience and its emotional and cognitive components. They

also found that both emotional and cognitive components of customer experience are positively correlated with customer loyalty and word of mouth, signaling that by providing personalized user experience to their customers, businesses are not only improving customer retention, but are also acquiring new customers through a positive word of mouth and are avoiding high costs of customer acquisition. The findings are shown in Figure 9 below.

Figure 9. Personalization effect on e-loyalty and word of mouth
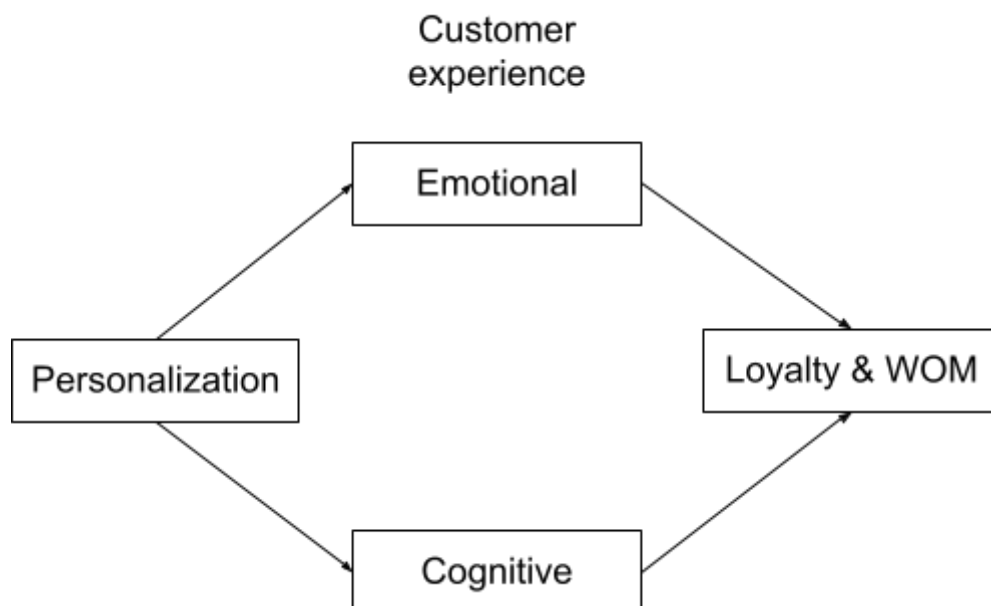
Source: *Tyrväinen, O., Karjaluoto, H. & Saarijärvi, H. (2020). Personalization and hedonic motivation in creating customer experiences and loyalty in omnichannel retail (pp. 6).*

According to authors online businesses should identify and undertake the opportunity to achieve and improve a positive experience among their customers by providing them with the personalized experience and should strive to continue on improving it and implementing additional effective personalization features on their websites. Enhanced customer experience can allow businesses to improve customer retention, loyalty, and encourage the positive word of mouth that will result in

acquiring new customers. Online retailers should focus on stimulating hedonic motivation that will, in turn, result in increased cognitive and emotional customer experience, by providing users with a positive online shopping experience that is pleasant and entertaining.

5. Examining the impact of personalized user experience on customer satisfaction and loyalty in eCommerce

5.1. Problem definition and research goals

As the eCommerce industry is growing rapidly, the industry growth is driving the competition and increasing the costs of customer acquisition. The high cost of attracting new customers due to intense competition being the biggest obstacle for online businesses to achieve growth nowadays, the companies are focusing their efforts on customer retention and maximizing customer lifetime value. In order to succeed in it, they need to provide customers with what they are demanding.

Although customers are demanding personalized shopping experiences, they are concerned with businesses violating their data privacy and misusing their personal information, making it challenging for the businesses to successfully deliver personalized user experience to their customers.

According to a McKinsey survey of retailers, 95% of retail CEOs claim that personalized customer experience is their strategic priority. However, the survey has shown that only 23% of consumers believe that retailers' personalization efforts have been successful.

The research goal was to gather necessary insights to conduct data analysis and present key findings important for future personalization strategies by eCommerce businesses.

Thesis research studied the effect of personalized user experience on customer satisfaction and loyalty in the context of eCommerce, and to assess the effect, the research first assessed the perceived benefits of personalization, as well as perceived costs with emphasis on users' privacy concerns and which specific personalization features are customers expecting from their personalized online shopping experience.

Therefore, the research provides a deeper insight into the customers' perceived benefits of personalization, the extent of their privacy concerns, a better understanding of the customers' view on the importance of specific personalization features provided by the shopping websites, and finally, the customers' feedback on the impact of personalization on their satisfaction and, ultimately, loyalty.

5.2. Methodology

To accomplish the goals of the study, a quantitative research method was used, and a research instrument that was used is a structured online questionnaire or a survey designed and distributed to a sample of 107 respondents via Google Forms. Non-probability, convenience sampling was used. Online distribution of the survey allowed a more effective distribution, as well as acquisition of a larger sample of respondents.

The questionnaire was modeled on the basis of research conducted in the following papers: (Pappas, 2018) (Bol, et al., 2022) (Park, 2003) (Pappas, et al., 2014) (Treiblmaier & Pollach, 2007)

The study examined the effect of on-site personalization on customer satisfaction and loyalty towards online retailers.

The survey was structured into five sections that were grouped by different research questions, and covered questions regarding customer's view on personalization and security in eCommerce. On the first page participants were displayed a statement providing the explanation of the purpose of the study and the use of collected data, guaranteeing that the survey is completely anonymous. On the following pages, survey participants were able to see only one section per page and proceed with the survey after completing questions of the section. They were also displayed a progress bar so they could track their progress and check how many steps are left to complete before submitting the form.

The first section involved questions requiring the respondents' demographic information, such as their age group and the highest level of education they have completed. It was stated that the questions are optional and that they serve to better understand background characteristics of the participants. Question type that was used in this section is multiple choice questions.

The following sections were grouped by research questions, and all of them used attitudinal questions using a 5 point Likert scale.

The second section consisted of five statements and referred to respondents' perceived benefits of personalized user experience in eCommerce where they were able to mark how accurate do they find the specific personalization benefits on a scale 1-5, where 1 represented "I strongly disagree" and 5 represented "I strongly agree". The statements in the section were modeled on the basis of research conducted in the following papers: (Bol, et al., 2022) (Pappas, et al., 2014) (Treiblmaier & Pollach, 2007)

The next section covered respondents' perceived costs of personalization in eCommerce with emphasis on users' privacy concerns, and involved four statements where the participants could mark to what extent are they concerned with each of the costs of personalization related to user privacy, also on a scale 1-5 (Strongly disagree - Strongly agree). The statements in the section were modeled on the basis of research conducted in the following papers: (Bol, et al., 2022) (Pappas, 2018)

The fourth section grouped the statements about the importance of specific personalization features provided by the shopping websites and, on a scale 1-5, 1 representing "Very unimportant" and 5 representing "Very important", respondents were able to specify how important they find each of the personalization features listed. Sixteen personalization features were listed in the section. Among the author's own, some of the personalization features listed in the section were modeled on Park's paper from 2003.

The fifth and the final section of the survey investigated the personalization's impact on customer satisfaction and loyalty, where participants were shown one statement

describing satisfaction and two statements describing loyalty towards shopping websites that provide them with personalized user experience and they were able to choose how accurately the statements describe their satisfaction and loyalty, again on a scale 1-5 (Strongly disagree - Strongly agree). Again, among the author's own, some of the statements from the final section were modeled on the basis of research conducted in the paper: (Pappas, 2018)

Before distributing the questionnaire to a larger sample, a pretest was conducted and the survey was shared with 10 respondents. The goal of the pretest was to determine the clarity of the statements included in the survey, and to consult with the participants about the ease of response, time of response, are they experiencing any issues when filling out the form, and do they find the survey questions interesting. During the pretest process, positive feedback was received, and the survey was delivered to a larger sample of respondents.

5.3. Results of the research

In total, there were 107 participants in the survey.

The first section questions regarding the respondents' demographic characteristics, although noted as optional, were answered by all of the participants of the survey. As shown in Figure 10, 75% (80) of the respondents are aged 20-29, 18% (19) fall into the 30-39 age group, 4% (5) are between the ages 40-49, 2% (2) of respondents are aged 50-59, and only 1% (1) is 19 or younger. None of the participants was 60 or older.

Figure 10. Age groups of the respondents
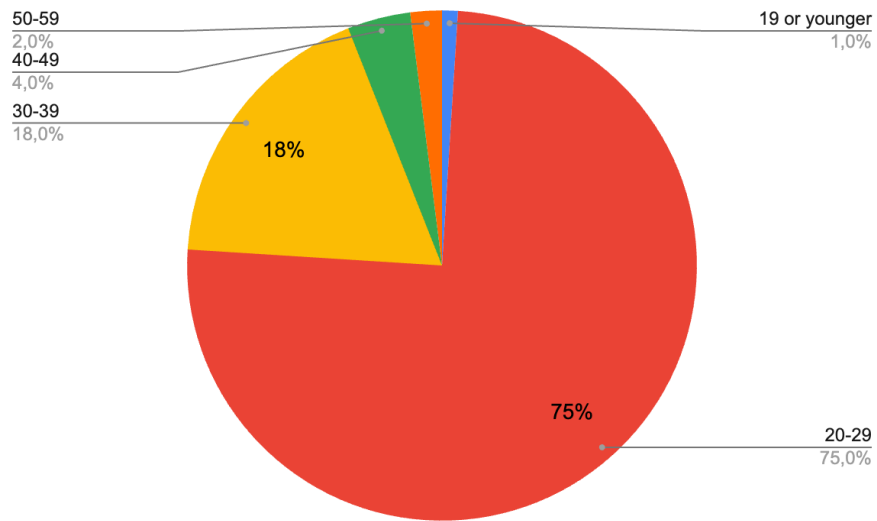
Source: *Author's work*

Figure 11 demonstrates the education level of the respondents. 54% (58) of them noted that the highest level of education they have completed is Master's degree, 30% (32) marked Bachelor's degree as their highest level of education completed, 13% (14) responded with high school degree, and there was 1% (1) holding Associate's, 1% (1) having Doctoral, and finally, 1% (1) without the high school degree.

Figure 11. Education level of the respondents
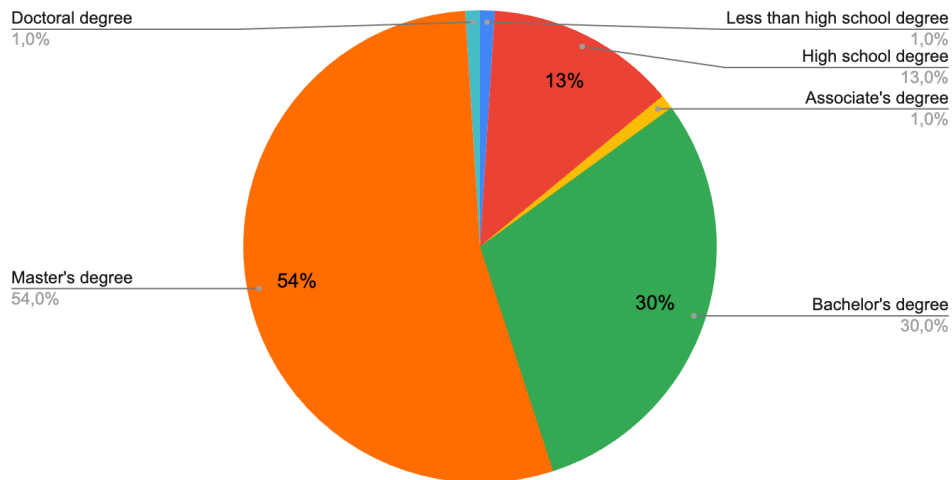
Source: *Author's work*

The second section, referring to perceived benefits of personalization, consisted of the following statements (for each, respondents were able to mark how strongly they agree with the statement, from 1-5, "I strongly disagree" to "I strongly agree"):

1. *Sharing my personal information with shopping websites helps me find more relevant information more quickly, and helps me complete a purchase more quickly.*

As shown in Figure 12, 45% (48) of the participants were undecided about the accuracy of the statement from their perspective, while 36% (39) agreed with the statement to some degree - 23% (25) agreed and 13% (14) strongly agreed. The smallest proportion of the respondents, 19% (20) of them disagreed with the statement on some level - 11% (12) disagreed and 8% (8) strongly disagreed.

Figure 12. Perceived benefits of personalization
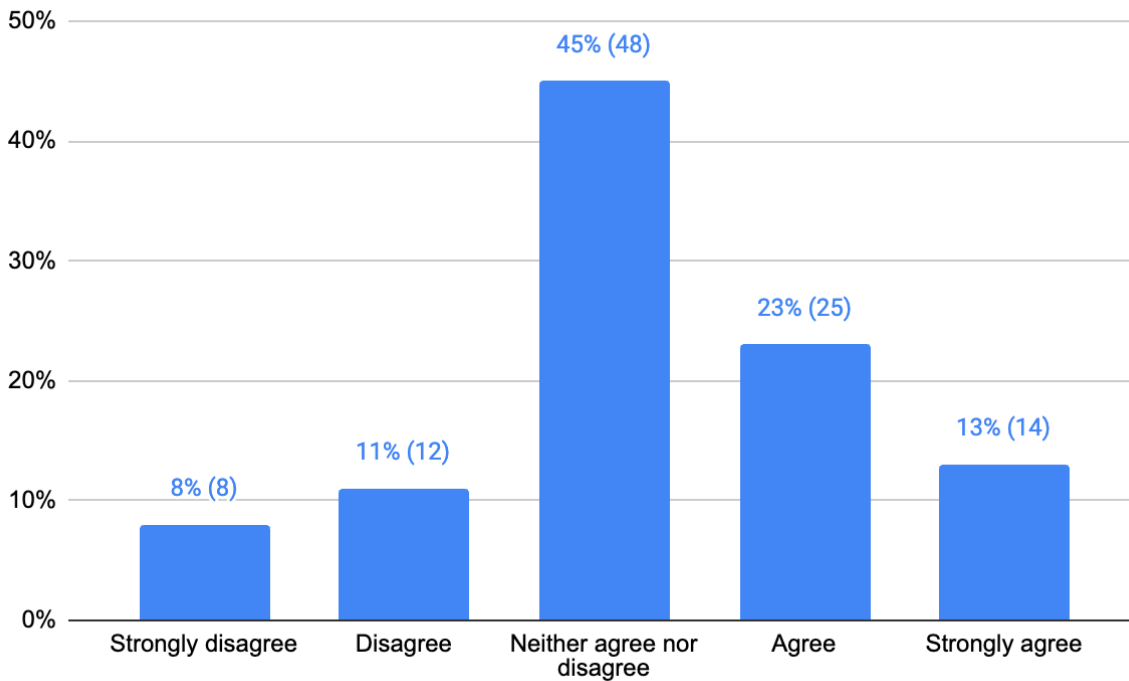
Source: *Author's work*

2. *Online vendors can provide me with personalized deals tailored to my activity context.*

The highest number of respondents, 44% (47) of them, marked this statement with "I agree", 17% (18) with "I strongly agree", 26% (28) couldn't quite estimate whether they agree or disagree with the statement. On the other hand, 13% (14) stated their disagreement - 8% (9) disagreeing and 5% (5) strongly disagreeing with the statement). The results are demonstrated in Figure 13.
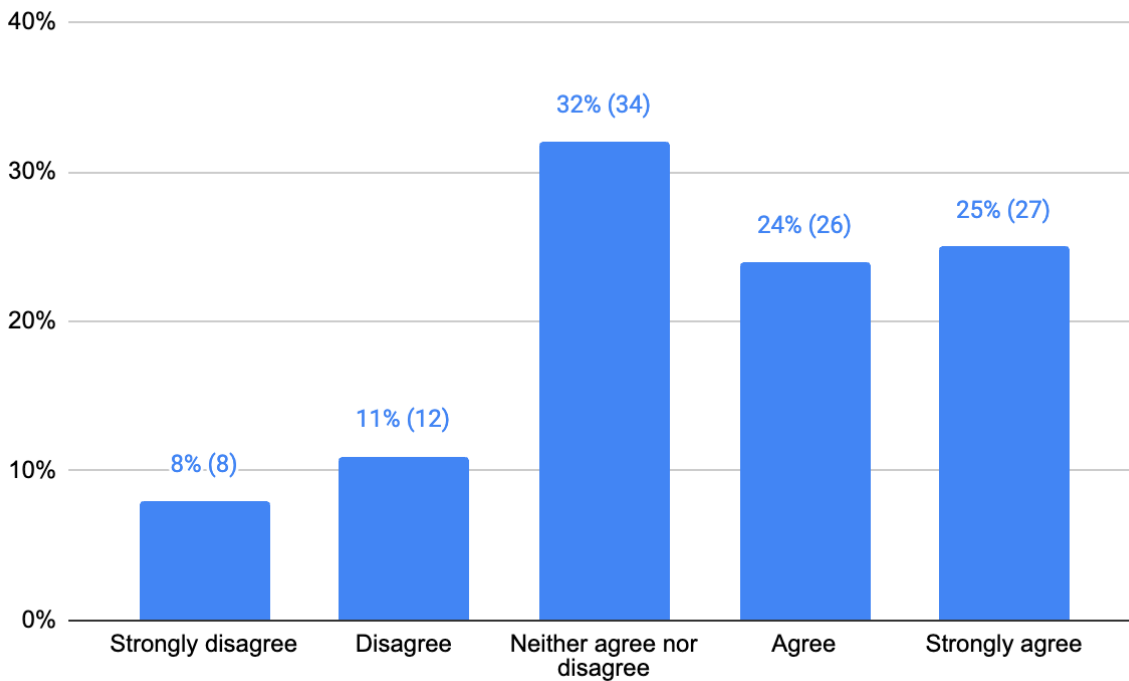
Figure 13. Perceived benefits of personalization
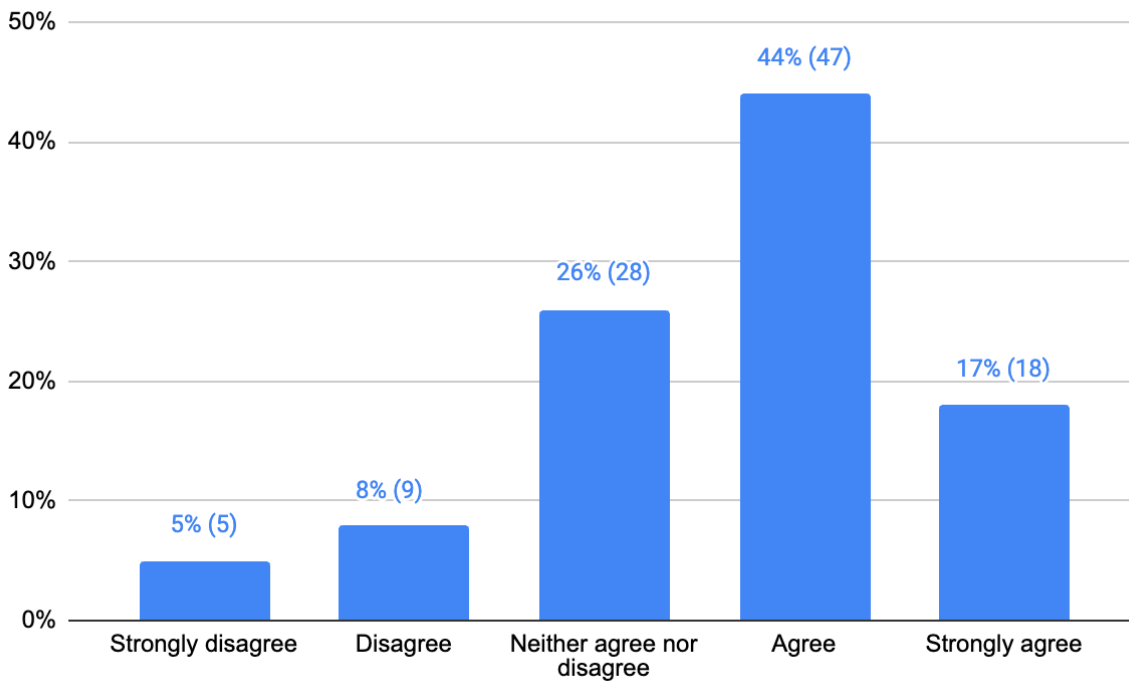
Source: *Author's work*

3. *Online vendors can provide me with more relevant promotional information tailored to my preferences or personal interests.*

As illustrated in figure 14, the largest proportion, 52% (56) noted that they agree that personalization provides them with more relevant promotions that are offered to them based on their interest and/or preferences. 18% (19) found the statement completely accurate and 20% (21) were unsure, while 7% (8) disagreed and 3% (3) disagreed completely with the statement.

Figure 14. Perceived benefits of personalization
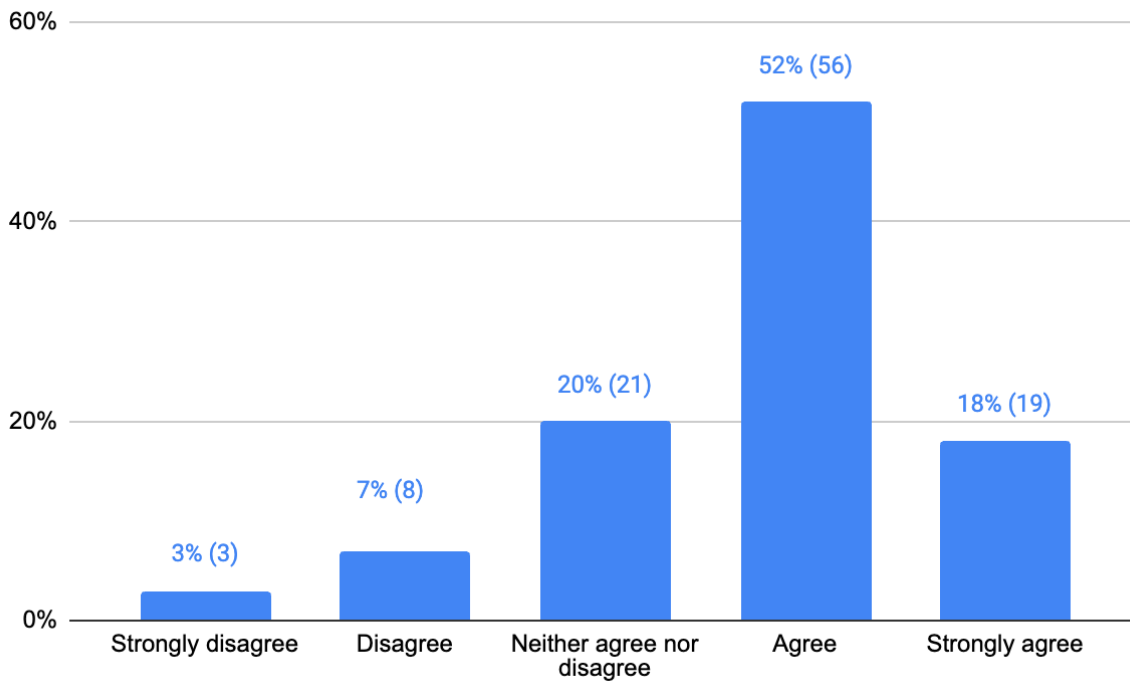
Source: *Author's work*

4. *Online vendors can provide me with the kind of deals that I might like.*

As many as 75% (81) agreed on some level that personalization enables them to receive the deals they might like - 51% (55) agreed and 24% (26) strongly agreed. 18% (19) don't agree nor disagree with the statement, while 4% (4) disagree and 3% (3) strongly disagree with the provided statement. The results are shown in Figure 15.

Figure 15. Perceived benefits of personalization
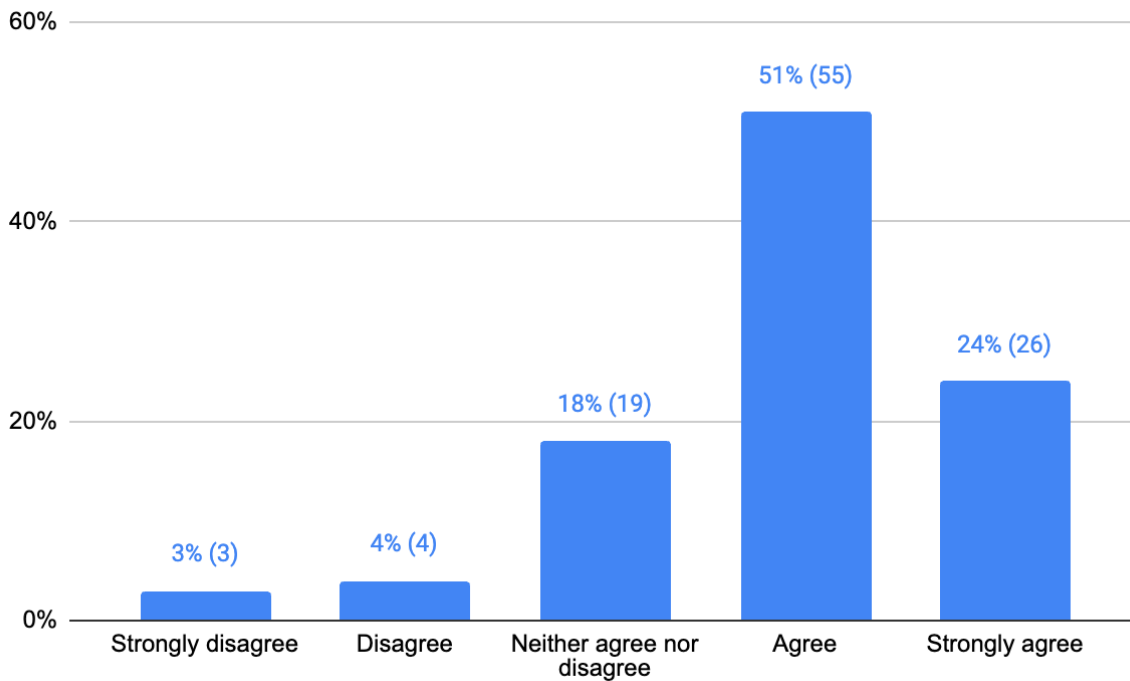
Source: *Author's work*

5. Personalized communication helps me make purchasing decisions.

The results of the fifth and final statement of the section, about personalized communication helping users make their purchasing decisions, are demonstrated in Figure 16. 32% (34) is uncertain whether they agree or disagree, 24% (26) agree, and 25% (27) strongly agree with the above statement. On the other hand, there were 11% (12) respondents disagreeing and 8% (8) completely disagreeing with the statement.

Figure 16. Perceived benefits of personalization

Source: *Author's work*

From the results of the survey's second set of statements, it can be concluded that the respondents mostly agree with the listed perceived benefits of personalization, especially with the ones regarding the more relevant promotions and deals they can be offered based on personalization. However, they are unsure if sharing their personal information can help them find more relevant information more quickly and help them complete a purchase more quickly, and therefore, if personalized communication helps them make purchasing decisions. This might imply that most of the respondents are not that satisfied with the shopping websites' personalization efforts so far, supporting the findings from the McKinsey survey provided in Paragraph 1 that only 23% of consumers believe that retailers' personalization efforts have been successful.

The next section, focusing on users' privacy concerns, includes following statements (again, for each statement, participants marked to what degree they agree with the statement, from 1-5, "I strongly disagree" to "I strongly agree"):

1. *I am concerned that personal information I share through shopping websites can be shared with other companies.*

As shown in Figure 17, as many as 48% (52) strongly agree, 20% (21) agree, 18% (19) are uncertain, 10% (11) disagree, and 4% (4) completely disagree with the statement.

Figure 17. Perceived costs of personalization
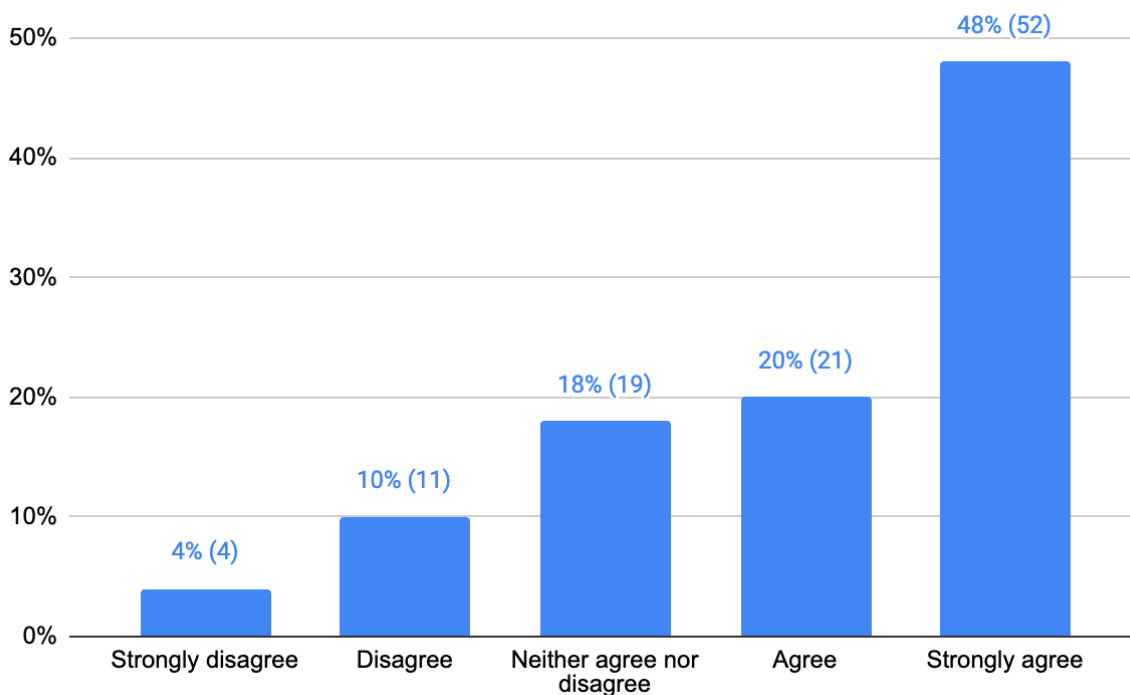
Source: *Author's work*

2. *I find it problematic if shopping websites collect information about my online search behavior.*

Demonstrated in Figure 18, the highest percentage, 38% (41) completely agrees with the listed statement and 25% (27) moderately agrees. 18% (19) don't agree nor disagree, while 15% (16) disagree and, finally, 4% (4) strongly disagree.

Figure 18. Perceived costs of personalization
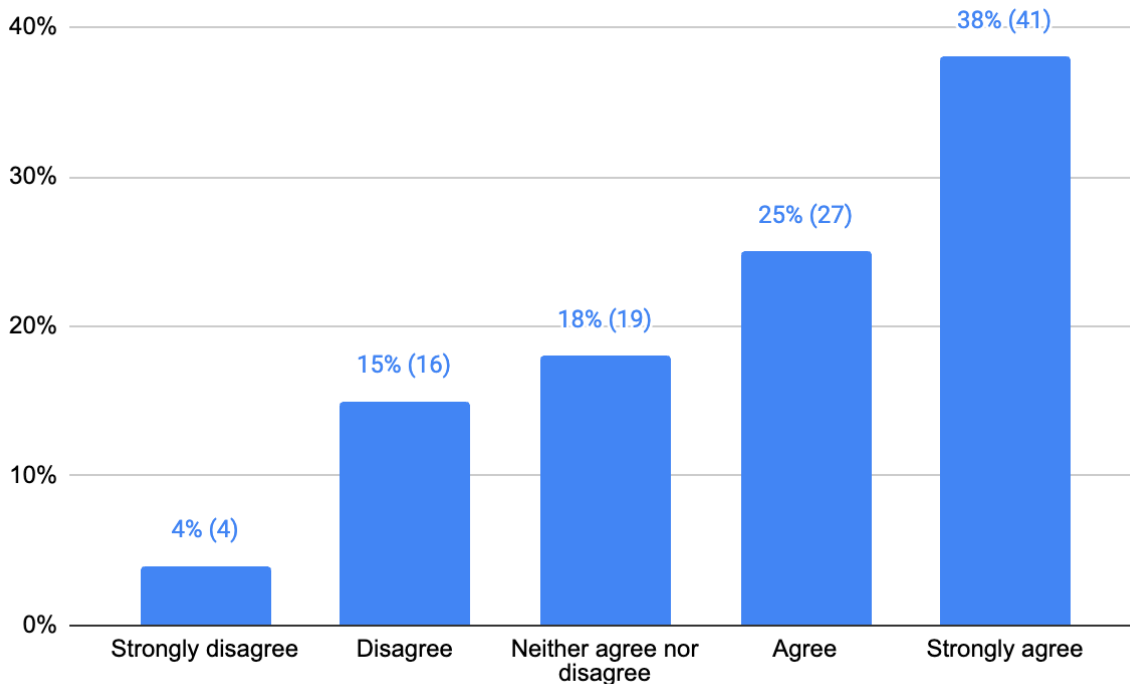
Source: *Author's work*

3. *It is risky to share personal information (such as your name, address, and age) with shopping websites.*

As illustrated in Figure 19, the largest number of the respondents find it risky to share personal information with shopping websites - 29% (31) moderately agree and 25% (27) completely agree. Also a significant proportion, 27% (29), are indecisive, while 17% (18) don't find sharing personal information with websites risky and 2% (2) don't find it risky at all.

Figure 19. Perceived costs of personalization
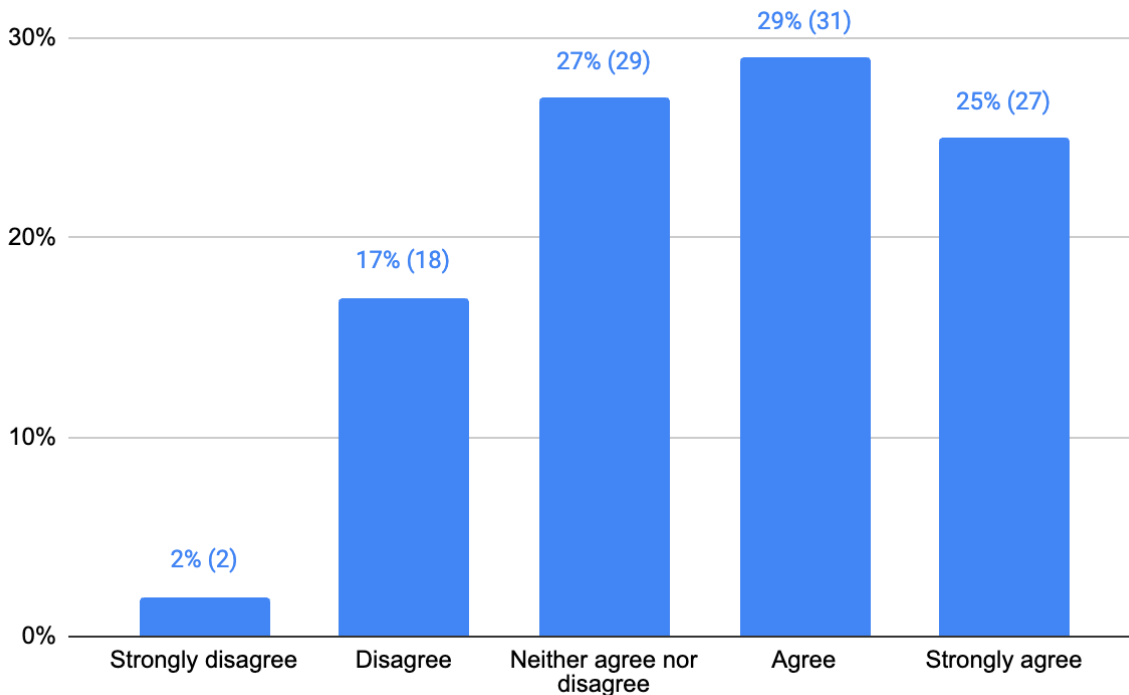
Source: *Author's work*

4. *Personalization causes privacy problems because it may keep track of my web behavior, monitor my clicks and browsing records, and expose my personal information to unknown parties.*

The last statement was about personalization causing privacy problems due to tracking users' web activity and possibility of exposing users' personal data to unknown parties, and the largest proportion, 38% (41), find it very problematic, 30% (32) find the statement moderately accurate, 21% (22) couldn't quite estimate how they feel about the statement, 9% (10) don't find it problematic, and only 2% (2) don't find it problematic at all. The results are shown in Figure 20.

Figure 20. Perceived costs of personalization
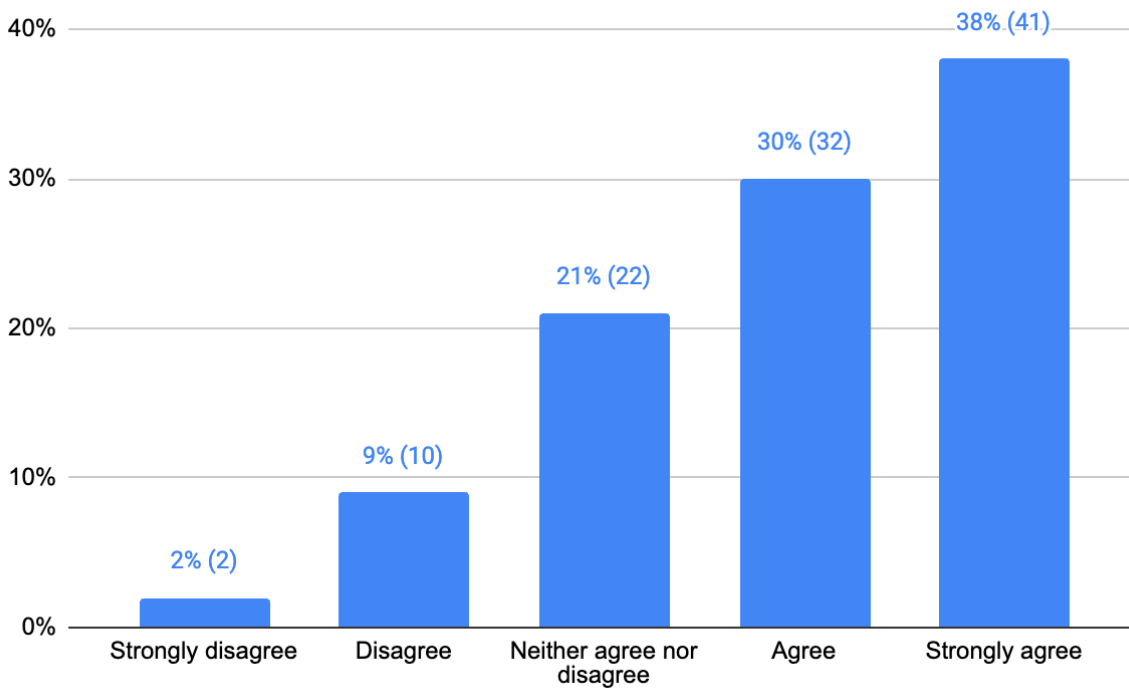
Source: *Author's work*

The responses from the third section of the survey prove the users' privacy concerns related to sharing their personal information for the purpose of getting a personalized shopping experience covered in Paragraph 4, with most of the participants agreeing with privacy concerns that were expressed in the statements.

The table below summarizes the responses from the fourth section, about the importance of specific personalization features (respondents were able to mark how important they find each feature, from 1-5, "Very unimportant" to "Very important")

Table 1. Importance of specific personalization features

Personalization features	Importance grade average
Security of an online store	4,85
Privacy in an online store	4,74
Given ability of personalizing an online store by my needs (e.g. clothing sizes and personal measurements)	4,10
Showing relevant reviews (from other users sharing my needs & preferences)	4,07
Relevant product/service recommendations	4,01
Options to save used filters	3,76
Site entry such as login or register	3,70
Wish lists	3,70
Reward programs	3,70
Showing my last viewed products	3,64
Given ability of personalizing an online store by my preference set	3,60
Options to save my personal information	3,46
Targeted promotions offered to me	3,36
Messaging tailored to my needs	3,33
Options to save my financial information	2,93
Recognition of my name and communication personally addressed to me	2,80

Source: *Author's work*

It can be seen from the table that security of an online store and privacy in the store are the most important to respondents, from the listed features, which was expected considering the responses from the previous section regarding privacy concerns. What is interesting is that, after the security and privacy, the next highest ranked features when it comes to importance are the ability of personalizing store by user's needs (e.g. clothing sizes and personal measurements) and showing relevant

reviews (from other users sharing the user's needs & preferences), which are personalization features that are not commonly used by eCommerce websites. Most websites allow users to filter clothing sizes they're interested in, but not many websites provide users with the ability to create a user profile where they can, for example, specify their personal measurements, so that websites can use that profile specifications to filter or personalize the whole website to the user and provide them with relevant reviews from other users sharing similar profile specifications or characteristics. Relevant product/service recommendations and option to save used filters are the next personalization features in importance, relevant recommendations being provided by most of the shopping websites, and option to save used filters by some (mostly depending on the product or service offer). Reward programs, showing user's last viewed products, wish lists, site entry such as login or register, and the ability of personalizing an online store by user's preference set come next, most of these features being commonly provided. Furthermore, options to save personal information, targeted promotions offered, and messaging tailored to user's needs are marked to have a somewhat lower importance. Finally, options to save financial information and recognition of user's name and communication personally addressed to the user are marked as the least important personalization features by the survey respondents.

Finally, the last section of the survey, with the set of statements answering directly to the research goals, investigates the personalization's impact on customer satisfaction and loyalty. Participants were able to choose how accurate they find the statements on a scale 1-5 (Strongly disagree - Strongly agree) The first statement that was shown to respondents can be seen in Figure 21.

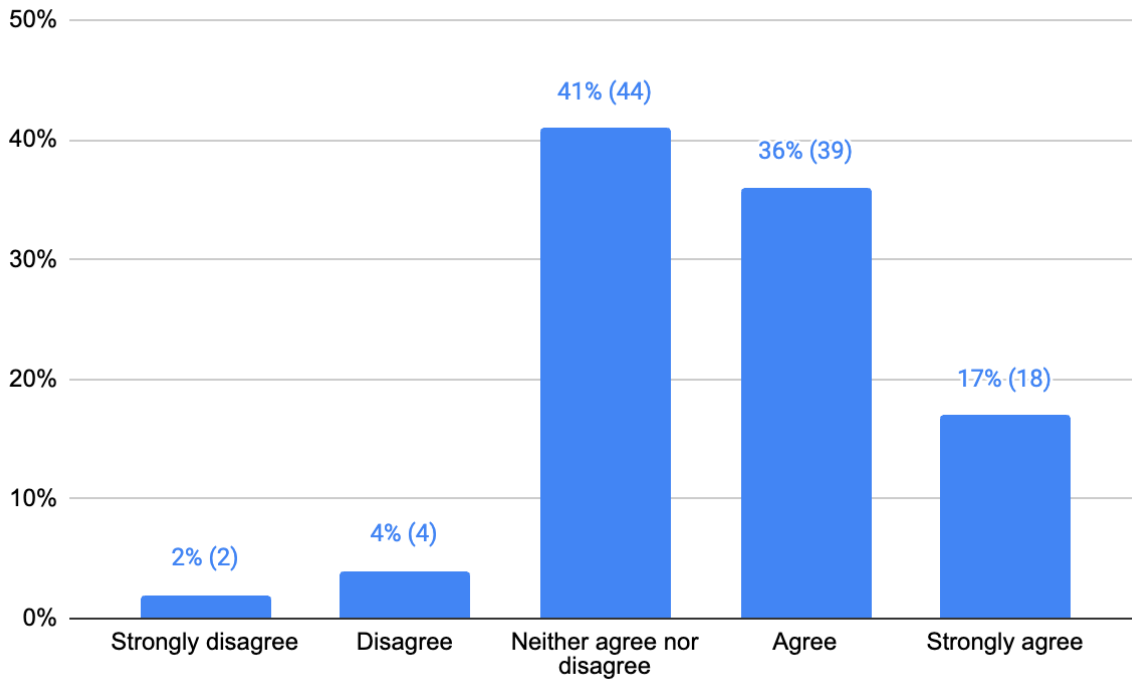Figure 21. Personalization's impact on customer satisfaction
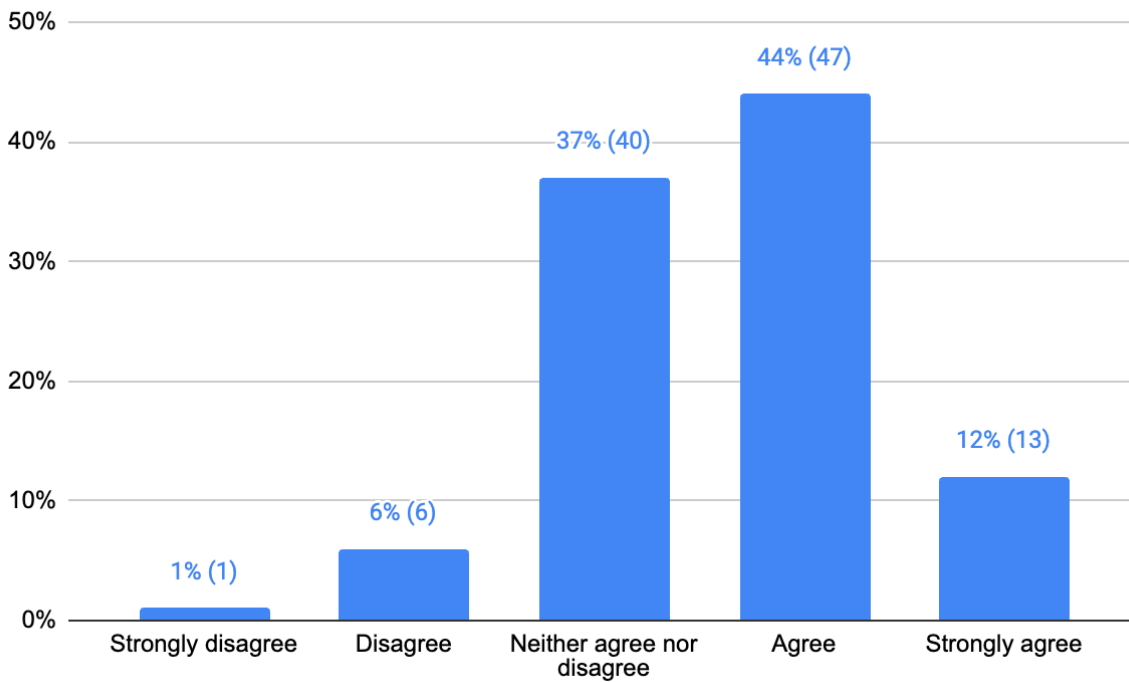
Source: *Author's work*

The statement describes customer satisfaction and positive feelings when purchasing based on personalized services. Most of the participants agree with the statement, 44% (47) marked "I agree" and 12% (13) marked "I strongly agree", 37% (40) are neutral, only 6% (6) disagree and 1% (1) completely disagree with the statement. The results have confirmed the premise that personalization has a positive impact on customer satisfaction.

Finally, Figures 22 and 23 show the last two statements of the survey, describing the effect of personalization on customer loyalty.

Figure 22. Personalization's impact on customer loyalty

Source: *Author's work*

Figure 23. Personalization's impact on customer loyalty
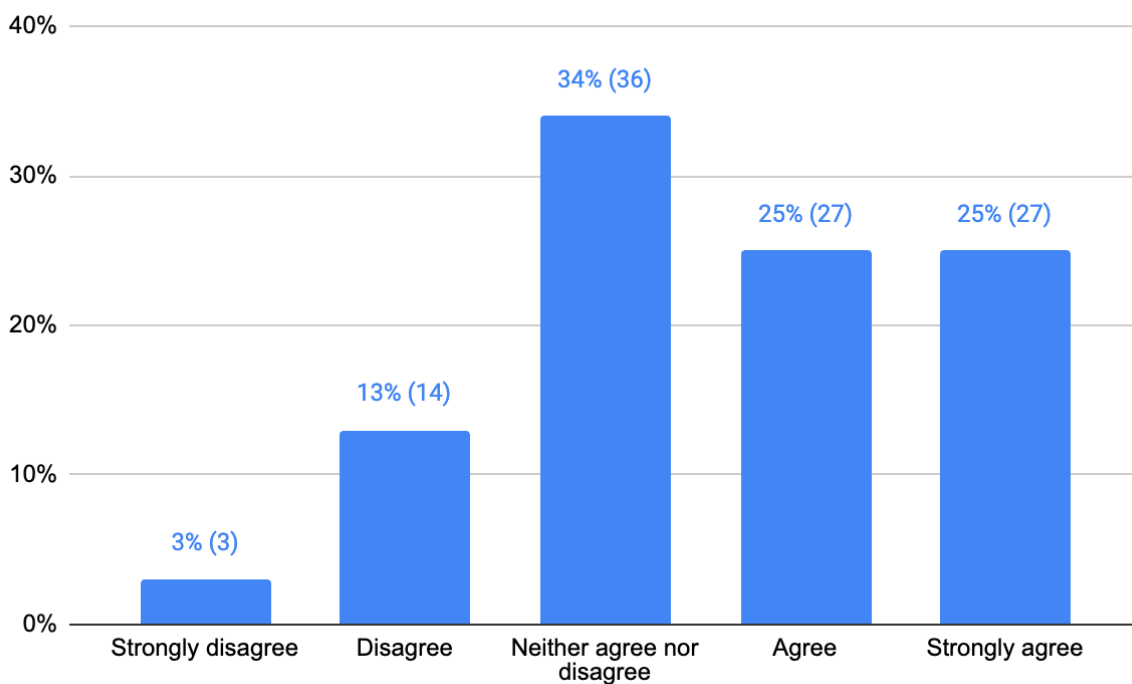
Source: *Author's work*

When asked to mark the accuracy of the statements referring to the effect of personalization and customer loyalty, most of the participants struggled to provide a clear answer. 41% (44) were unsure about the first statement accuracy (see Figure 22) for them personally, and 34% (36) were indecisive about the second one (shown in Figure 23). The reason for the uncertainty might be due to the fact that the provided statements based customer loyalty solely on personalization, and the respondents don't find personalization as that important factor affecting loyalty (compared to e.g. product offering, delivery and return policies, etc.) However, significant proportion of the participants in the survey stated that agree that personalization positively affects loyalty - 36% (39) agree and 17% (18) strongly agree with the first statement, and 25% (27) agree and, again, 25% (27) strongly agree with the second one, which was expected considering the responses regarding personalization's impact on customer satisfaction and the positive correlation between customer satisfaction and loyalty, as stated in Paragraph 3. Finally, a negligible number of respondents stated that they disagree with the statements - 4% (4) disagree and 2% (2) strongly disagree with the first, while 13% (14) disagree and 3% (3) completely disagree with the second statement.

The results of the research show that personalized user experience positively impacts customer satisfaction in eCommerce, however, a significant number of participants of the research are not sure about the positive relationship between personalization and customer loyalty, signaling that personalization may not be the single most important factor affecting loyalty. Regardless, there is also a significant number of positive responses when it comes to personalization and loyalty, meaning that businesses should focus some of their efforts on providing a personalized shopping experience, as a part of their customer retention strategy.

Although being considered as one of the main personalization benefits for users, as explained in Paragraph 4, a significant number of participants are not sure that personalization helps them find more relevant information more quickly, and that it helps them make purchasing decision and complete a purchase more quickly, which can be used as a signal for online businesses to improve their personalized services. The research has also shown that users are still highly concerned about the misuse of their personal information and violation of their privacy, meaning that there is still a

space for improvement for online businesses when it comes to user data collection and data use transparency. Finally, the study has provided insights about the importance of various personalization features, some of which have not yet been incorporated in personalization strategies by many online businesses.

5.4. Limitations and recommendations for future research

A key limitation of the study is the purposive convenience sampling and a sample size. The research provides a better understanding of the effect of different personalization features on customer satisfaction and loyalty in eCommerce and shows that, although users are still highly concerned about their privacy and sharing their personal information with websites, they perceive personalized user experience as beneficial. However, there are limitations to the study. Real-life examples of a highly personalized eCommerce website compared to a website where personalized user experience is poor or nonexistent were not provided in the survey, which would enable the participants to actually experience what was tried to be explained in the statements and could make the statements evaluation easier for them. Additionally, when explicitly asked, respondents can provide answers that are much different from how they would actually behave under given circumstances (for example, most of the respondents expressed a high level of user privacy concerns, when in real life they could be acting very differently - providing consent for a website to collect data about them without spending time on reading the privacy policy first). For that reason, one of the recommendations for future research is to combine conducting a survey with observing users' behavior based on first party data. Also, perceived value of personalization and specific personalization features can be very different for different industries (e.g. entertainment, household goods, electronics and hospitality industry), which can also be compared and examined in future studies.

Another recommendation for future research is to investigate the importance of personalization versus other factors affecting customer satisfaction and loyalty, and also to examine and compare the effect of personalization on satisfaction and loyalty based on different demographic characteristics (e.g. age, level of education, field of study and career, assuming that people working in technology industries value

personalization more, and are less concerned about the privacy issues), which could serve as a guideline for businesses to decide on personalization implementation based on their target group.

5.5. Managerial implications

As customers expect personalized online shopping experiences and view it as beneficial and personalization features as important when deciding where to shop online, eCommerce businesses that haven't yet developed and implemented personalization strategy should rethink their customer retention strategies and start focusing some of their efforts on personalizing user experience for their customers.

Online retailers that have implemented personalization strategy need to revise their strategies by receiving feedback from their customers on whether their personalization efforts have been successful and strive to continuously improve and optimize the user experience they are providing to their customers. When it comes to personalization, there is still a lot of space for improvement for eCommerce businesses, many of which having only basic personalization features implemented on their websites and mobile applications, which have become standard and are no longer setting them apart from the competition. They need to take a step forward and consider testing more advanced personalization features in order to be more competitive in the rapidly growing eCommerce industry.

There is also a space for improvement for online businesses when it comes to transparency of the user's personal data collection and use, since customers are still concerned about sharing their personal information with them, and customer data collection is inevitable for businesses to be able to provide the customers with customized shopping experience.

Businesses should strive to maximize the personalization benefits for customers and diminish their perceived costs of personalization associated with data privacy concerns in order to improve the overall customer satisfaction and, ultimately, maximize the customer lifetime value, which is the business opportunity that should

not be disregarded, especially in the today's eCommerce industry, characterized by high and still growing competition and costs of new customers acquisition.

6. Conclusion

The main objective of the thesis was to study the effect of personalized user experience on customer satisfaction and loyalty in the context of eCommerce, and to present key findings important for future personalization strategies by eCommerce businesses.

In order to understand the importance of personalized user experience in the eCommerce industry today, it was first necessary to define user experience and examine its importance, then to investigate the evolution of eCommerce and industry trends. The eCommerce market rising rapidly is driving the competition and increasing costs of acquiring new customers. Hence, companies need to focus their strategies on customer retention and maximizing the lifetime value of their customers.

To be able to assess the impact of personalization on customer satisfaction and loyalty in eCommerce, it was crucial to describe the relationship between customer satisfaction and loyalty in the industry, and to address the factors that contribute to the customer satisfaction and, ultimately, loyalty. Furthermore, eCommerce personalization strategy with its benefits and challenges focusing on privacy concerns was studied in the thesis. Although users expect personalized online shopping experiences, they are concerned about their privacy and the use of their personal data. Online businesses, therefore, are facing challenging times as they need to find a way to meet users' needs without compromising the privacy of their data, with new regulations making the data collection harder.

In order to fulfil the main objective of the thesis and to propose findings on the impact of personalized user experience on customer satisfaction and loyalty in eCommerce, research was conducted. The results of the research proved the positive impact of personalized user experience on customer satisfaction in eCommerce. Although the studied impact of personalization on customer loyalty was inconclusive to some degree, given the positive correlation between customer satisfaction and loyalty, and a significant number of responses proving the positive effect of personalization on

the customer loyalty, it can be concluded that personalization efforts contribute to the customer loyalty. However, among other recommendations, it is recommended for future studies to examine the importance of personalization versus other factors affecting customer satisfaction and loyalty. The study also showed that there is still a space for improvement for online businesses when it comes to personalized services and personalization features provided, but also when it comes to transparency of the data collection and use. The

sooner businesses revise their personalization strategies and adapt them to the users' needs and expectations, more competitive they can expect to be in this fast growing and ever-changing industry.

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Appendices

Appendix A. Online survey

APPENDICES

APPENDIX A

ONLINE SURVEY

The impact of personalized user experience on customer satisfaction and loyalty in eCommerce

This survey is an integral part of research of a master thesis at the Faculty of Economics & Business, University of Zagreb. The survey is completely anonymous and all collected data will be used in an aggregated form and exclusively for the purpose of master thesis research. The thesis will analyze user experience and customer satisfaction and loyalty in eCommerce, perceived benefits of personalized user experience in eCommerce, perceived costs with emphasis on users' privacy concerns and the importance of specific personalization features, and finally, as a basic criterion for analyzing the results, personalization's impact on customer satisfaction and loyalty. The survey should take up to 5 minutes to solve and consists of five parts: the first part measures the demographic characteristics of the respondents, the second part covers questions related to perceived benefits of personalization, the third part refers to perceived costs of personalization with emphasis on users' privacy concerns, while the fourth part includes questions about the importance of specific personalization features when deciding where to shop online. The fifth, and also the last part, refers to personalization's impact on customer satisfaction and loyalty. In order for the results of the research to be as reliable as possible and for the expected scientific contribution of the work to be realized, the goal is to get responses from at least 100 participants of the research.

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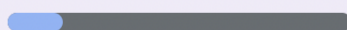
Dalje   Stranica 1 od 6   Izbriši obrazac

The impact of personalized user experience on customer satisfaction and loyalty in eCommerce

Demography

The following questions are optional, require your demographic information and allow to better understand background characteristics of the respondents.
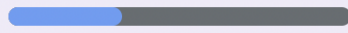
What is your age group?

○ 19 or younger

○ 20-29

○ 30-39

○ 40-49

○ 50-59

○ 60 or older

What is the highest level of education you have completed?

◯ Less than high school degree

◯ High school degree

◯ Associate's degree

◯ Bachelor's degree

◯ Master's degree

◯ Doctoral degree

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Perceived benefits of personalization

This section covers questions related to respondents' perceived benefits of personalized user experience in eCommerce. On a scale 1-5, where 1 represents "I strongly disagree" and 5 represents "I strongly agree", which of the following benefits of personalization do you find accurate?

Sharing my personal information with shopping websites helps me find more relevant information more quickly, and helps me complete a purchase more quickly.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Online vendors can provide me with personalized deals tailored to my activity context.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Online vendors can provide me with more relevant promotional information tailored to my preferences or personal interests.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Online vendors can provide me with the kind of deals that I might like.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Personalized communication helps me make purchasing decisions.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

The impact of personalized user experience on customer satisfaction and loyalty in eCommerce

Perceived costs of personalization with emphasis on users' privacy concerns

This part of the survey covers questions related to respondents' perceived costs of personalized user experience in eCommerce. On a scale 1-5, where 1 represents "I strongly disagree" and 5 represents "I strongly agree", which of the following costs of personalization related to user privacy concern you?

I am concerned that personal information I share through shopping websites can be shared with other companies.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I find it problematic if shopping websites collect information about my online search behavior.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

It is risky to share personal information (such as your name, address, and age) with shopping websites.

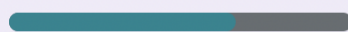|	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Personalization causes privacy problems because it may keep track of my
web behavior, monitor my clicks
and browsing records, and expose my personal information to unknown parties.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

The impact of personalized user experience on customer satisfaction and loyalty in eCommerce

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Importance of specific personalization features when deciding where to shop online

On a scale 1-5, where 1 represents "Very unimportant" and 5 represents "Very important", how important is each of the following online personalization features when you decide where to shop online?

Site entry such as login or register

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Wish lists

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Reward programs

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Given ability of personalizing an online store by my preference set

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Given ability of personalizing an online store by my needs (e.g. clothing sizes and personal measurements)

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Recognition of my name and communication personally addressed to me

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Options to save my personal information

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Options to save my financial information

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Options to save used filters

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Showing my last viewed products

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Showing relevant reviews (from other users sharing my needs & preferences)

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Security of an online store

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Privacy in an online store

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Relevant product/service recommendations

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Messaging tailored to my needs

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

Targeted promotions offered to me

	1	2	3	4	5	
Very unimportant	○	○	○	○	○	Very important

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Personalization's impact on customer satisfaction and loyalty

On a scale 1-5, where 1 represents "I strongly disagree" and 5 represents "I strongly agree", how accurately do the following statements describe your satisfaction and loyalty towards shopping websites that provide you with personalized user experience?

In general, when I purchase based on personalized services I feel satisfied, excited and/or curious.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

In the future I intend to continue shopping online based on personalized services.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

I am more likely to make a repeat purchases in the future from shopping websites that provide me with a personalized user experience than the ones that don't use personalization.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

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