

# **The effect of the COVID-19 pandemic on Digital Transformation in retailing: a Master's thesis**

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## **Abstract**

The Coronavirus has affected every aspect of daily operations, but the direct effect of the pandemic on consumer buying behavior has been reported vaguely given the magnitude of the situation. While the pandemic has visibly accelerated e-commerce in retailing, thus paving the way for digitalization, it has also led to rapid channel migration from off- to online shopping and disrupted the traditional way of purchasing. In this thesis, the author examines the impact of the pandemic on consumers and companies alike. The systematic literature review has revealed a lasting impact on e-commerce and a change in traditional retailing, highlighted the implications for distribution centers and internal company operations related to the BMC, examined the changes to the customer journey and loyalty, and introduced omnichannel retailing as a possible solution towards a seamless shopping experience. Next to this, twenty-one key factors have been identified as influencing the way a consumer chooses a retailer. To examine to which extent the findings of the review correspond to actual results, an online survey was developed based on these key variables. Out of them, five factors came out as being very important to customers when selecting an online retailer - delivery price, delivery time, the availability of product images, product details, and website usability. Furthermore, the survey results determined an additional choice influencing factor - customer reviews, which complements the initial theoretical findings. On the other hand, the study also tested for factors influencing the online shopping regularity and concluded that the introduced variable model can predict the online shopping regularity with a 62% accuracy. Separately, three out of the seven selected factors disclosed significant relationships - two negative ones between online shopping regularity and delivery time and shopping experience, and a positive one between online shopping regularity and time spent shopping online. These results not only indicate the vast area of points retailers must focus on when designing customer strategies, but also suggest which factors drive the customer decision-making process.

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## **Chapter 1 - Introduction and research background**

The COVID-19 pandemic has obstructed retailing operations, compelling companies to transfer their activities online (Arora et al., 2020). This rapid shift has introduced a new wave of digital transformation as a potential coping mechanism (LaBerge, O'Toole, Schneider, & Smaje, 2020). Imperatively, using digital assets and principles to reach customers and mitigate the connectivity issues caused by the pandemic has defined the need for a value-adding customer approach (Silva, Duarte, & Sundetova, 2019). In this sense, to better add value and cater to consumer needs in times of rapid online shopping acceleration, retailers are facing a problem with customer attraction and retention due to the increased competition in the digital market. The available literature lists different factors impacting a customer's retailer choice, however, a summary of which factors are the primary determinants of retailer choice and shopping frequency is limited to none.

### **1.1. Research problem, research issues and contributions**

The following research question is posed: "What was the effect of the COVID-19 pandemic on the Digital Transformation in retailing?" The goal of the thesis is to discuss the impact the Coronavirus has had on retailing and the study is conducted in two parts - a literature review and a survey. The systematic literature review is focused on accounting for the digital transformation variable as the main driver for changes in the business model. Firstly, the effect of digital transformation on retailing is examined, followed by a review of the impact the pandemic has had on e-commerce and what that entails for the customer journey. Furthermore, the consequences for companies are explored in-depth by defining three major factors. Lastly, omnichannel strategizing is analyzed as a potential bridge towards a smoother customer journey.

On the other hand, an online survey is developed based on the online shopping factors identified during the literature review and focuses on determining whether the theoretical results correspond to the practical ones. In this sense, the survey tests which factors consumers perceive as important when selecting a retailer, as well as, which factors determine how much time they spend shopping online. This way, the research contributes not only scientifically, but can also be used as a guide for retailers to better tailor their target strategies or improve their websites in a practical manner.

### **1.2. Justification for the research**

The reasoning behind the selection of this research topic is twofold. Firstly, the Coronavirus pandemic has dramatically reshaped the traditional customer journey, disrupting many touchpoints along the way. Furthermore, apart from being an MSI research priority, gaining a structured understanding of the major factors affected by the pandemic is considered to be of relevant interest. Current literature summarizes the different effects of the pandemic on customer buying behavior, however, there is not enough research on which factors are the most important to consumers in the selection of a retailer. This signifies the research as important since in increasingly competitive times for digital retailers, where shopping is primarily done online, being aware of what influences consumer choice is imperative.

The unique aspect of the research is that it is tasked with finding and outlining all of the potential factors associated with online shopping and designing a study accordingly, to determine which of those influence the online shopping regularity of a customer.

### **1.3. Methodology**

To bridge the aforementioned gap in which factors influence the retailer choice of a consumer as a direct consequence of the Coronavirus, the literature review is tasked with investigating the effects digital transformation has had on e-commerce during the pandemic, the importance of having a well-integrated (omnichannel) customer journey strategy, and how these factors have led to (forced) channel migration. Secondly, the outcome of the review provides a valuable foundation and outlines the factors to be examined during the online survey.

## **Chapter 2 - Literature review**

To execute the systematic literature review, firstly a research plan was prepared. The key-word focus entailed terms such as "COVID-19", "e-commerce", "digital transformation", "retailing", and applicable synonyms. The initial search process listed 75 articles, out of which 60 were selected for initial review, and then narrowed down to 24. It is imperative to mention that the article language was set to English, whereas, primarily Scopus, Google Scholar, and Web of Science were used. The publication years dated from late 2019 to the present day. The final number of articles was divided into separate categories based on the initial logical structures - digital transformation in retailing, COVID-19 and e-commerce, COVID-19 and customer journey, COVID-19 and retail, and omnichannel.

### **2.1. Digital transformation in retailing**

The advances in information technology are capable of completely changing the way consumers interact with retailers, as well as the daily commercial operations (Van Bruggen, Antia, Jap, Reinartz, & Pallas, 2010). One such advance is digital transformation. Digital transformation has different effects on retailers, commonly urging for rapid response actions (LaBerge et al., 2020). Besides this, Verhoef et al. (2019) argue that this information technology advancement has four primary effects on retailing - influencing the current company cost structure, making use of digital tools to optimize the supply chain process, changing customer behavior by affecting both on- and offline sales within the company, and accounting for consumers becoming more connected and informed.

Rapid digital transformation urges retailers to undertake different actions to successfully respond to environmental changes without losing customer value. One of the approaches, as argued by Verhoef et al. (2019) is to establish a flexible organizational structure. The literature review has outlined multiple arguments for the benefits of flexibility as an organizational tool amidst a rapidly changing environment (Aryapadi et al., 2020; Binder, Deetjen, Kaesler, Mußhoff, & Schollmeier, 2021; Lee & Lee, 2021; Van et al., 2010; Cortez & Johnston, 2020; Verhoef et al., 2019; Shi, Wang, Chen, & Zhang, 2020; Peltola, Vainio, & Nieminen, 2015). Firstly, being flexible allows retailers to consecutively switch between organizational roles, granting a short response time to address the fluctuating consumer needs. Furthermore, flexibility aids in embracing and introducing new technology at the workplace and helps to quickly respond to competition, and regain customer loyalty.

In contrast, apart from a flexible organizational structure, digital assets are outlined to be effective competition tools for adopting digital transformation (Verhoef et al., 2019; Silva et al., 2019). To provide an example for digital assets, after the hit of the COVID-19 pandemic, many retailers have started either investing in or developing digital technologies. Among these assets are

machine learning, internet of things, big data, AI, cloud computing, 3D printing, autonomous vehicles, virtual and augmented reality tools, and robotics (Robinson, 2020; Lee & Lee, 2021). Verhoef et al. (2019) argue that being able to make use of such digital assets is an integral part of the newly adopted decision-making process. Having more data, ultimately, contributes to an informed decision-making. The next step for a retailer in leveraging digital transformation is the development of a digital platform.

The proper development of a digital platform depends on a strong digital growth strategy. A strong digital growth strategy can, in turn, contribute to higher sales and new market entry. Consequently, the literature review has outlined managerial advice to accomplish this undertaking. On one hand, Verhoef et al. (2019) advise retailers to make use of the Ansoff matrix by determining which strategy is best suited to their current situation and can benefit from leveraging digital transformation into new market creation. However, Binder et al. (2021) implore that the strategy selection must be in line with the state of the retailer's digital transformation. This is because the introduction of a new strategy will impact not only the internal decision-making process but also the company's technical capabilities. Additionally, the decision making process within the company is linked to managerial leadership (setting KPIs), and will, consecutively, reflect on the employee's mental capabilities (having to reach the KPIs), making this a nuanced process (Cortez & Johnston, 2020). Furthermore, Binder et al. (2021) argue that another point of attention for a new growth strategy is data analysis. After the strategy is implemented, the retailers are urged to use digital assets to measure and keep track of their KPIs to determine whether separate parts of the process require more attention, and which are performing positively. This can be done by monitoring web measurement metrics such as landing page views, website clicks, mobile data, and internet traffic (Verhoef et al., 2019). Finally, Aryapadi et al. (2020) argue that retailers are required to carefully plan their long-term goals since it is expected that the COVID-19 pandemic will continue accelerating and fostering this digital transformation. Consequently, digital transformation leads to an accelerated e-commerce, which is examined in the next chapter.

## **2.2. COVID-19 and e-commerce**

Retailing bridges the gap between consumer needs and products or services. It entails offerings, logistics, legal aspects, and monetary transactions. Currently, worldwide retailing is undergoing a rapid change from a brick-and-mortar to an internet-based format (Reinartz, Wiegand, & Imschloss, 2019). The global pandemic has had a stoic effect on retailing as a whole (Lee & Lee, 2021) – due to the world population being quarantined and self-isolated, an increasing number of orders placed online have strengthened the way for e-commerce (Aryapadi et al., 2020; Binder et al., 2021).

According to Fiedler, Hazan, Ruwadi, and Ungerman (2020), e-commerce spending has had an increasingly high shopping activity in the following categories – groceries, child essentials, apparel, and skincare. Apart from a consumer perspective, COVID-19 has also had a direct effect on health in retailing.

Health in retailing is primarily used in regards to supply chain (Aryapadi et al., 2020), concerning the health of the personnel working to meet customer demand. In regards to this, many retailers have sped up the digital transformation within their companies to minimize face-to-face interactions and continue to supply their products. On the other hand, the supply chain part of retailing has faced a second problem. In line with the surge of e-commerce orders accelerated by the pandemic, the logistics sector has been struggling to cope with the new demand. Since these developments have complicated the traditional customer journey, many companies have opted for the

integration of an omnichannel strategy (Bartman, McConnell, Neuhaus, & Scheringer, 2021). Consequently, apart from the disruptions in delivery processing, Lee and Lee (2021) argue that it is the accelerating digitalization that, ultimately, boosted e commerce. Lastly, related effects are examined in more detail in sub-chapter 2.2.4.1.

### **2.3. COVID-19 and the impact on customer journey**

To reflect on the effect digital transformation has had on the shopping behavior of customers, the customer journey should first be examined. Van Bruggen et al., (2010) argue that the customer journey is comprised out of several stages, with marketing being an integral part of the process. Primarily, the consumers begin with an information search on the product/service of interest, and later, place an order based on their choice. Consequently, this way, the clients engage in a monetary transaction with the retailer. The authors outline that the fervency the consumers proceed through the stages of the buying process depends on the availability of their time, experience, and the characteristics of the product of interest. Each stage of this process, however, intertwines with the need for the marketing channel to provide channel-specific services. Taken retailers can properly map out the customer buying process, the most suitable channel per phase can be determined - this is how a channel roadmap is built.

Apart from the channel roadmap, another important factor in the customer journey is the engagement strategy. Bommel, Edelman, and Ungerman (2014) argue that customer behaviors need to be correlated with the past shopping activities the clients have had with the company. This correlation can determine what type of content the consumers interact with and will, hence, aid in formulating an effective engagement strategy. With the frequent technological developments, crafting an engagement strategy is argued to have become more complex. Customers are more digitally adept and in control of what their main attention focus is on, which means that to capture customer value, retailers must create a compelling customer experience based on each stage of the customer's journey. This is imperative, since, presently, customers can engage with retailers from a plethora of touchpoints via diverse media and channels, heightening the need for a seamlessly integrated customer experience (Lemon & Verhoef, 2016).

Having considered how a channel roadmap and an engagement strategy are linked to the customer journey, it can be discussed that the pandemic has had a significant effect on the purchasing pattern of customers. A survey by McKinsey indicated that consumers are confident their spending will be disseminated over various channels. Customers from Western Europe will increase their spending in offline channels, such as convenience stores, to purchase essential items such as groceries and household necessities, whereas, respondents from the US indicate that they would use online channels to have the same products delivered to their homes (Aryapadi et al., 2020). The channel migration towards an online format has contributed towards the interviewees indicating that they will shop online for non-essential items. Additionally, the survey findings indicate a rapid download pattern of delivery applications (Verhoef et al., 2019).

Finally, the literature review has indicated that two pre-pandemic features continue to be important to consumers – namely, free returns and product delivery, as well as expedited shipping (Fiedler et al., 2020). Moreover, an argument by Kim and Chun (2018) is used to annotate that another factor of importance for customer buying behavior is the availability of information. The literature has indicated that for a high buying intention, the customers must be aware of which items are in stock. In line with this, clients are less likely to place an order with a website that fails to provide information on the availability. Consequently, it can be argued that having current and

relevant data in the decision-making process is of high value to the consumer. This is attributed to the presence of information contributing towards making an informed decision (Reinartz et al., 2019).

## **2.4. COVID-19 and the impact on retail**

The literature review has outlined three major effects the accelerated digital transformation has had on companies. The first issue is focused on the observed changes in distribution centers, the second addresses the impact on customer loyalty, and the last discusses the consequences on internal company operations.

### **2.4.1. Distribution centers**

To cope with the rising order volumes (Lee & Lee, 2021), retailers have had to adapt their logistics operations (Aryapadi et al., 2020). Alicke, Azcue, and Barriball (2020), further underpinned by Aryapadi et al. (2020), argue that the increase in customer demand has outlined concerns for the personal safety of the supply chain personnel. Notably, distribution center employees are required to undergo health checks, the number of people per shift has decreased, and additional costs on sanitizing the equipment have been incurred. To navigate the new digital landscape, the employees are cross-trained in using digital assets for essential supply chain functions and are required to comply with mandatory health protocol.

On the other hand, the surging demand has left many retailers without stock. To combat this caveat, companies have started to assemble strategic partnerships with parties, different from their usual suppliers and manufacturers (Cortez & Johnston, 2020). Ultimately, this has driven a change in incoterms - looser payment conditions and a larger delivery window have been established (Aryapadi et al., 2020). Additionally, the goal to retain customer value is observed to be related to the on-shelf product availability and product replenishment opportunities, underpinning the desirability of these strategic partnerships.

The on-shelf availability paves the way for the last identified issue with distribution capacity - stock-outs. To address this caveat, retailers have assigned their employees to product categories with the fastest sales, aiming to increase the operational capacity (Aryapadi et al., 2020). An additional solution to the stock-out inventories is argued to be redirection (Binder et al., 2021). To save operating expenses and assure the value of speedy delivery, many retailers have allocated their inventories to locations where the product demand is higher. Lastly, to avoid delivery delays, retailers have begun shipping directly to stores and consumers instead of distribution centers (Aryapadi et al., 2020).

In conclusion, to cope with the discussed issues in uncertain demand surge, retailers are advised to make use of digital assets in terms of marketing insights and company databases, to be able to design and plan a reliable supply chain in the future (Alicke et al., 2020; Aryapadi et al., 2020).



#### **2.4.2. Customer loyalty**

The second direct effect of accelerated e-commerce on retailers has been the decreasing customer loyalty. In this sense, Fiedler et al. (2020) argue that building an engagement strategy to provide customers with inherent value is essential. Being able to primarily shop online, clients have focused on selecting retailers who can provide fast and free of charge deliveries, offer websites with detailed product descriptions, product images, and quick page loading (Cortez & Johnston, 2020). This is further underpinned by Binder et al. (2021) who define the three elements of increasing importance as an aftermath of the pandemic to customers (in terms of online navigation) as being the loading speed of the website, the quality and ability to capture attention on the landing page, and the quality of user experience during the journey.

Furthermore, digital showrooms have been argued as an effective catalyst towards establishing new customer ties since they offer the ability to ask questions and interact with clients on one platform (Cortez & Johnston, 2020). In turn, customers are more open to providing personal details due to the impact of the Coronavirus being a driver for communication. Ultimately, retailers can use and connect this information via digital platforms to ensure optimal customer value.

Additionally, another driver for customer value is claimed to be social media. Retailers can use their channels to inform customers on promotions or events, as well as answer client questions to further drive value. An alternative value driver, as indicated in the study by Zhuang, Fang, and Cai (2020) is O2O coupons. The research has concluded that the severity of the pandemic in the customer location affects the client's intention whether to claim the coupon online or offline. In this sense, online-to-offline coupons can be considered a driver of customer value.

On the other hand, customers have expressed behaviors in support of social causes by retailers, and have opted for convenient offline shopping devices such as self-check-out stalls, mobile/contactless payment, mobile preorder and offline pickup, and even AR for fashion retailers as a virtual changing room. Consequently, to be able to recapture customer loyalty, retailers must first understand the journey of their customers, acquire the essential digital assets and organizational capabilities to cater to them, and integrate them into a seamless customer journey (Binder et al., 2021; Verhoef et al., 2019).

#### **2.4.3. Internal firm operations**

Lastly, internal company operations have also felt the impact of the pandemic. One of the consequences of the forced channel migration is that not every company is fully prepared to integrate digital assets. Alternatively, Robinson (2020) argues that technology-based companies, on the other hand, have benefited from the impact the crisis has had on the digital transitioning at the workplace since their services have become essential in transferring jobs online. Albeit the duality of the situation, Fiedler et al. (2020) underpin a few solutions for managers to cope with the difficulties of the digital transformation. The authors argue that sales professionals should be given the necessary digital assets to aid customers in allocating the products they are interested in or suggesting alternatives – in sum, mobile applications should be made an integral part of the commercial process.

Ultimately, the integration and availability of digital assets has more advantages. Taken the company has a suitable data set available, it can identify what consumers regard as missing in their e-commerce programs (Cortez & Johnston, 2020). The benefits, apart from contributing to customer experience, are also the digital footprint the companies can acquire. The collected customer data can be used to optimize promotional strategies and personalize customer profiles by suggesting

discounts on products of interest (Shi et al., 2020). Additionally, the programs R and SAS can be used to model marketing efforts and customer journey patterns and identify potential problematic points before they occur, as well as target new customer groups. The article by Cortez and Johnston (2020) presents an example of utilizing such data to identify whether consumers prefer shopping on- or offline, and whether they respond to e-mail marketing on specific days, thus altering their mailing campaign towards these days.

In contrast, despite the efforts towards a quick adaptation in using digital communication software such as MS Teams, it has been recorded that employees do not see it as effective as face-to-face interaction (Cortez & Johnston, 2020). This, in turn, contributes to longer meetings, and, in sum, to longer working days. The authors argue that for an optimal working day, employees should have ten-minute breaks after consecutively working for two hours, and should be provided with stress management tools if struggling.

Furthermore, the literature review has outlined that retailers need to integrate proactive strategic feasibility to better combat managerial uncertainty. In other words, middle managers should be delegated non-critical tasks to foster organizational agility and flexibility (Cortez & Johnston, 2020). Furthermore, Verhoef et al. (2019) argue that a company structure with a low hierarchy can contribute to an easier transition in times with a rapidly changing environment. Multiple top-down managerial levels are argued to be less attractive during this period of accelerated digital transformation since the bureaucratic procedures reduce innovation and are more time-consuming (McAuley, Duberley, & Johnson, 2014). This is imperative since leadership drives the social exchange within a company.

Lastly, using webinars instead of on-location employee training is argued to be a feasible alternative given the circumstances (Verhoef, 2019; Cortez & Johnston, 2020).

Conclusively, it has become clear that the rapid convergence of offline to online channels indicates the importance for retailers to develop a seamless cross-channel customer experience to prevent being outdone by the competition, and to continue delivering value to customers (Bommel et al., 2014). Furthermore, Reinartz et al. (2019) argue that the value chain has shifted from the traditional structure of manufacturer -> retailer -> consumer. Presently, each group of participants in the value chain can directly reach the consumer, thus presenting increased competition of capturing value. This, in turn, indicates the need for adaptability and flexibility for customers to seamlessly navigate across retail channels. Van Bruggen et al. (2010) argue that for a company to have a fluid customer experience, it will first have to make sure it has the required support systems and technical capabilities required to foster omnichannel customer interactions. Omnichannel, as a solution, has been brought forth in this case since it entails being active in both online and offline channels, however, without interrupting the customer journey and allowing for a seamless translation from one touchpoint to another (Lazaris & Vrechopoulos, 2014). This presents companies with opportunities to further generate value down the value chain by allowing for a higher degree of customized services (Lee & Lee, 2021). These changes are imperative since the post COVID economy is argued to entail a wider application of digitalization to every part of modern society, and many of the "new normals" are going to stay (Robinson, 2020). The next chapter discusses the omnichannel concept as a proposed solution.

## **2.5. Omnichannel - a strategy in retailing**

A few years back, Bommel et al. (2014) argued that by 2019 the retail market will be primarily based on an integrated customer experience, spanning over both virtual and physical shopping channels

(Kim & Chun, 2019). Presently, the consumer journey has already begun changing with the introduction of digital assets (Robinson, 2020; Lee & Lee, 2021). In other words, the customers are offered a plethora of choices in researching and acquiring products and services of interest (Kim & Chun, 2018). This makes digital platforms a feasible way to capture customer value by offering customized promotions and, thus, increasing the overall retailer revenue.

Apart from the introduced attractiveness of using such an integrated customer experience strategy, the reasoning behind its popularity in the past two years has to do with the global changes across the world. Ultimately, Kim and Chun (2018) argue that a new strategy in retailing is dictated either by the manufacturer, where the goal is to acquire more market power in different stages of the supply chain, or based on the decision-making of the retailer. However, a third factor has resurfaced - currently, the driver for changing strategies within commerce is the global pandemic, opting for a rapid solution to combat the risk of entirely losing offline channels (Peltola et al., 2015; Zhuang et al., 2020). The observed channel migration from offline to online platforms establishes an impending concern regarding which channel will assume the leadership position within distribution activities. In this sense, Van Bruggen et al. (2010) argue that the channel leader is the channel that has the biggest impact on the value of the products or the customer experience.

Accordingly, an omnichannel strategy includes the entire commercial package - supply chain services (shipping and logistics), commerce and sales tools, marketing know-how in terms of customizable promotions, as well as performance management based on digital assets (Kim & Chun, 2018). Customers can access the retailer's products from a mobile application, desktop computer, or a brick-and-mortar store. This strategy is perceived as attractive since it entails that the customer journey is uninterrupted. Consequently, every stage and touchpoint is linked, enabling the client to acquire products without a change in price despite the channel they are using (Kim & Chun, 2018; Verhoef, Kannan, & Inman, 2015). The following sub-chapters examine the concept of omnichannel strategizing in further detail.

### **2.5.1. Introduction to omnichannel retailing**

To illustrate what an omnichannel does, an example by Bommel et al. (2014) is presented. The journey begins when the consumer is set on buying a product. Firstly, the client will use the internet to acquire information on the articles - taken an item of interest is identified, it can be added to the wish list on the online platform. Following, the consumer would like to purchase the product, however, they will want to see it in person first. Following the directions to the offline store by using a location application, the client is welcomed at the store by receiving a push notification in the app of the retailer. The enabled location is followed by an offer specifically tailored for this customer - a discount on the product of interest until the end of the day (Peltola et al., 2015). Moreover, the application of the retailer can provide directions to the section of the store containing the product. Taken the retailer has integrated a "call button" as a digital asset to their application, the customer can press it to speak to the staff. This gives them the option to ask questions, receive recommendations, and additional facts about the product. Assuming a deal is made, and the customer decides to purchase the product, they receive the opportunity to link their purchase to social media, where they can write a review or ask members of their network for opinions. Before the transaction is completed, the retailer may offer a "virtual designer" add-on, where the customer can tailor the environment to see how the product would look in their home. After the decision to purchase has been made, the client can use a contactless device to confirm payment, which sends them delivery details. The exact delivery details contribute to better planning on the side of the consumer in allocating when to accept the product. After the shipment has been received, the retailer may send

personalized suggestions to the client on other products based on their purchasing history, provoking the cycle to start anew. Conclusively, the clients are presented with unique flexibility to transfer from one channel to the other without losing information (Shi et al., 2020).

Moreover, the article by Peltola et al. (2015) underpins the benefits of smooth transition omnichannel strategies offer. Based on their arguments, as further backed up by the presented example, customers are offered a convenient way to pin down their product of interest, and choose the most suitable way to receive it. Apart from the benefits of a unified journey for the consumer, the retailer can use the acquired data and integrate it into their information system. Affirmatively, being aware of the purchase history of a customer can help the firm allocate the channels this customer prefers to use and contribute to specifically tailored promotional strategies to further increase customer value and company revenue.

Deriving from this, it can be concluded that every stage of the customer journey presents the company with an opportunity to add value and contribute to a favorable brand experience by making use of digital assets and optimizing the cross-channel experience of customers. Moreover, firms that have been primarily operating brick-and-mortar stores have the opportunity to recapture their loyal customers by continuously offering them value from a new channel (Kim & Chun, 2018).

### **2.5.2. Omnichannel integration**

According to Binder et al. (2021), moving towards an omnichannel strategy can be split into a four-step process. Firstly, the firm must clearly define the journey of the customer and allocate what drives the decision-making process (Bommel et al., 2014). Consequently, the data from all of the channels must be unified, and a process for evaluating customer experience and channel traffic must be developed. On the other hand, as further underpinned by Peltola et al. (2015), the customer journeys must be fully optimized - the retailers have to provide product descriptions, information on costs, and options for flexible deliveries. Lastly, the retailer is advised to frequently keep track of and improve the landing pages of their online channels to guarantee a favorable user experience (Reinartz et al., 2019; Binder et al., 2021). Conveying equivalent information and experience across all of the channels and points of the customer experience will reduce the risk of losing customer loyalty, and further foster retail value (Peltola et al., 2015; Shi et al., 2020). Consequently, it is argued that when the users are satisfied with the experience, they are more likely to contribute to the customer convergence rate. In this manner, the user interface must be engaging and convenient to navigate, steering the attention of the consumer towards purchasing.

Furthermore, the literature review has indicated four elements retailers need to examine when considering an omnichannel strategy. Firstly, Bommel et al. (2014) argue that for an omnichannel strategy to be successful, the company must have centers in data analytics and digital marketing. The combination of the two can add to the personalization of micro-campaigns for customers, thus accounting for additional value. These findings further underpin the need for digital asset investment. Additionally, the planning behind the campaign process is systematic and includes brainstorming and evaluation sessions. For those sessions to be beneficial, management is compelled to allocate clear roles and define the responsibilities of each member. As mentioned in the preceding chapter, omnichannel strategizing requires flat hierarchy and rapid action. Consequently, this diminishes the need for high bureaucratic procedures that limit innovation. Lastly, Peltola et al. (2015) argue that apart from the listed considerations, a successful omnichannel strategy entails a careful selection of strategic e-commerce partners to prevent inherent risk.

### **2.5.3. Omnichannel caveats**

Apart from the convenience and benefits an omnichannel strategy can yield, the literature review has outlined a few implementation caveats. A potential issue can result from an improperly integrated customer journey. Cases have been recorded of customers asking for advice in an offline channel, which later interrupted their journey with the inability to return to the online channel (Verhoef et al., 2015). Binder et al. (2021) argue that a possible way to remedy this disintegration is for the retailer to introduce chatbots or customer hotlines. These digital assets will prevent the interruption of the customer journey (Peltola et al., 2015). Lastly, Kim and Chun (2018) draw attention to the concept of intra-cannibalism. This issue occurs when a newly-introduced online channel enters into internal competition with an existing offline channel, thus minimizing the total value to the retailer.)

## **2.6. Conclusion**

The literature review addresses the effect of the Coronavirus pandemic on digital transformation in retailing with the central research question: “What was the effect of the COVID-19 pandemic on the Digital Transformation in retailing?” It can be concluded that the Coronavirus had a direct effect on the acceleration of e-commerce, as well as the digitalization in companies. The digital transformation introduced changes in the business model, culture, and cost structure of companies presented multiple benefits associated with the implementation of digital assets, and alternative strategies for recapturing customer value. Apart from the discussed possibilities, for a retailer to successfully adapt under these conditions, they must carefully plan and select a partner and strategy in line with their current digital capabilities. Next to the introduced benefits, the pandemic has paved the way for many distribution centers and supply chain problems, the most prominent of which frequent stock-outs due to high consumer demand. Omnichannel strategizing was introduced as a possible solution under the form of a unified customer journey, not only compact for companies but also beneficial to customers by providing a seamless experience at every touchpoint. The COVID-19 pandemic is still not over, and what the future will bring is, so far, unforeseen. It can be determined, however, that ICT will be at the center of the post pandemic era, and likely many of the digital assets such as mobile payments, remote working, and online communication will stay.

## **Chapter 3 - Methodology**

### **3.1. Introduction**

This section of the thesis discusses the methodological process. The systematic literature review has outlined multiple variables related to the buying behavior during the COVID-19 pandemic used as a foundation for the developed survey.

### **3.2. Research Design**

The literature review has explored how the Coronavirus accelerated digital transformation, paving the way for a seamlessly integrated customer journey. The applicable literature was selected based on the timeframes of 2019 - 2021 (on the effects of the COVID-19 pandemic on e-commerce/retailing), from 2011 - 2021 (on digital transformation, channel migration, and omnichannel retailing). The primary sources for secondary data collection were Scopus, Web of Science, Google Scholar, and SAGE

Journals. The language of the search was set to English, and the goal was to filter out the inapplicable literature, as well as double findings. The contribution of the literature review was twofold. Firstly, it minimized the buzz around digital transformation and channel migration, delineating the effects of COVID-19 on retailing (primarily, e-commerce). Secondly, it provided a valuable foundation for the design of an online survey to compare the theoretical findings with actual results.

In other words, the review drew forth the following factors as influencing online shopping regularity - delivery time, delivery price, website UI, website UX, detailed product description, product images, website loading time, social media campaigns, O2O coupons, company CSR, offline shopping measures, product price, the usefulness of chatbots, the usefulness of consumer hotlines, time spent on online shopping, online shopping experience level, quick order processing time, online shopping frequency, shopping category. Apart from using the conducted literature review to determine the independent variables, the framework developed by Verina and Titko (2019) is used to describe the link between the variables. The study administers the core drivers of digital transformation within a company, with a few of the key identifiers being “customer requirements and increased needs”. Additionally, the survey was designed in Qualtrics, included three open-ended questions and seventeen Likert scale (0-10) questions to administer for which factors consumers considered important when selecting a retailer.

Lastly, the (online) survey was chosen as a research design method due to being unobtrusive and based on self-completion. Additionally, this method of data collection is suitable during the pandemic since it is web-based and does not present a risk to the participants. Qualtrics was used to prepare and distribute the survey, with the data collection starting on the 29th of May, 2021 and completion on the 5th of June, 2021. The completion period was selected due to the initial goal of the author to acquire 40 responses minimum (Babbie, 2014) being accomplished within a week - the response yield was 93 people. Before distributing the survey, feedback was received from a University student based on how measurable and understandable it was.

### 3.3. Hypotheses

Since the independent variables are twenty-one, the qualitative outcome was used to determine the key factors for the quantitative analysis. Based on the highest mean score of the provided responses (8 or higher, APPENDIX IV - Variable Importance), the following variables were selected for the multivariate analysis: delivery price, product images, website usability, delivery time, and product descriptions. However, the literature review has often indicated two additional factors of importance - online shopping experience and time spent shopping online, which will also be included as independent variables. Additionally, age group, residence, and occupation are recoded as dummy variables and added to the model in the role of control variables. In this sense, the research is aimed at finding out whether online shopping regularity can be predicted by the delivery price, product images, website usability, delivery time, product description availability, time spent shopping online, and experience with online shopping, while controlling for age, residence and occupation of the consumer. In this regard, the following sub-sub chapters will demonstrate the proposed hypotheses.

#### 3.3.1. Delivery price

H0: There is no negative relationship between **regularity of online shopping** and *delivery price*

H1: There is a negative relationship between **regularity of online shopping** and *delivery price*

The introduced relationship is expected to be negative in line with the findings of the literature review - when the delivery price is high, the regularity of online shopping from the retailer is low.

### 3.3.2. Product images

H0: There is no positive relationship between **regularity of online shopping** and *product images*

H1: There is a positive relationship between **regularity of online shopping** and *product images*

The relationship is expected to be positive - when product images are available, the customer is more likely to actively shop from the retailer.

### 3.3.3. Website usability

H0: There is no positive relationship between **regularity of online shopping** and *website usability*

H1: There is a positive relationship between **regularity of online shopping** and *website usability*

The proposed relationship is argued to be positive - a retailer with a website with functional usability is more likely to have customers who regularly shop.

### 3.3.4. Delivery time

H0: There is no negative relationship between **regularity of online shopping** and *delivery time*

H1: There is a negative relationship between **regularity of online shopping** and *delivery time*

The relationship is expected to be negative - high product delivery time lowers the online shopping regularity from the selected retailer.

### 3.3.5. Product details

H0: There is no positive relationship between **regularity of online shopping** and *product details*

H1: There is a positive relationship between **regularity of online shopping** and *product details*

The availability of product details increases the online shopping regularity from the retailer providing the service - the relationship is hypothesized to be positive.

### 3.3.6. Time Spent shopping online

H0: There is no positive relationship between **regularity of online shopping** and *time spent shopping online*

H1: There is a positive relationship between **regularity of online shopping** and *time spent shopping online*

Additionally based on the outcome of the literature review, the more a consumer spends their time shopping, the more frequently they engage in the activity, arguing for a positive relationship.

### 3.3.7. Experience with online shopping

H0: There is no positive relationship between **regularity of online shopping** and *experience with online shopping*

H1: There is a positive relationship between **regularity of online shopping** and *experience with online shopping*

The last relationship is also hypothesized to be positive - the more experience a consumer has with shopping online, the more regularly they will buy goods using the internet.

### **3.4. Ethical considerations**

The research entails an online survey as a data collection process. In this sense, new data is collected, whereas, the focus is on a research population varying in age, occupation, and tech-savviness to avoid bias. Furthermore, the sample was randomly drawn, and the survey was distributed on four different platforms - LinkedIn, Facebook, WhatsApp, and Instagram. Lastly, the data collection was anonymous and presented an active online consent form - taken a participant selected they did not give their consent, the survey was looped to redirect them to the last page without collecting data.

## **Chapter 4 - Analysis of data**

### **4.1. Introduction**

The analysis of data is two-fold. The qualitative part interprets the results of the open-ended questions by using the Gioia model as a coding concept, whereas the quantitative part entails the results of a multivariate regression run on SPSS to determine whether the model is a suitable fit.

### **4.2. Qualitative analysis**

The qualitative survey analysis is based on concluding the main survey results, as well as coding the open-ended questions.

#### **4.2.1. Open-ended questions**

This section examines the outcome of the three open-ended questions - an inductive coding approach was used to compile the findings into aggregate dimensions by incorporating the Gioia model. The data collection stage was based on analyzing the collected responses given by the participants. In this stage, the redundant and duplicate responses were omitted, shortening the useful data. Following the primary coding stage, the draft categories that became apparent were linked together per color code and repositioned for convenience to build the second-order concept (themes). After establishing the logical links between the themes, the aggregate frame was developed.



Is there something you regard as missing in the way online shopping is conducted?		
1st Order (Concepts)	2nd Order (Themes)	Aggregate Dimensions
Videos of products in hands or on people	PRODUCT IMAGES	RETAILER
Images when people are either using or wearing the product sometimes are missing to me this is important		
Fotos of different types of people. Very skinny, normal, chubby, so everyone can see how something will fit. Maybe less for the buying behaviour, but also stimulates one, because they can see how it will look.		
Ability to try out the product for an amount of time, before deciding whether to commit to it or not (especially for more expensive items)		
I'm often held back from ordering something due to the inability to test it prior purchase.	PRODUCT TESTING	
Opinions of the buyers	REVIEWS	
Most of the products online are missing reviews from other customers. When I buy something, I always tend to check if there are reviews about it and whether they're positive or negative, I make my own research.		
I find the "orders completed" and "customer reviews" quite useful.		
Reviews of the products		
Shops often don't ask how they could improve your customer experience	LACK OF FEEDBACK ACCEPTANCE	
I would say no, but when buying more personal products (hair/skin care or medicine) help from a specialist might be helpful which is not available online.	SPECIALIST AID	
Give insights into price history	PRICE HISTORY	
Safe and clear payment is missing at some retailers and it should be a must! The customer must feel safe for it's money in virtual space!	SAFE PAYMENT	
some websites have a faster tracking option which I think is very useful, instead of opening more and more sites, so I'd like to see that in more shopping sites	QUICK WEBSITE TRACKING	
The ability to change delivery date and time	DELIVERY TIME CHANGE	
I am concerned about the returns and its consequences to the planet. There should be ways to reduce shopping returns.	CSR	
Transparency with how the business is conducted behind the scenes.		
		COMPANY PROFILE

Table 1. Is there something you regard as missing in the way online shopping is conducted?  
Source: Excel, developed for this study based on the survey outcomes

The research question for the data frame above (Table 1) is "Is there something you regard as missing in the way online shopping is conducted?". Consequently, the purpose of the inquiry is to pin down which elements customers regard as missing or should be improved from retailers, and grouped in a logical way. The resulting aggregate dimensions are Retailer, Distribution, and Company Profile. The Retailer dimension was developed by sorting the direct quotations based on the commentary the participants had in regards to the subject, encompassing the lack of product images and ability to test the product, absence of website reviews, store disposition towards feedback, lack of a hotline, price history unavailability, and the option to pay safely. Consequently, it unites the themes related to a direct concern for the retailer. On the other hand, the Distribution dimension entails specifics towards the logistical process of product acquisition, such as tracking options, as well as the ability to change delivery time. Lastly, Company Profile was developed based on some respondents drawing forward the importance of transparency and CSR, making this a company image issue. The responses indicating lack of or no feedback were removed on the grounds of not being useful towards answering the question.

Based on the provided elements, please indicate the ones you pay most attention to when choosing a retailer to shop from:
Reviews of other consumers
Website feature: reviews on their products

Table 2. **What elements do you pay the most attention to when selecting a retailer?**

Source: Excel, developed for this study based on the survey outcomes

Secondly, an interesting addition to the literature review became apparent during the survey, namely in the answers of a few respondents, indicating that the recipients base their retailer choice on previous customer reviews (Table 2). In this sense, these findings complement the literature review by suggesting an additional variable influencing retailer choice.

In the past year, did you switch to another retailer, and if yes - why (reasoning can be anything from long order processing time, companies not offering sustainable initiatives, etc.)?		
Product price		
Price		
Price was better		
Product price and quality		
Food wise we have been transitioning from lidl back to tesco and asda simply for the better quality of the products, even though it costs a bit more.		
Problems with the quality of the goods		
Yes, swapped due to a low quality and long delivery time. Was cheaper though		
I used to buy a lot through Amazon, but once I read some of their products weren't original I have started to buy directly from the manufacturing companies if I can. Also, many times Amazon has the same products as Aliexpress just way more expensive. None of these companies is sustainable, so at least if I can save money I will buy through Aliexpress.		
Yes, broader assortment		
Not really. I have a certain need and then look online where I can buy it. So the online retailer could be different as it depends if the product is in stock there for a good price.		
Yes, better options.		
Amazon, for not paying taxes. Coolblue, for offering partial refunds - to any other store		
I prefer to be a customer of Amazon because if you have the prime version, you order now - you receive tomorrow. Which is persuasive, reliable and you can always return. Plus, you have warranty.		
Yes, mainly because of the fact lots of retailers are not transparent in how they treat and pay their employees.		
Faster delivery and good service after the sell		
Options to return		
I use various retailers, based on price, delivery time and ability to return. I prefer to do a mini-research on the product I wish before I buy it.		
Return not available or return available if you pay the shipping cost		
Used a certain delivery company Dpd for a package on winter never using it again it always gets lost		
Problem with delivery		
I'd usually switch retailers based on pricing (/frequent take-discounts) or slow order processing/delivery (more than 5 business days to deliver within the same city/area)		
I've canceled purchases because of slow loading time, bad user experience or very high prices compared to the competitors.		
I switched from Adidas to other shoe brands because of the bad usability of the online shop, it took too long to find specific products		
I have not switched to another retailer, but orders do in fact come very slow and the information that is put out isn't always reliable.		
Yes, because I moved countries and there's a wider range of products here through eBay		
I prefer to shop local instead of buying from multinationals		

Table 3. Why would you switch to a different retailer?

Source: Excel, developed for this study based on the survey outcomes

Finally, the last open-ended question was tasked with finding out the reasons behind consumers switching to different retailers. Consequently, the goal was to answer "In the past year, did you switch to another retailer, and if yes - why (reasoning can be anything from long order processing time, companies not offering sustainable initiatives, etc.)?". The findings suggest that customers switch retailers based on Product Specifics and Availability, Company Profile, Location-based, Supply-chain, and User Experience.

#### 4.2.2. Survey conclusion

The survey results indicate two further interesting outcomes. In regards to shopping categories, the participants rated electronics as the category they usually purchase goods from the highest, whereas furniture was in the last place. Contrary to the results of the literature review, food products did not score in the top three categories.

#### Q7 - Which categories do you usually purchase goods from?

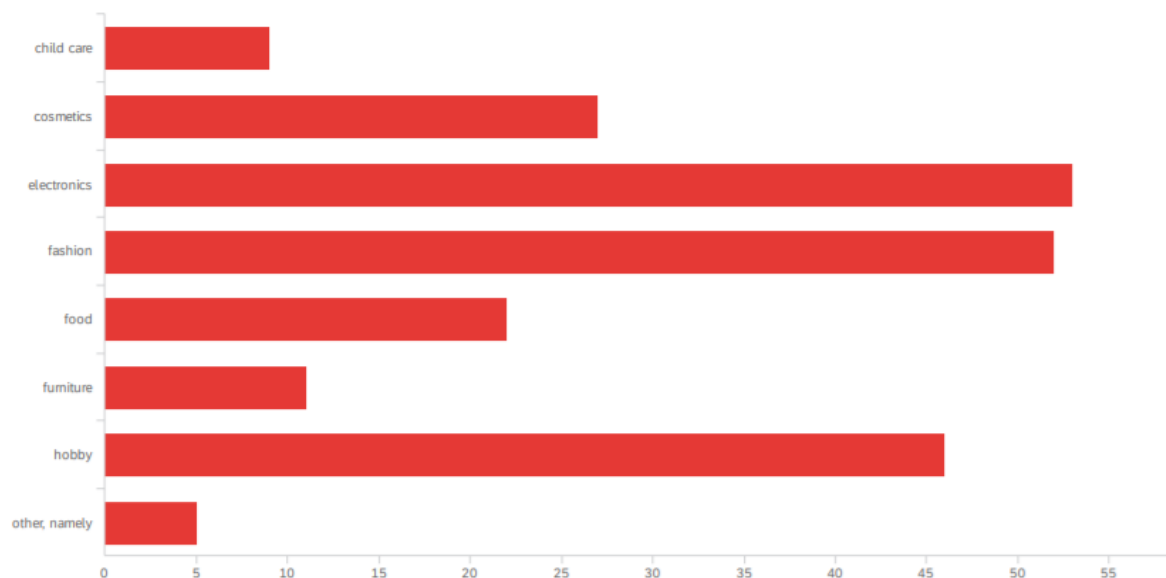


Table 4. **Which categories do you usually purchase goods from?**  
Source: Qualtrics, developed for this study based on the survey outcomes

Q26 - Based on the provided elements, please indicate the ones you pay most attention

to when choosing a retailer to shop from:

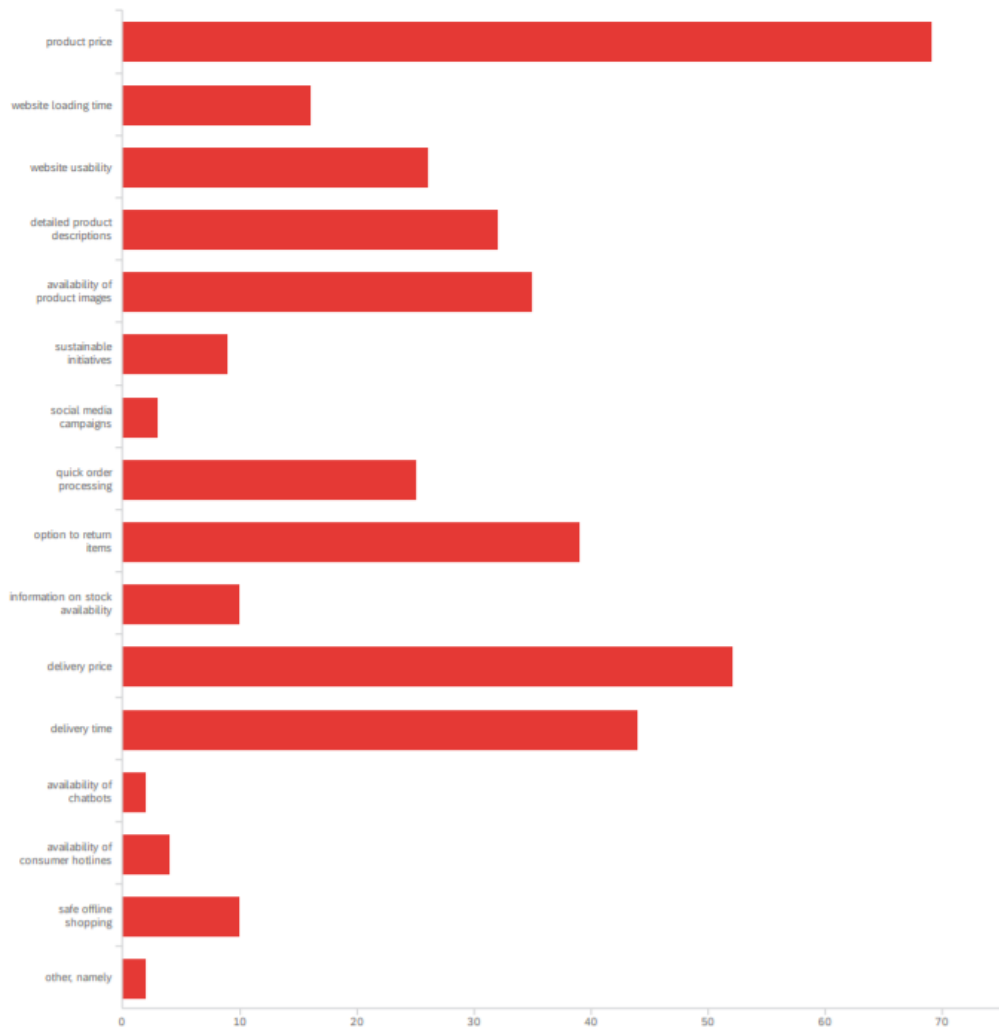


Table 5. Which elements do you pay the most attention to when selecting a retailer?

Source: Qualtrics, developed for this study based on the survey outcomes

On the other hand, the table above demonstrates that product price, delivery price, and time are the most important factors consumers have in mind when selecting a retailer to purchase goods from. Additionally, to account for the means of the stipulated variables (APPENDIX IV - Variable Importance), an SPSS frequency test was run. It determined the following outcome for the importance of the key variables based on the collected responses - delivery price (with a mean of 8,56), product images (with a mean of 8,49), website usability (with a mean of 8,28), delivery time (with a mean of 8,1), product descriptions (with a mean of 8,05), option to return (with a mean of 7,99), product price (with a mean of 7,95), order processing time (with a mean of 7,81), stock availability (with a mean of 7,57), website loading time (with a mean of 7,03), offline shopping safety (with a mean of 6,16), sustainable initiatives (with a mean of 5,71), social media campaigns (with a mean of 5,61), consumer hotlines (with a mean of 5,59), and chatbots (with a mean of 4,77).

### 4.3. Quantitative analysis

A multivariate analysis was chosen for this study since the independent variables are more than two and the study is interested in the prediction value of the dependent variable. Moreover, the multivariate analysis can display how much of the variation can be explained by the selected seven different independent variables, making it a suitable choice for this study<sup>1</sup>.

#### 4.3.1. Operationalizing data

Prior to the analysis, the received data was operationalized. Initially, there were 93 collected responses, however, after accounting for the completion percentage, it became apparent that 76 (n>40) people completed the survey until the end. The received data entails 51 respondents from 18 to 28 years, 17 from 29 to 39 years, and 8 from 40 to 50 years. On the other hand, 29 of the respondents are male, 46 are female, and one respondent preferred not to share their gender. Lastly, occupation-wise, 28 are students, 38 are full-time employed, 6 are working part-time, and 4 are looking for work.

Before examining the relationship between the variables, a normality test was conducted. The p-value for all of the tested variables was lower than 0.05, except for the Chatbots variable ( $p = 0,200$ ) (refer to APPENDIX I - Normality Test). Additionally, the age group (young, middle, and older groups), occupation (student, looking for work, full- and part-time employment), and residence (outside of, Western, or Eastern Europe) control variables were recoded into dummy variables for convenience and added to the analysis.

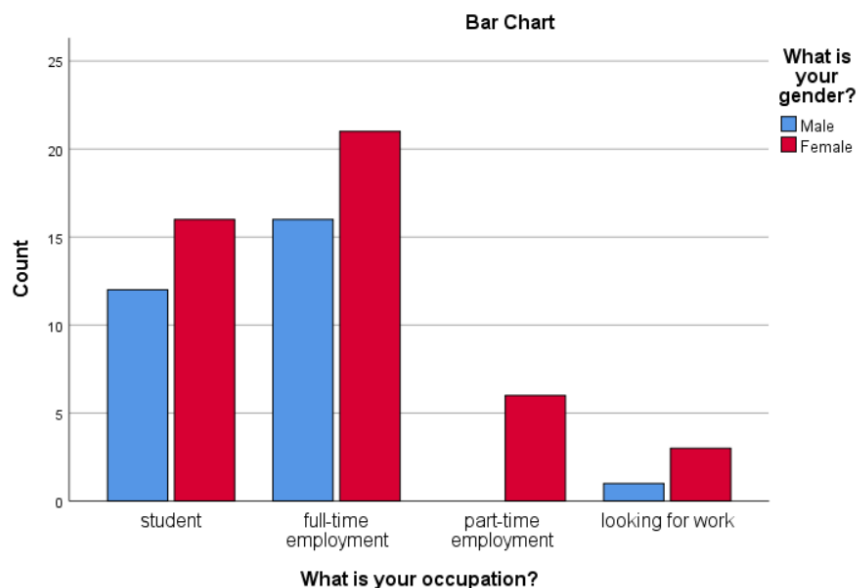


Table 6. **The number of respondents by gender and occupation.**

Source: SPSS, developed for this study based on the survey outcomes

#### 4.3.2. Results

The quantitative goal of the survey is to examine whether there is a significant effect from the selected independent variables. To do this, a multivariate regression analysis is performed based on the

<sup>1</sup> Laerd Statistics. (n.d.). Multiple Regression Analysis using SPSS Statistics. Retrieved 2021, July 17, from <https://statistics.laerd.com/spss-tutorials/multiple-regression-using-spss-statistics.php>

hypotheses listed in Chapter 3.3. Prior to discussing the significance of the outcomes, the model is examined separately.

Based on the presented output in APPENDIX II - Multivariate Regression (Table 1), it can be determined that the level of prediction is strong ( $R = 0.788$ ). Moreover, the coefficient of determination (0.620) entails that the shopping regularity explains 62% of the variability of the stipulated dependent variable. Next, to examine the statistical significance of the model and whether it is a good fit for the data, the ANOVA results are interpreted (APPENDIX II - Multivariate Regression, Table 2). Based on the outcome ( $F(16, 56) = 5.721$ ,  $p < .005$ ) it can be concluded that the independent variables can significantly predict online shopping regularity.

Furthermore, it is interesting to examine the significance of the variables to determine which of them account strongly for the regularity of online shopping. Based on the output of the Multivariate Regression below (Table 7), it has become apparent that there are three significant relationships.

Coefficients <sup>a</sup>										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	99,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	3,411	,807		4,229	,000	1,260	5,562		
	DeliveryPrice	-,157	,049	-,347	-3,205	,002	-,287	-,026	,578	1,729
	ProductImages	-,064	,038	-,167	-1,692	,096	-,164	,037	,698	1,433
	WebsiteUsability	,030	,040	,073	,754	,454	-,077	,138	,717	1,395
	DeliveryTime	-,015	,035	-,042	-,424	,673	-,109	,079	,700	1,429
	ProductDetails	,065	,042	,167	1,533	,131	-,048	,178	,573	1,746
	OnlineShoppingExperien ce	-,308	,065	-,439	-4,720	,000	-,482	-,134	,783	1,277
	TimeSpentShoppingOnli ne	,440	,109	,401	4,049	,000	,150	,729	,693	1,444
	YoungGroup	,207	,425	,164	,486	,629	-,927	1,341	,060	16,747
	MiddleGroup	,385	,434	,257	,888	,378	-,771	1,541	,081	12,315
	OlderGroup	,302	,422	,137	,715	,478	-,824	1,427	,184	5,445
	FullTime	-,361	,142	-,290	-2,552	,013	-,739	,016	,525	1,906
	PartTime	,077	,231	,033	,331	,742	-,540	,694	,690	1,449
	LookingWork	-,187	,278	-,061	-,671	,505	-,928	,555	,808	1,237
	WesternEurope	-,256	,384	-,206	-,667	,508	-1,280	,768	,071	14,137
	EasternEurope	,066	,373	,052	,178	,859	-,927	1,060	,079	12,598
	OutsideEurope	,128	,484	,037	,265	,792	-1,162	1,418	,352	2,845

a. Dependent Variable: OnlineShoppingRegularity

Table 7. Coefficients

Source: SPSS, developed for this study based on the Qualtrics survey data

The output demonstrates a significant negative relationship between regularity of online shopping and delivery price ( $p < 0.005$ ), indicating that there is enough evidence to reject the null hypothesis. The second significant relationship is the positive relationship between online shopping regularity and time spent shopping online ( $p < 0.005$ ). Finally, the third and last significant relationship, contrary to the proposed direction of the literature review, is the one between online shopping regularity and online shopping experience - a significant negative relationship.

Moreover, albeit the remaining four relationships being insignificant - there is not enough evidence to reject the null hypotheses, the analysis has determined an interesting disalignment between the literature review and the direction of the relationship between the regularity of online and shopping and product images. Even though the arguments suggest a positive relationship, the analysis has brought forth a negative one.

Lastly, examining the control variables - the recoded into dummy variable categories age group, occupation, and residence, administer the following findings. Even though the control variable

findings are insignificant ( $p > 0.005$ ), an increase from the young group (18 - 28) causes an increase in online shopping regularity of 0.207, whereas the middle (29 - 39) and older groups (40 - 50), respectively, lead to increases of 0.385 and 0.302. On the other hand, an increase of full-time and looking for work consumers decrease the online shopping regularity by 0.361 and 0.187, whereas, part-time consumers increase it by 0.077. Lastly, the residence variables indicate that an increase from Western European consumers decreases online shopping regularity by 0.256, whereas, an increase from consumers from Eastern and outside of Europe leads to an increase of online shopping regularity by 0.066 and 0.128.

## **Chapter 5 - Conclusion and implications**

### **5.1. Conclusion about the literature review**

The literature review was focused on the available literature on the subject and was divided into two major parts - how the consumers have experienced the shift towards online shopping, and how the retailers have experienced the Coronavirus pandemic in terms of their internal operations. The main findings indicate that COVID-19 affected retailing by accelerating e-commerce and attributed to various changes within the business model canvas of companies and their cost structures. Additional costs were incurred in the supply chain process - distribution center employees need to go through rigorous health training, additional inventory must be purchased, and delivery routes should be optimized. This has paved the way for digitalization - the implementation of digital assets and strategies can successfully be used for recapturing customer value and loyalty. On the other hand, due to the vast availability of online retailers, customers have a wider choice of where to purchase goods from. This increased competition has determined that consumers prefer to shop from retailers with informative websites, strong usability and quick loading time, order processing and product images play an important role in retailer selection, as well as the different variables discussed prior. Additionally, omnichannel strategizing was discussed as a possible solution towards an integrated and seamless customer experience. Finally, the systematic literature review outlined the necessary variables for the online survey focused on retailer choice.

### **5.2. Conclusion about the research**

The research incorporated an online survey, which was later divided into open- and closed-question analyses. The main conclusion from the open-ended questions featured a new factor influencing the consumer choice of a retailer - previous customer reviews. This is interesting since the literature did not mention reviews as a potential factor or independent variable, and can thus be regarded as a direct complement to the previous findings in literature. Additionally, the top three factors used by customers to decide on which retailer to purchase from are the following (sorted by highest mean): delivery price, product images, and website usability, aligning with the findings in literature. Moreover, in contrast with the literature review, “food” as a shopping category did not score in the top three categories. Lastly, the survey also aided in providing insight why consumers would switch to different retailers.

On the other hand, the multivariate regression has brought forth two interesting points. Firstly, the independent variables used in the model explain 62% of the variability of online shopping regularity, indicating the model is perceived as accurate. And, secondly, out of the seven stipulated relationships, three have come out as significant. There is a negative relationship between the online



shopping regularity and the delivery price, as suggested from the literature review, and a significant positive relationship between online shopping regularity and time spent shopping online. However, the last significant relationship, unlike the literature review, has concluded a different type of relationship direction. Initially hypothesized as a positive relationship, the relationship between online shopping regularity and online shopping experience has come out to be negative - the more experience shopping online a consumer has, the less regularly they will shop online.

### **5.3. Implications for theory**

The study has drawn forth three major theoretical implications. Firstly, it has explained what the customers focus on the most when choosing where to purchase goods from. In line with this, the sum of the twenty-one factors can aid companies in recapturing or maximizing value for customers, as well as, attribute to a higher customer convergence rate taken if the focus was executed correctly. In this sense, the study has demonstrated the necessity of having a suitable data set with the consumer footprint to identify future opportunities. Furthermore, the systematic literature review can be used as a complement to future research on this topic due to summarizing and including different theoretical aspects not only on consumer shopping behavior, but also on the way the pandemic has affected the company side in terms of job rotations, additional training costs, distribution changes, etc.

### **5.4. Limitations and further studies**

Firstly, the literature available on the topic was not enough - there might be other variables associated with retailer choice and online shopping regularity which were not reported or accounted for (in the same way the study uncovered “reviews” as an additional factor). Furthermore, not enough respondents from the age groups of 29+ have completed the survey, indicating difficulties to draw sustainable conclusions based on age. It would be interesting to see whether more respondents per different age groups will provide different results.

Additionally, the literature review was two-fold - it analyzed and collected literature both on the customer and company sides in regards to how the pandemic has affected them. Due to interviewing and surveying retailers being difficult as a student with limited contacts and reach, it would be interesting to acquire information on how the retailers have experienced this online shift and whether it is different than what the literature entails. The factors discussed in the company part of the literature review can be used as a foundation for this type of study.

Furthermore, the practical implications of the thesis demonstrate the necessity of having a suitable data set with the consumer footprint to companies, to identify what customers regard as missing and important for e-commerce programs. This information can be used to aid retailers in recapturing or maximizing their value and attribute to a higher customer convergence rate.

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## APPENDIX I - Normality Test

### Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
How often do you shop online?	,312	73	,000	,776	73	,000
How much time do you spend shopping online?	,379	73	,000	,685	73	,000
The product price set by a retailer is an important criterion when I consider purchasing an item.	,195	73	,000	,904	73	,000
I find website loading time to be an important criterion when I consider placing an order with a retailer.	,160	73	,000	,925	73	,000
I find website usability (website is easy to navigate) to be important when selecting a retailer.	,183	73	,000	,889	73	,000
I find the availability of detailed product descriptions important when I consider purchasing an item from a retailer.	,203	73	,000	,909	73	,000
I find the availability of product images important when I consider purchasing an item from a retailer.	,222	73	,000	,840	73	,000
I find social media campaigns by retailers to be useful in informing me about current offers when shopping online.	,146	73	,001	,938	73	,001
I consider sustainable initiatives an important factor when selecting a retailer.	,114	73	,021	,959	73	,018
I find quick processing of my order (within the same or next day of placing) to be an important factor when purchasing from a retailer.	,175	73	,000	,911	73	,000

I find the option to return the item I have purchased from a retailer important.	,253	73	,000	,771	73	,000
I find information on the availability of stock on an item I want to purchase from a retailer important.	,132	73	,003	,914	73	,000
I find the delivery price to be an important factor when purchasing from a retailer.	,188	73	,000	,875	73	,000
I find quick delivery time (within one week) to be an important factor when purchasing from a retailer.	,192	73	,000	,889	73	,000
I find chatbots useful when I have questions about an order I have placed with a retailer.	,089	73	,200*	,954	73	,010
I find consumer hotlines useful when I have questions about an order I have placed with a retailer.	,129	73	,004	,948	73	,005
I find the option to safely shop offline important when selecting a retailer.	,126	73	,006	,929	73	,001
Are you experienced with shopping online?	,265	73	,000	,733	73	,000

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## APPENDIX II - Multivariate Regression

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,788 <sup>a</sup>	,620	,512	,435

a. Predictors: (Constant), OutsideEurope, ProductDetails I find the availability of detailed product descriptions important when I consider purchasing an item from a retailer., OnlineShoppingExperience Are you experienced with shopping online?, YoungGroup, LookingWork, PartTime, EasternEurope, TimeSpentShoppingOnline How much time do you spend shopping online?, DeliveryTime I find quick delivery time (within one week) to be an important factor when purchasing from a retailer., WebsiteUsability I find website usability (website is easy to navigate) to be important when selecting a retailer., ProductImages I find the availability of product images important when I consider purchasing an item from a retailer., OlderGroup, FullTime, DeliveryPrice I find the delivery price to be an important factor when purchasing from a retailer., MiddleGroup, WesternEurope

Table 1. **Model summary**

Source: SPSS, developed for this study based on the Qualtrics survey data



### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17,304	16	1,081	5,721	,000 <sup>b</sup>
	Residual	10,585	56	,189		
	Total	27,889	72			

a. Dependent Variable: OnlineShoppingRegularity How often do you shop online?

b. Predictors: (Constant), OutsideEurope, ProductDetails I find the availability of detailed product descriptions important when I consider purchasing an item from a retailer., OnlineShoppingExperience Are you experienced with shopping online?, YoungGroup, LookingWork, PartTime, EasternEurope, TimeSpentShoppingOnline How much time do you spend shopping online?, DeliveryTime I find quick delivery time (within one week) to be an important factor when purchasing from a retailer., WebsiteUsability I find website usability (website is easy to navigate) to be important when selecting a retailer., ProductImages I find the availability of product images important when I consider purchasing an item from a retailer., OlderGroup, FullTime, DeliveryPrice I find the delivery price to be an important factor when purchasing from a retailer., MiddleGroup, WesternEurope

Table 2. ANOVA

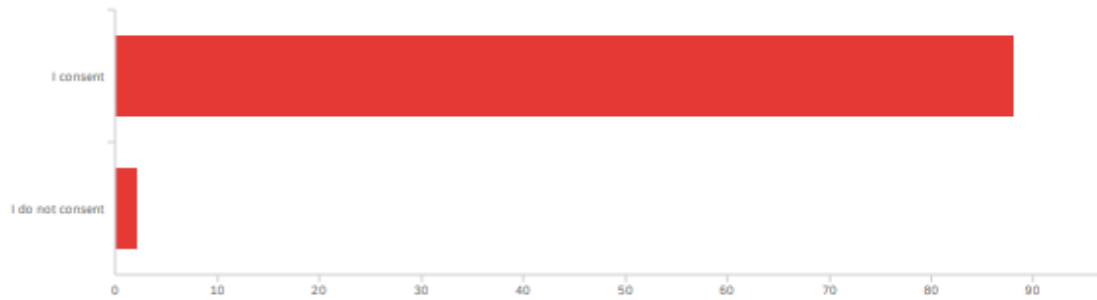
Source: SPSS, developed for this study based on the Qualtrics survey data

## APPENDIX III - Survey

### Default Report

*The effect of the COVID-19 pandemic on Digital Transformation in retailing*  
May 29, 2021 8:54 AM MDT

Q1 - This survey is aimed at understanding the consumer buying behavior during the COVID-19 pandemic. You will be presented with questions regarding online shopping (such as shopping categories you purchase goods from), retailer website elements, and factors that determine your overall purchase intention. Consequently, you will have to indicate your answers in each of the mentioned categories. The responses, apart from being anonymous, will be kept confidential. To elaborate on the terminology used, online shopping entails the purchase of goods online, whereas, the customer journey encompasses the process from selecting an item, ordering and paying for it, to receiving it. Please proceed towards the prepared questions only if you have shopped online at least once in the past year. The survey should take from 10 to 15 minutes to complete, and your participation is voluntary. You have the right and are free to withdraw from it at any point during the process. By giving your consent to participate below you proceed to the questions, thus indicating that you acknowledge being 18 years of age (or older), you realize your participation is voluntary, and you can terminate the process at any time or for any reason. Lastly, the survey is best displayed on a desktop device - it is less compatible on mobile.

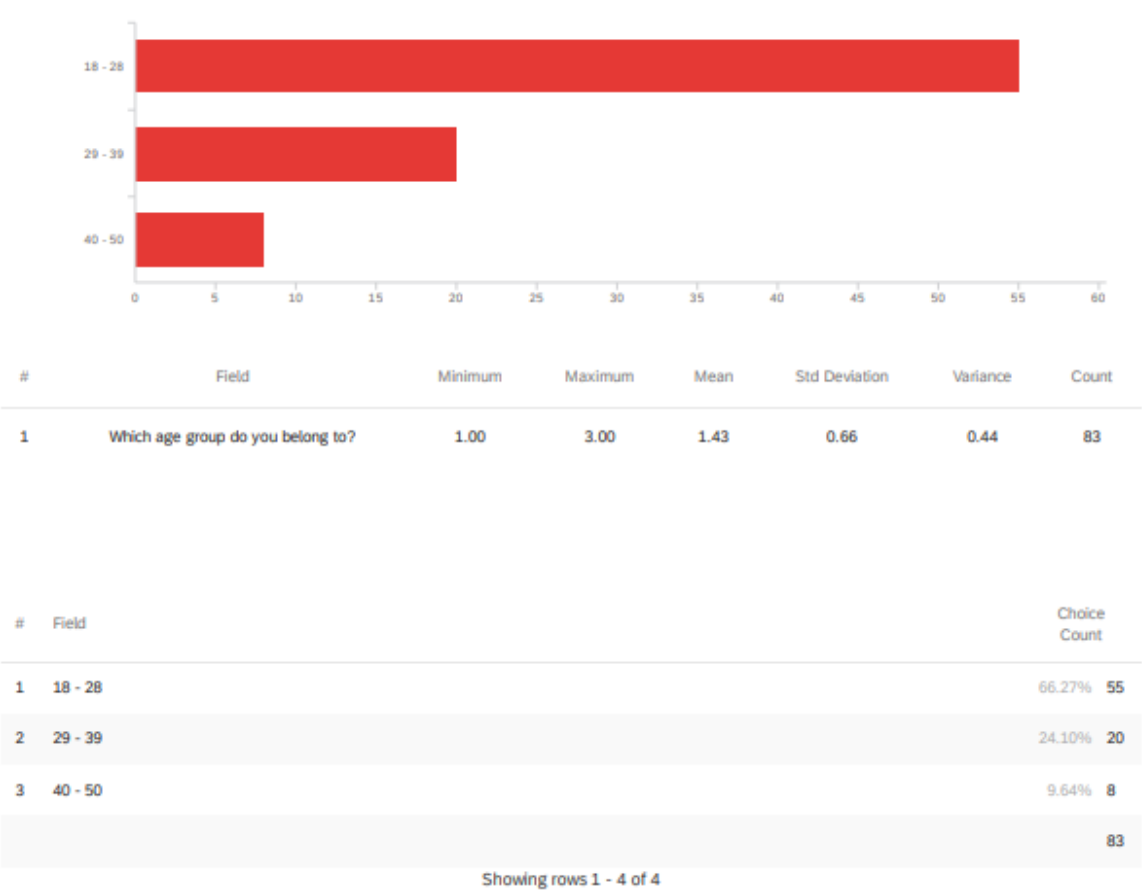


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	<p>This survey is aimed at understanding the consumer buying behavior during the COVID-19 pandemic. You will be presented with questions regarding online shopping (such as shopping categories you purchase goods from), retailer website elements, and factors that determine your overall purchase intention. Consequently, you will have to indicate your answers in each of the mentioned categories. The responses, apart from being anonymous, will be kept confidential. To elaborate on the terminology used, online shopping entails the purchase of goods online, whereas, the customer journey encompasses the process from selecting an item, ordering and paying for it, to receiving it. Please proceed towards the prepared questions only if you have shopped online at least once in the past year. The survey should take from 10 to 15 minutes to complete, and your participation is voluntary. You have the right and are free to withdraw from it at any point during the process. By giving your consent to participate below you proceed to the questions, thus indicating that you acknowledge being 18 years of age (or older), you realize your participation is voluntary, and you can terminate the process at any time or for any reason. Lastly, the survey is best displayed on a desktop device - it is less compatible on mobile.</p>	1.00	2.00	1.02	0.15	0.02	90
#	Field						Choice Count
1	I consent						97.78% 88
2	I do not consent						2.22% 2

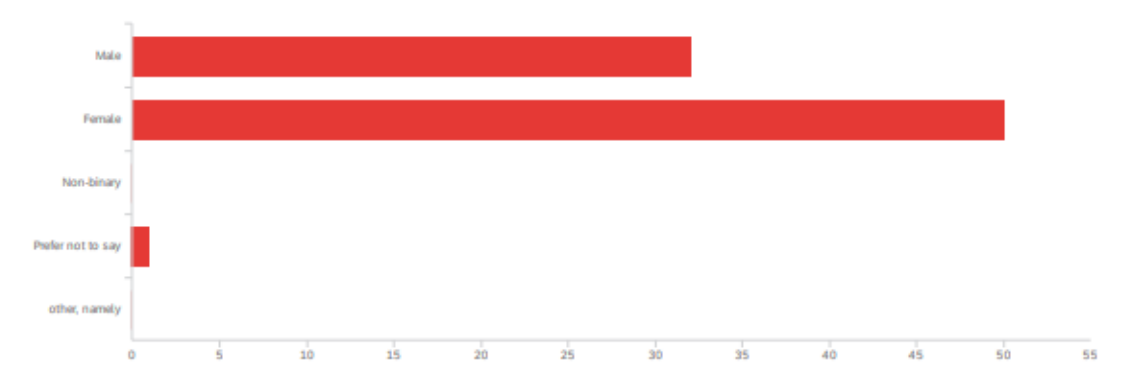
90

Showing rows 1 - 3 of 3

Q2 - Which age group do you belong to?



Q3 - What is your gender?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your gender? - Selected Choice	1.00	4.00	1.64	0.55	0.30	83

#	Field	Choice Count
1	Male	38.55% 32
2	Female	60.24% 50
3	Non-binary	0.00% 0
4	Prefer not to say	1.20% 1
5	other, namely	0.00% 0
		83

Showing rows 1 - 6 of 6

Q3\_5\_TEXT - other, namely

other, namely
---------------

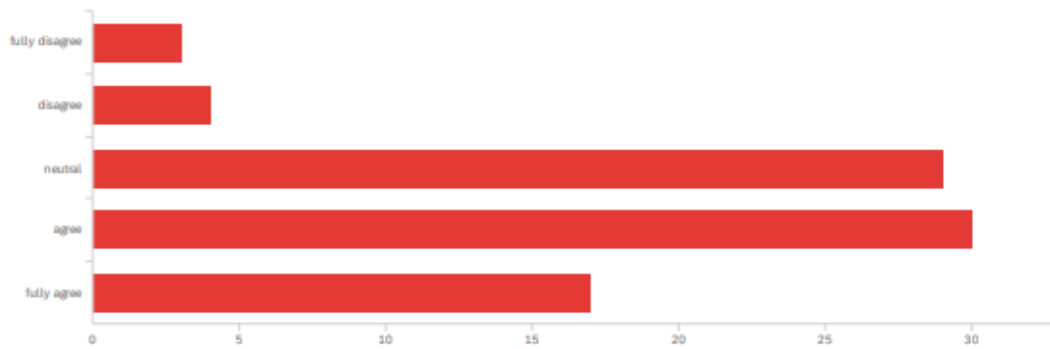
Q4 - Where do you reside?



Q5 - What is your occupation?



### Q30 - Do you consider yourself tech-savvy?



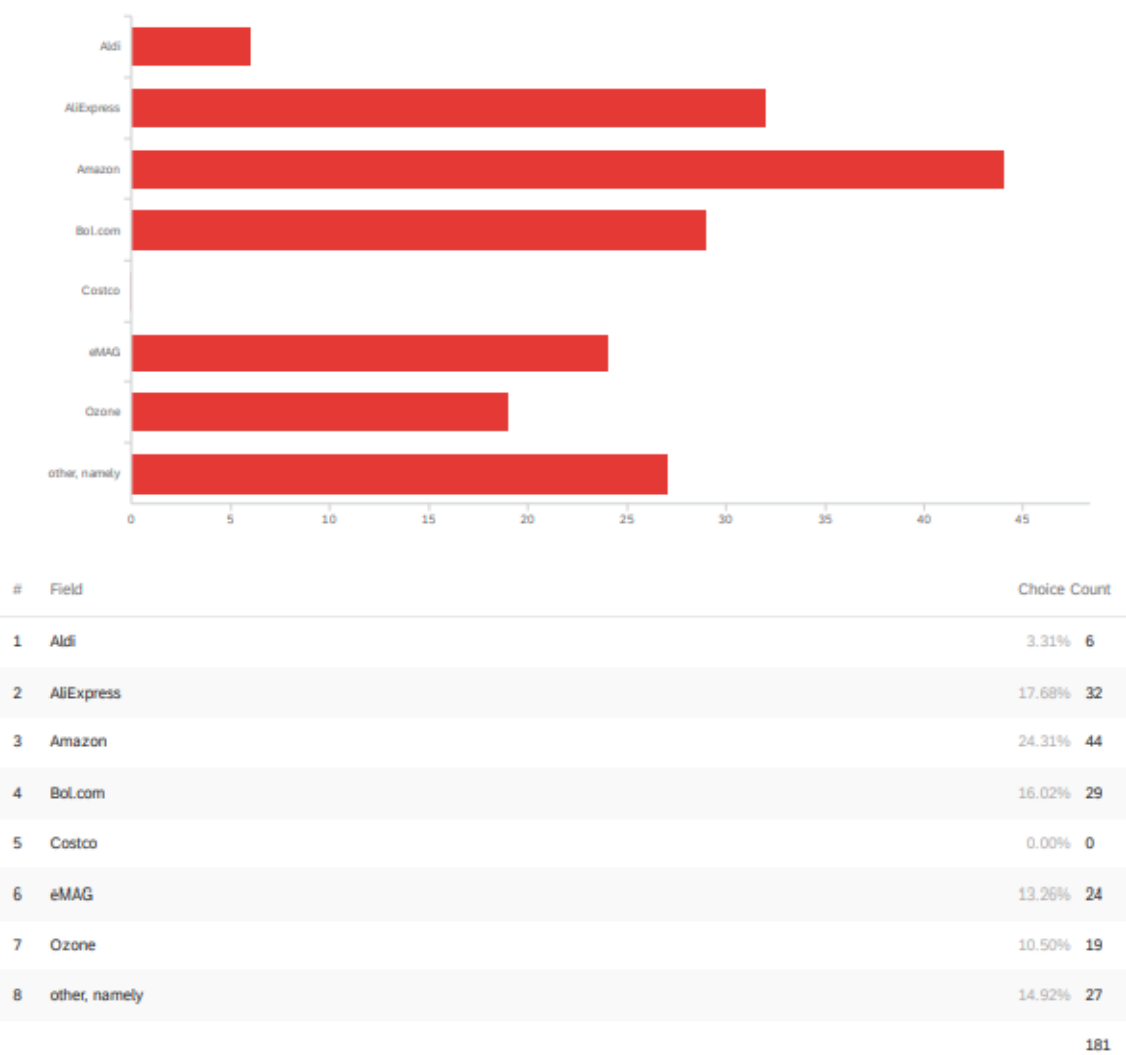
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you consider yourself tech-savvy?	1.00	5.00	3.65	0.97	0.95	83

#	Field	Choice Count
1	fully disagree	3.61% 3
2	disagree	4.82% 4
3	neutral	34.94% 29
4	agree	36.14% 30
5	fully agree	20.48% 17
		83

Showing rows 1 - 6 of 6



Q6 - Which retailers do you usually purchase from?



Showing rows 1 - 9 of 9

Q6\_8\_TEXT other, namely

other, namely
Zalando
Sites of the clothing stores

other, namely

---

Zara

Albert Heijn

Coldblue

eBay

Zalando

zavvi.nl (hub group), Coolblue

Picnic

Fashion days, Notino, Asos

Trendyol

Asda, Tesco, Lidl, Cex. Fashion wise i shop from second hand shops mostly like depop for example

H&m, Zalando, other clothing shops

Kaufland

ASOS

Glovo, Douglas...

Fashiondays

JOLSE

eBay

Bookdepository .com

Lidl, Фантастико, beauty zone, billa

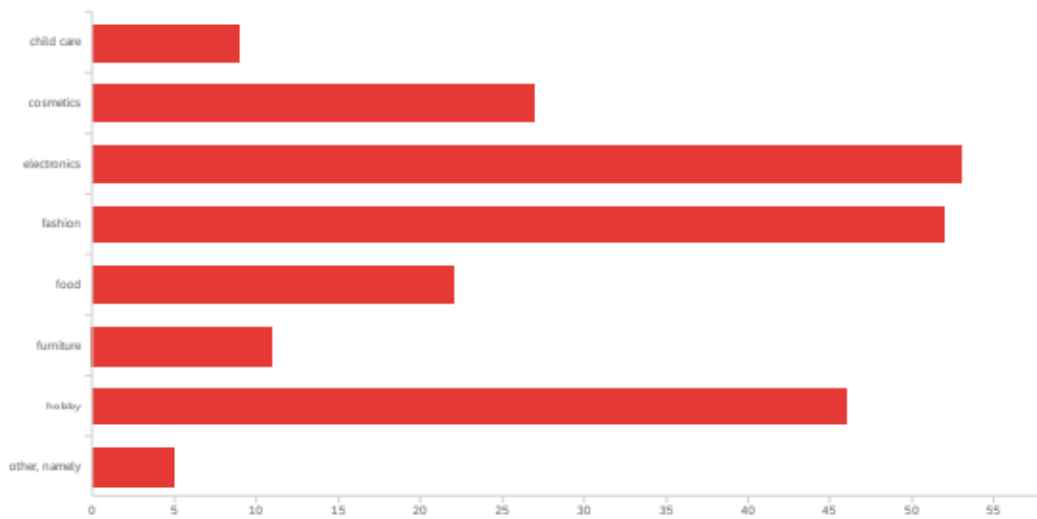
Zara Trendyol

Albert Heijn

Rewe

Oysho, Douglas

## Q7 - Which categories do you usually purchase goods from?



#	Field	Choice Count
1	child care	4.00% 9
2	cosmetics	12.00% 27
3	electronics	23.56% 53
4	fashion	23.11% 52
5	food	9.78% 22
6	furniture	4.89% 11
7	hobby	20.44% 46
8	other, namely	2.22% 5
		225

Showing rows 1 - 9 of 9

### Q7\_8\_TEXT - other, namely

other, namely

by "hobby" I mean mostly books.

Cosplay

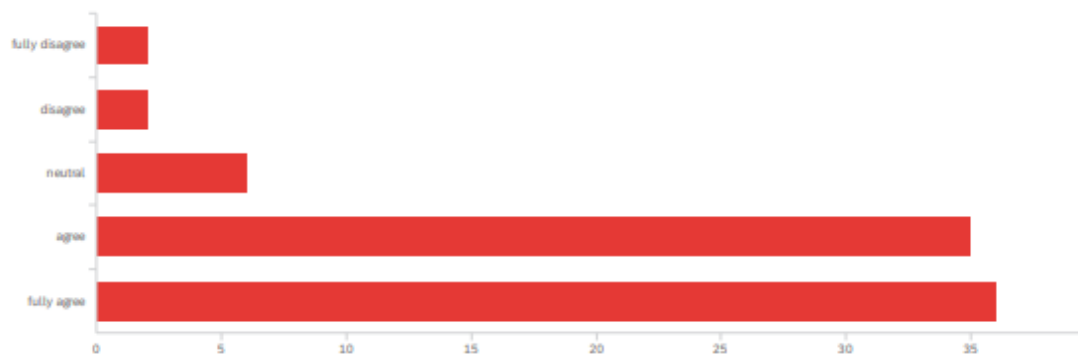
other, namely

Healthy supplements

Skin/Hair care

Books

## Q8 - Are you experienced with shopping online?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Are you experienced with shopping online?	1.00	5.00	4.25	0.88	0.78	81

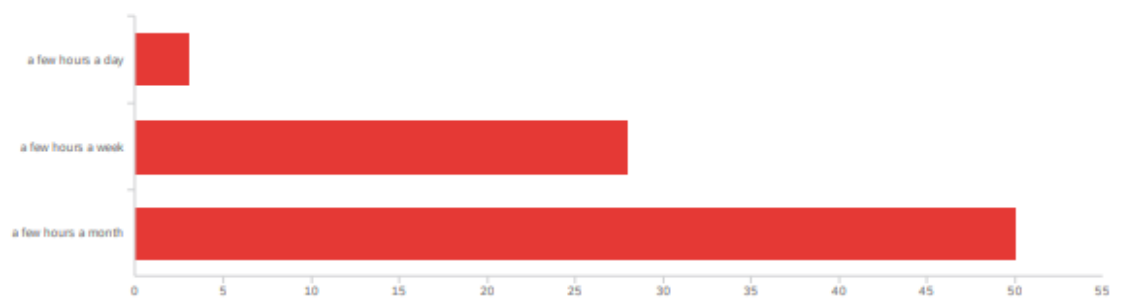
#	Field	Choice Count
1	fully disagree	2.47% 2
2	disagree	2.47% 2
3	neutral	7.41% 6
4	agree	43.21% 35
5	fully agree	44.44% 36
		81

Showing rows 1 - 6 of 6

Q9 - How often do you shop online?



Q10 - How much time do you spend shopping online?

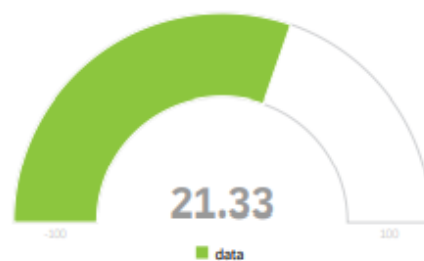
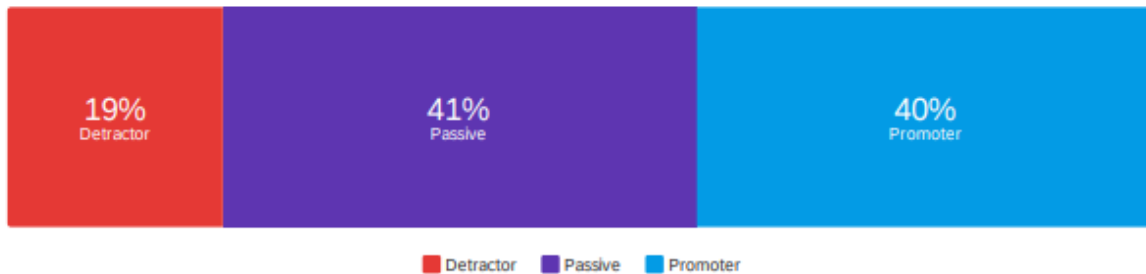


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How much time do you spend shopping online?	1.00	3.00	2.58	0.56	0.32	81

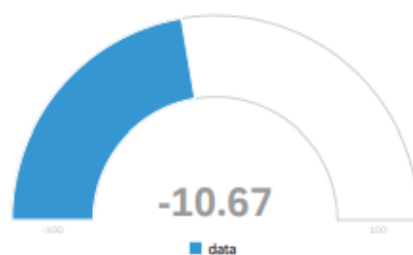
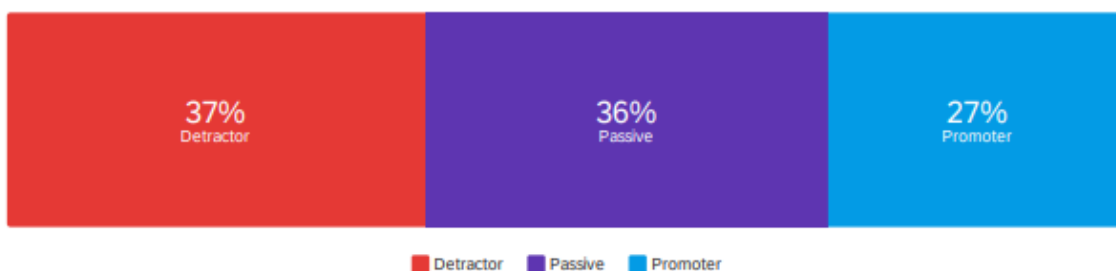
#	Field	Choice Count
1	a few hours a day	3.70% 3
2	a few hours a week	34.57% 28
3	a few hours a month	61.73% 50
		81

Showing rows 1 - 4 of 4

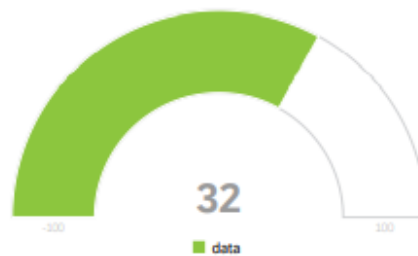
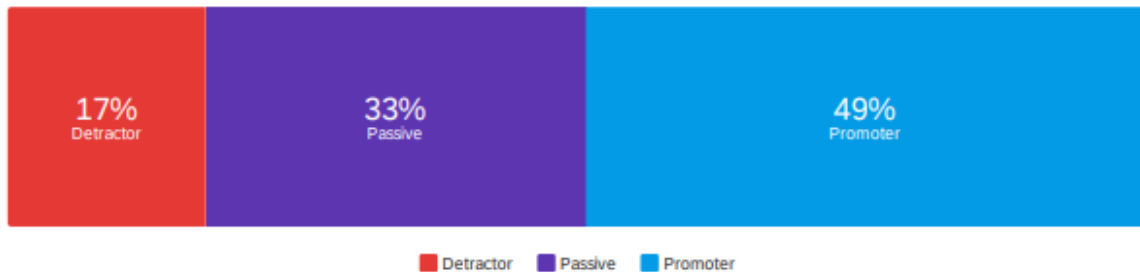
Q11 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". The product price set by a retailer is an important criterion when I consider purchasing an item.



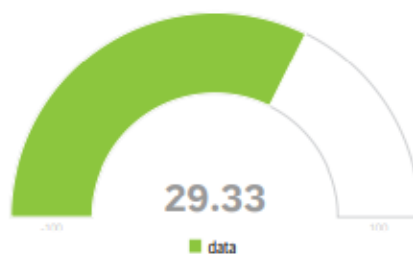
Q12 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find website loading time to be an important criterion when I consider placing an order with a retailer.



Q13 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find website usability (website is easy to navigate) to be important when selecting a retailer.

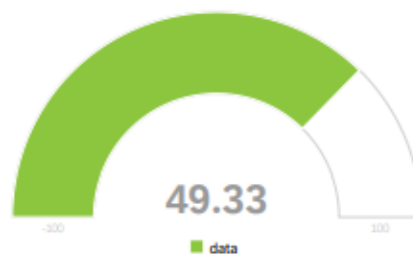
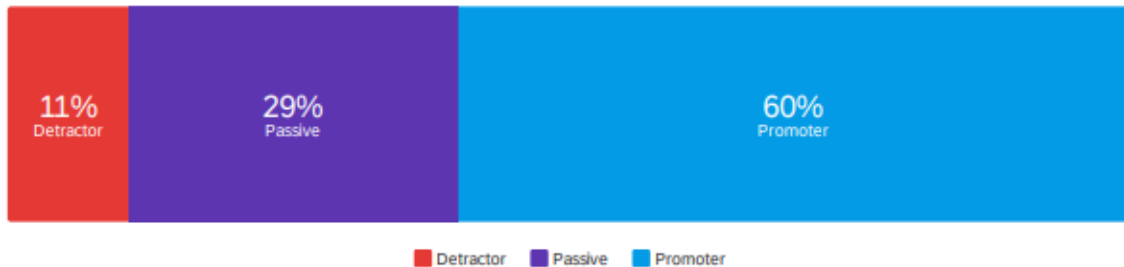


Q14 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find the availability of detailed product descriptions important when I consider purchasing an item from a retailer.

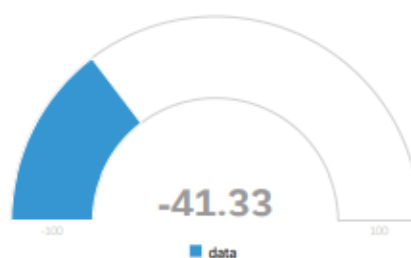
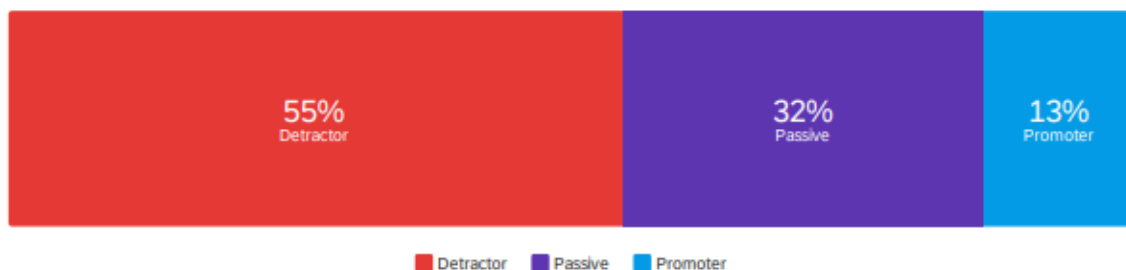




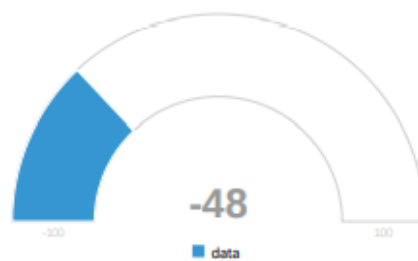
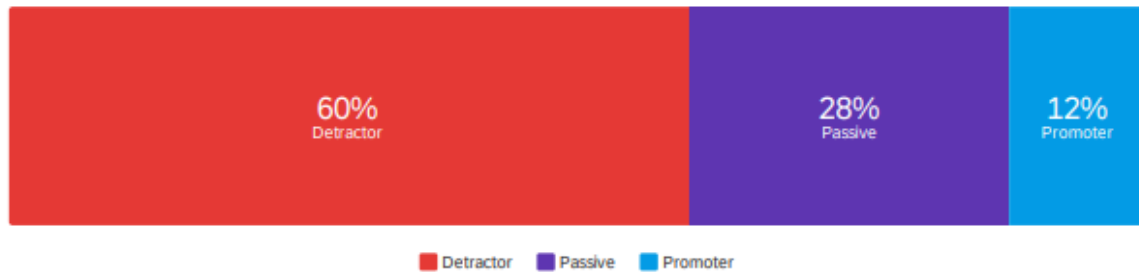
Q15 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find the availability of product images important when I consider purchasing an item from a retailer.



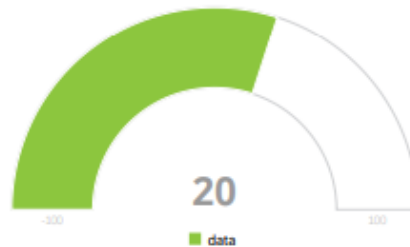
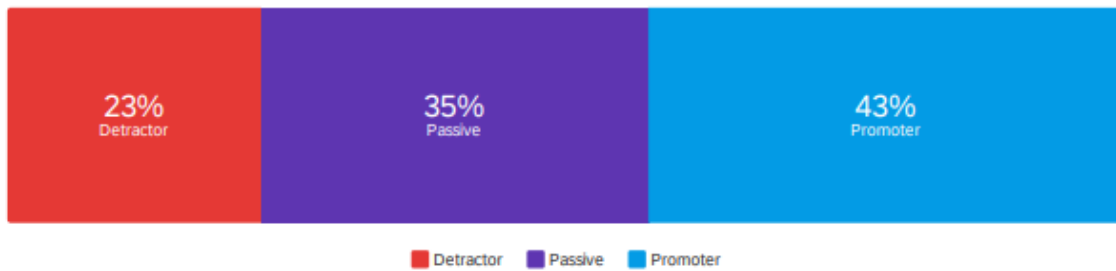
Q16 - Using the scale below, please indicate the usefulness of the feature, with 0 being "not useful", and 10 being "extremely useful". I find social media campaigns by retailers to be useful in informing me about current offers when shopping online.



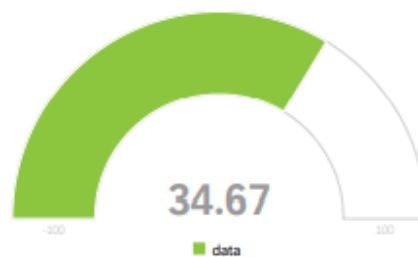
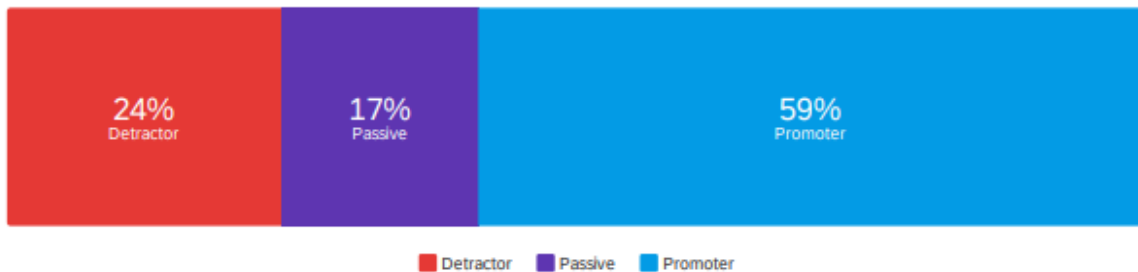
Q17 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I consider sustainable initiatives an important factor when selecting a retailer.



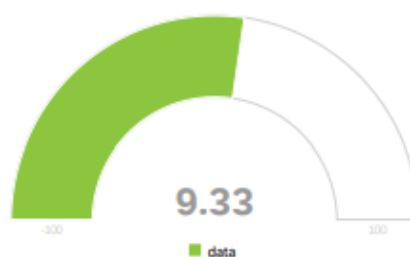
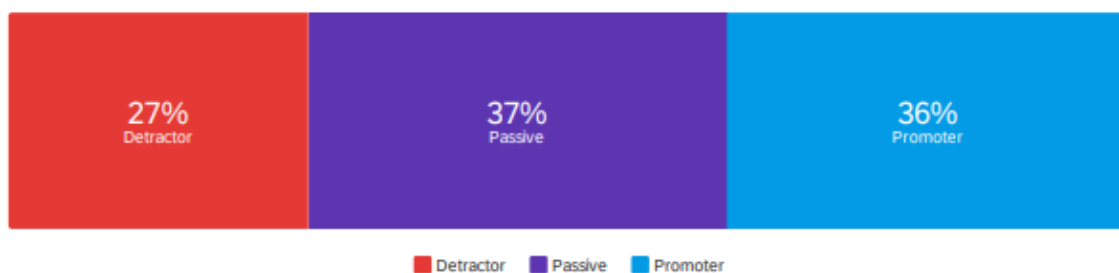
Q18 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find quick processing of my order (within the same or next day of placing) to be an important factor when purchasing from a retailer.



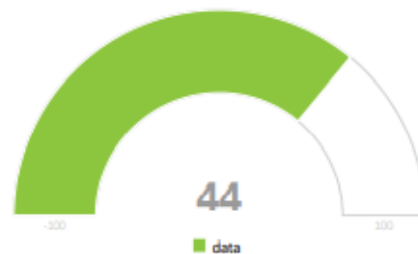
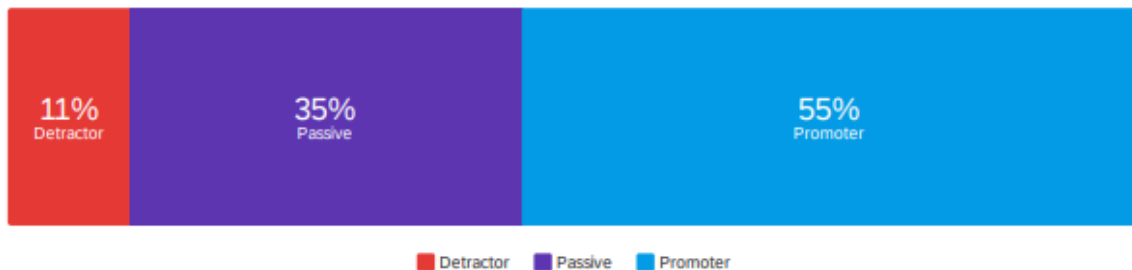
Q19 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find the option to return the item I have purchased from a retailer important.



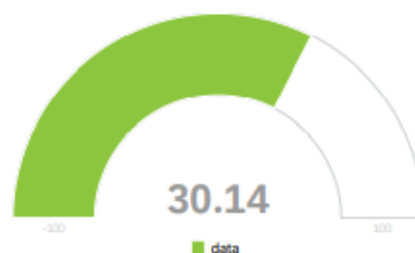
Q20 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find information on the availability of stock on an item I want to purchase from a retailer important.



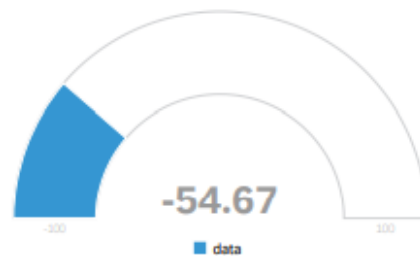
Q21 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find the delivery price to be an important factor when purchasing from a retailer.



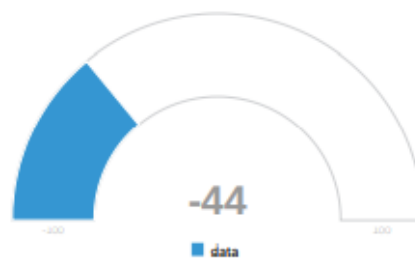
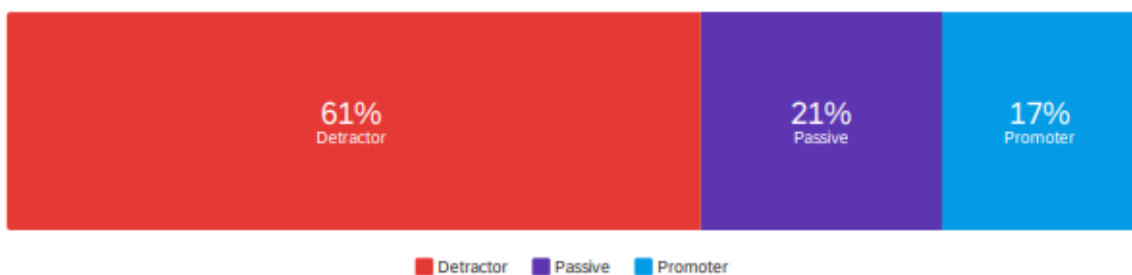
Q22 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find quick delivery time (within one week) to be an important factor when purchasing from a retailer.



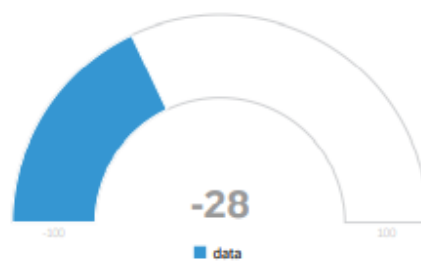
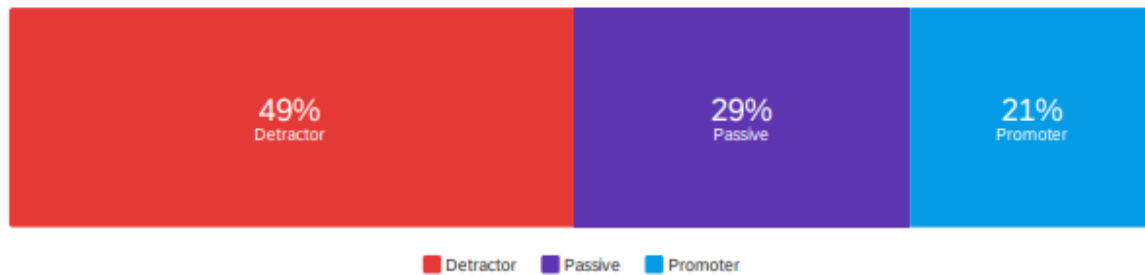
Q23 - Using the scale below, please indicate the usefulness of the feature, with 0 being "not useful", and 10 being "extremely useful". I find chatbots useful when I have questions about an order I have placed with a retailer.



Q24 - Using the scale below, please indicate the usefulness of the feature, with 0 being "not useful", and 10 being "extremely useful". I find consumer hotlines useful when I have questions about an order I have placed with a retailer.

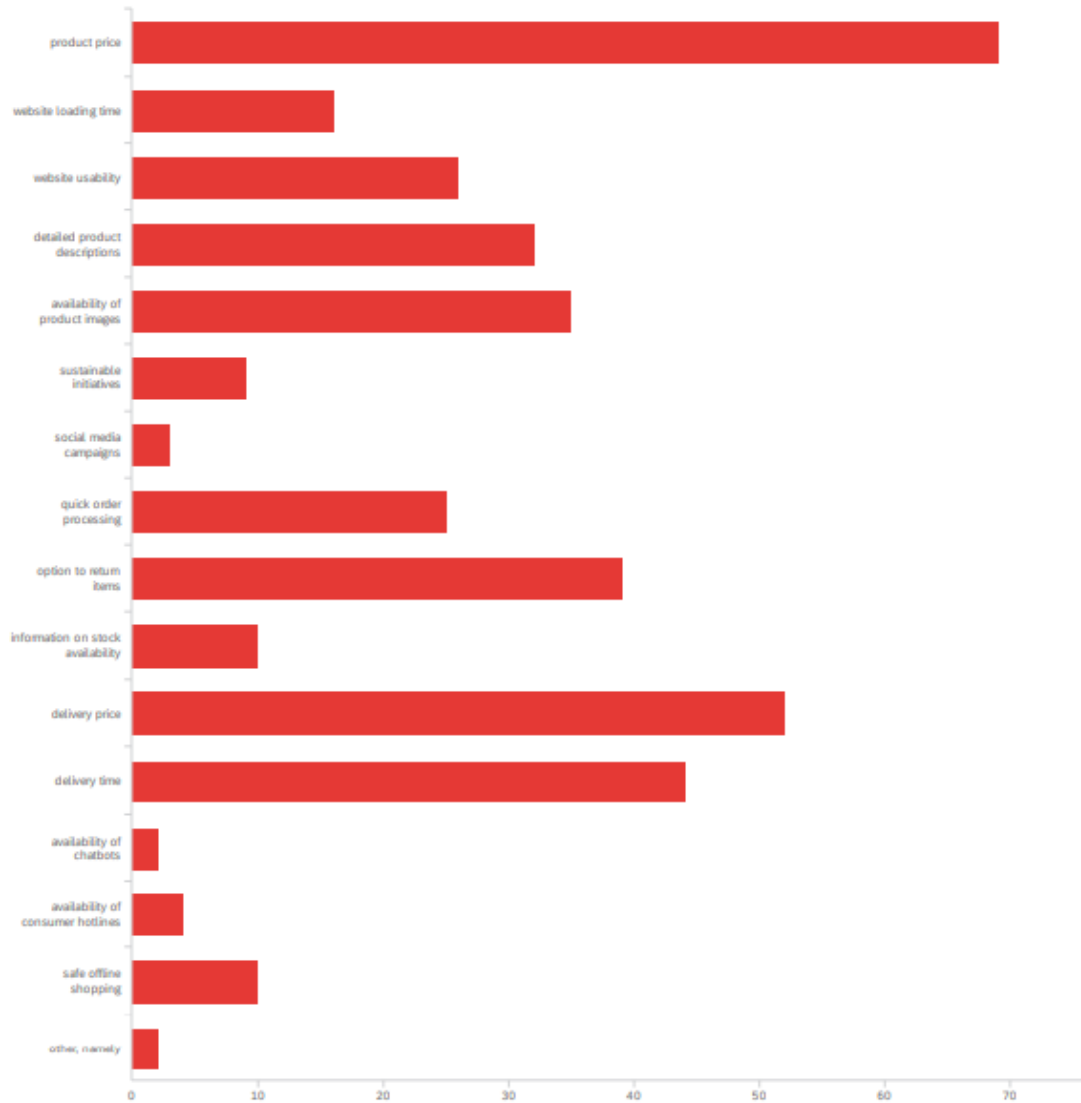


Q25 - Using the scale below, please indicate the importance of the feature, with 0 being "not important", and 10 being "extremely important". I find the option to safely shop offline important when selecting a retailer.



Q26 - Based on the provided elements, please indicate the ones you pay most attention

to when choosing a retailer to shop from:



#	Field	Choice Count
1	product price	18.25% 69
2	website loading time	4.23% 16



#	Field	Choice Count
3	website usability	6.88% 26
4	detailed product descriptions	8.47% 32
5	availability of product images	9.26% 35
6	sustainable initiatives	2.38% 9
7	social media campaigns	0.79% 3
8	quick order processing	6.61% 25
9	option to return items	10.32% 39
10	information on stock availability	2.65% 10
11	delivery price	13.76% 52
12	delivery time	11.64% 44
13	availability of chatbots	0.53% 2
14	availability of consumer hotlines	1.06% 4
15	safe offline shopping	2.65% 10
16	other, namely	0.53% 2

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Showing rows 1 - 17 of 17

Q26\_16\_TEXT - other, namely

other, namely

Reviews of other consumers

Website feature: reviews on their products

Q28 - In the past year, did you switch to another retailer, and if yes - why (reasoning can be anything from long order processing time, companies not offering sustainable initiatives, etc.)?

In the past year, did you switch to another retailer, and if yes - why (rea...

Faster delivery and good service after the sell

No

No

Used a certain delivery company Dpd for a package on vinted never using it again it always gets lost

Amazon, for not paying taxes, Coolblue, for offering partial refunds - to any other store

yes, because I moved countries and there's a wider range of products here through eBay

No

I prefer to be a customer of Amazon because if you have the prime version, you order now - you receive tomorrow. Which is persuasive, reliable and you can always return. Plus, you have warranty.

no

no

Yes, swapped due to a low quality and long delivery time. Was cheaper though

I prefer to shop local instead of buying from multinationals

Options to return

I switched from Adidas to other shoe brands because of the bad usability of the online shop, it took too long to find specific products

Price

I've canceled purchases because of slow loading time, bad user experience or very high prices compared to the competitors.

Yes, broader assortment

I use various retailers, based on price, delivery time and ability to return. I prefer to do a mini-research on the product I wish before I buy it.

Yes. Better options.

In the past year, did you switch to another retailer, and if yes - why (rea...

Food wise we have been transitioning from Lidl back to tesco and asda simply for the better quality of the products, even though it costs a bit more.

Yes, mainly because of the fact lots of retailers are not transparent in how they treat and pay their employees.

I used to buy a lot through Amazon, but once I read some of their products weren't original I have started to buy directly from the manufacturing companies if I can. Also, many times Amazon has the same products as Aliexpress just way more expensive. None of these companies is sustainable, so at least if I can save money I will buy through Aliexpress.

I have not switched to another retailer, but orders do in fact come very slow and the information that is put out isn't always reliable.

I'd usually switch retailers based on pricing (/frequent fake-discounts) or slow order processing/delivery (more than 5 business days to deliver within the same city/area)

N/A

No

No

No

No

Return not available or return available if you pay the shipping cost

no

No

No

Problem with delivery

No

Product price

No

No

No

Problems with the quality of the goods

No.

Price was better

In the past year, did you switch to another retailer, and if yes - why (rea...

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Product price and quality

No

No

No

Not really, I have a certain need and then look online where I can buy it. So the online retailer could be different as it depends if the product is in stock there for a good price.

No

No

## Q29 - Is there something you regard as missing in the way online shopping is conducted?

Is there something you regard as missing in the way online shopping is cond...

Fotos of different types of people. Very skinny, normal, chubby, so everyone can see how something will fit. Maybe less for the buying behaviour, but also stimulates one, because they can see how it will look.

No

No

Images when people are either using or wearing the product sometimes are missing to me this is important

Give insights into price history

some websites have a faster tracking option which I think is very useful, instead of opening more and more sites, so I'd like to see that in more shopping sites

Most of the products online are missing reviews from other customers. When I buy something, I always tend to check if there are reviews about it and whether they're positive or negative, i make my own research.

no

no

No

Shops often don't ask how they could improve your customer experience

Nothing I can think off

No

I find the "orders completed" and "customer reviews" quite useful.

N/A

Transparency with how the business is conducted behind the scenes.

I am concerned about the returns and its consequences to the planet. There should be ways to reduce shopping returns.

I believe it's bearable as of right now, so I wouldn't say something is missing.

I'm often held back from ordering something due to the inability to test it prior purchase.

Safe and clear payment is missing at some retailers and it should be a must! The customer must feel safe for it's money in virtual space!

Is there something you regard as missing in the way online shopping is cond...

I don't know

Ability to try out the product for an amount of time, before deciding whether to commit to it or not (especially for more expensive items)

No

No

no

No

Opinions of the buyers

No

No

No

Videos of products in hands or on people

The ability to change delivery date and time

No

Reviews of the products

No.

No

No

No

No

I would say no, but when buying more personal products (hair/skin care or medicine) help from a specialist might be helpful which is not available online.

Not particularly

No

## APPENDIX IV - Variable Importance

		The product price set by a retailer is an important criterion when I consider purchasing an item.	I find website loading time to be an important criterion when I consider placing an order with a retailer.	I find website usability (website is easy to navigate) to be important when selecting a retailer.	I find the availability of detailed product descriptions important when I consider purchasing an item from a retailer.	I find the availability of product images important when I consider purchasing an item from a retailer.	I find social media campaigns by retailers to be useful in informing me about current offers when shopping online.	I consider sustainable initiatives an important factor when selecting a retailer.	I find quick processing of my order (within the same or next day of placing) to be an important factor when purchasing from a retailer.	I find the option to return the item I have purchased from a retailer important.	I find information on the availability of stock on an item I want to purchase from a retailer important.	I find the delivery price to be an important factor when purchasing from a retailer.	I find quick delivery time (within one week) to be an important factor when purchasing from a retailer.	I find chatbots useful when I have questions about an order I have placed with a retailer.	I find consumer hotlines useful when I have questions about an order I have placed with a retailer.	I find the option to safely shop offline important when selecting a retailer.
N	Valid	75	75	75	75	75	75	75	75	75	75	75	73	75	75	75
	Missing	3	3	3	3	3	3	3	3	3	3	3	5	3	3	3
Mean		7.95	7.03	8.28	8.05	8.49	5.61	5.71	7.81	7.99	7.57	8.56	8.10	4.77	5.59	6.16
Median		8.00	7.00	8.00	8.00	9.00	6.00	6.00	8.00	9.00	8.00	9.00	8.00	5.00	6.00	7.00
Mode		8	7	10	9	10	5 <sup>a</sup>	8	9 <sup>a</sup>	10	10	10	9 <sup>a</sup>	4	5	5
Std. Deviation		1.692	2.143	1.503	1.601	1.631	2.745	2.514	1.799	2.430	2.035	1.378	1.733	2.907	2.848	2.805
Skewness		-0.723	-0.729	-0.618	-0.454	-1.189	-0.496	-0.193	-0.614	-1.551	-0.584	-0.622	-0.843	-0.003	-0.239	-0.595
Std. Error of Skewness		0.277	0.277	0.277	0.277	0.277	0.277	0.277	0.277	0.277	0.277	0.277	0.281	0.277	0.277	0.277
Kurtosis		0.007	0.798	-0.404	-0.774	1.269	-0.683	-0.783	-0.185	1.954	-0.414	-0.593	0.020	-0.960	-0.642	-0.225
Std. Error of Kurtosis		0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.548	0.555	0.548	0.548	0.548
Minimum		3	0	4	4	3	0	0	3	0	3	5	3	0	0	0
Maximum		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
<sup>a</sup> Multiple modes exist. The smallest value is																

Table 1. Independent Variable Means

Source: SPSS, developed for this study based on the Qualtrics survey data