

Online VS. Offline shopping, impact of Covid-19 on the digitalization process in Austria

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Affidavit

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Abstract

The ongoing digitalization in the retail industry is a process that has been going on for many years. However, the outbreak of the novel disease Covid-19 fastened the digitalization process by forcing businesses to adapt to a needed digital way of operating within weeks.

This thesis aims to identify the influence of Covid-19 on the retail industry's digitalization process as well as how it affected the consumers' decision to shop online versus offline. An online questionnaire helped to understand to what extent the novel disease Covid-19 influenced the decision to shop online versus offline and how the participants' perception towards shopping online has changed. The researcher was able to receive 117 valid responses from the questionnaire. The received data presents the strong impact of Covid-19 on the participants online shopping frequency. Since the outbreak of Covid-19, most participants indicated a substantial increase in their shopping frequency.

Moreover, the data reveals critical motivating factors that influence the consumers to shop online versus offline. Convenience factors seem to be the most influential motivating factor to shop online. Additionally, the data presents factors affecting the decision to shop in brick-and-mortar stores, such as evaluating the desired products physically. Finally, the research further offers valuable information regarding the change of the preferred product category choices before and after the pandemic as well as the relationships between statements concerning the shopping experience in the Covid-19 times and demographic characteristics.

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List of Abbreviations

COVID-19 - Corona Virus Disease 2019

SMEs - Small and medium-sized enterprises

DTS – Digital Transformation Strategy

eWom – Electronic Word-of-Mouth

GDP – Gross Domestic Product

1 Introduction

The following chapter intends to present important background information on the research topic and clarifies vital terms. First, the chapter introduces the novel disease Covid-19 and highlights the social and economic changes the unique pandemic has caused globally. In addition, it discusses the rise of digitalization and the resulting benefits for certain industries thereof. Finally, the research aim and research questions as well as the research design are explained.

1.1 Background

1.1.1 Covid-19 a Global Pandemic as a Challenge for the World

In 2020 the world has encountered a crisis no one could have prepared for. The infectious disease Covid-19 has influenced the way we live, love, and work. First discovered in Wuhan, China, in December 2019, the virus has spread worldwide and is continuously spreading further (Chakraborty & Maity, 2020; WHO, 2020).

The Covid-19 pandemic has caused one of the biggest social and healthcare crises in the history of humankind. Countries were facing unique challenges when fighting against the virus's outbreak, such as ensuring a working healthcare system and the right allocation of medical supplies (Duek & Fliss, 2020). Furthermore, countries had to shut down and enforce social distancing to minimize the contagion rate and resulting deaths. This so-called *lockdown* means that most international and national flights were canceled, restaurants and bars were closed, companies had to resort to home office, and public and private institutions such as universities and schools had to close their doors (Chakraborty & Maity, 2020). Despite all the efforts, during the process of writing this thesis, the number of worldwide reported cases as well as the reported deaths are continuing to increase exponentially (WHO, 2020).

Fernandes (2020) emphasizes in his study that Corona harms countries' economic growth rates. The majority of top economies of the world have noted down an economic decline in 2020. Countries with a tourism-dependent economy such as Spain, Portugal, and Mexico have experienced immense GDP losses in 2020 (Fernandes, 2020).

Moreover, recent forecasts estimate Austria's GDP to decrease by 7 percent due to the lockdown in 2020 (IMF 2020). The resulting lack of revenue caused by the lockdown is improbable to recover since regulations still limit possible business activities. An example of the consequences for the service-based businesses is, for instance, shown by the leading German multinational travel agency TUI, which had to request financial aid in 2020 to continue operating (Fernandes, 2020).

1.1.2 Retail Development

The ongoing change in the retail industry is a well-known phenomenon. The retail sector is continuously evolving due to the continued wave of digitalization (Kagermann & Winter, 2018; Hagberg, Sundstrom and Egels-Zandén, 2016). Nowadays, consumers face a challenge when deciding whether to shop online or offline. It needs to be determined which mode of shopping can fulfill consumers' shopping interests and maximize their satisfaction (Schwartz et al. 2002). PWC (2016) highlights that physical stores have an annual decrease in customer visits between April and July. However, most consumers still favor shopping in a traditional physical store due to the better evaluation of the product.

Online retail has gained significant importance to consumers who value convenience (Jiang, Yang and Jun, 2013). According to PWC (2016), 56 percent of the German respondents claimed that convenience is the main influencing factor for purchasing products online. On the contrary, only 35 percent of the German respondents said that the price is their primary motive to shop online. Moreover, the rising importance of online retail is reflected in the estimated global e-commerce sales for 2020. Worldwide e-commerce sales are expected to sum up to 3.914 trillion dollars and are therefore expected to be 16.5 percent higher than in 2019 (eMarketer, 2020). KPMG (2017) highlights the increasing importance of smartphones for the entire retail industry. Seventy-seven percent of consumers from the United States regularly use their mobile phones to research a specific product while being in a physical store. The majority of these consumers compare the store's price with prices offered among other retailers (KPMG 2017).

A Consumer's decision to shop offline is combined with different costs compared to shopping online. The consumers' cost of shopping in brick-and-mortar stores relates to the cost of time to go into the store and the resulting cost for transportation to get there. On the other hand, consumers' shopping cost relates to the possible risks such as lack of security and lack of data privacy and the cost of waiting for the product (Shi, Zhou, Jiang, 2019).

1.2 Research Aim

This study's primary purpose is to evaluate Covid-19's impact on the retail industry's digitalization process and the influences on consumers' motivation to shop online versus offline. This study has several objectives associated with the digitalization process and Covid-19. First of all, the digitalization process's possible impacts on brick-and-mortar retail stores need to be determined. Afterward, it needs to be evaluated to what extent Covid-19 has changed the consumer's intention to purchase online or offline, and finally, the main advantages of shopping online need to be evaluated. These problems lead to the central research question of this thesis:

What factors affect consumers' decision to shop online vs. offline?

To answer the central research question, all relevant vital terms must be defined. Afterward, the topic of the thesis will be discussed by relaying literature. To close the research gap, the author decided to use the quantitative approach and has developed a questionnaire that has been answered by 117 participants. The survey results will help get a broader understanding of how Covid-19 has impacted the consumer's decision whether to shop online or offline.

Thus, this thesis is divided into six parts:

The first part of the thesis is the introduction, which mainly aims to provide a brief overview of the retail industry's current situation and a short explanation of the development of the novel disease Covid-19 and its impact on the world. The second part of the thesis is the literature review, which includes several explanations of terms and processes related to the topic. The literature review starts with explaining and elaborating terms related to digitalization. Afterward, the key differences between online and offline shopping are explained, and factors that can influence the decision

where to shop get elaborated. The next part of the literature review includes an in-depth explanation of the consumers' intention to shop online, including several factors influencing the decision to shop online and the consumer purchase decision making process. At the end of the literature review, the influence of demographic and geographic characteristics on the consumers' decision where to purchase is explained. The literature review is followed by a short overview of the literature review resulting research hypothesis.

The third part of the thesis is the methodology section. In this section, several research designs and methods get explained as well as analyzed for their advantages and disadvantages. In addition, the questionnaire development is explained and how the data was collected. The final two parts of the methodology section are the explanation of the data analysis and the applied research ethics.

The fourth part of the thesis is the data analysis. This part includes the whole empirical part of the thesis, including the sample characteristics, the participants preferred shopping modes, motivating factors to shop offline, motivating factors to shop online, the rankings of different product categories before and after the outbreak of Covid-19, and the participants shopping behavior after the outbreak of the pandemic.

The fifth part is the discussion section. In this section, the analysis findings are elaborated and afterwards reviewed for their effect on the research hypotheses. The final part of the thesis will conclude the research.

2 Literature Review

This chapter includes the theoretical background of this thesis. The literature review is divided into three parts including a brief description of the differences between online and offline shopping, the detailed explanation of how a digital transformation occurs and what steps are needed to successfully achieve a transformation including the rapid digitalization wave caused by Covid-19. In the third subchapter, the author describes factors influencing consumers intention to shop online.

2.1 Digital Transformation

In order to understand how a digital transformation of a business takes place, each relevant step needs to be analyzed. Figure 1 emphasizes the three steps needed to achieve a digital transformation.

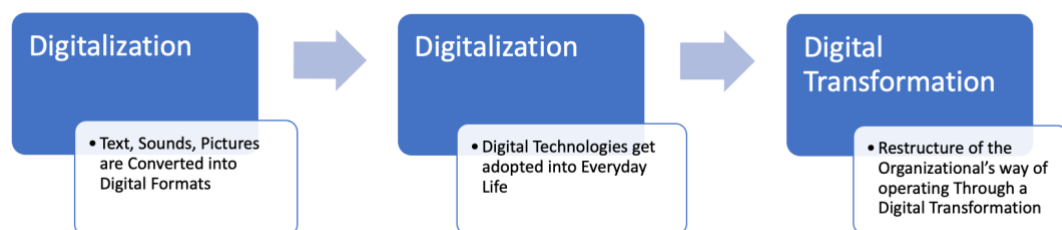


Figure 1 Framework of Digitalization

2.1.1 Digitization

Digitization is the fundamental step to achieve the digitalization of a business. The term “digitization” refers to the process of converting analog information or formats such as text or sounds into digital formats such as the implementation of electronic reports (Brennen & Kreiss 2016; Thormann et al. 2012). This process is achieved by changing analog information into bytes that can have a value of zero or one. This encoded format enables computers to store and process the info. The easy availability of devices that are capable of digitizing, such as scanners, increases the implementation of the process to everyday life (Khan, 2015). Digitization is a process that occurs in the whole world and nearly every industry. Friedrich et al. (2011) further emphasize that specific sectors such as financial services and insurance, adopt digital processes faster than other sectors. These leading sectors are constantly digitizing their business activities to increase their productivity and bring more convenience to consumers. A similar scenario applies to the geographic development of digitization. Thereby, countries such as Austria or Germany have higher digitized sectors and more digitized processes than eastern European

countries. In the future, a subsequent effect is very likely since digitization favors a good economy and a good economy in return enables digitization (Friedrich et al. 2011).

In a business environment, digitization refers to the change from analog processes to automated digital processes (Mergel, Edelmann and Haug, 2019). This change may result in a structural shift in the company's way of operating. The digitization of services can result in a change in the market or customer segment. It needs to be determined whether the change attracts new customer segments and whether further adjustments to the company's structures are required (Matt, Hess and Belian, 2015).

Khan (2015) highlights that digitizing might initially be pricey, but the advantages exceed the cost in the long-term. Besides that, digitization is combined with several advantages, such as the improvement of access to information inside the company as well as with the external stakeholders e.g., consumers are no longer limited by distance or availability of hard copies of materials such as blueprints or reports (Khan, 2015). The free flow of information not only benefits the consumer; it also creates value to the companies that provided that information by gathering data about the consumer's preferences, behavior, and location. This information is then used to design and place products better for the target audience (Friedrich et al. 2011). Furthermore, changing the way of operating by digitizing is essential to enhance efficiency and productivity (Mergel, Edelmann and Haug, 2019). Finally, digitization is cost-effective, which is another beneficial factor, and the overall relief of communication is facilitated in a clear manner (Mergel, Edelmann and Haug, 2019).

2.1.2 Digitalization

Now that digitization has been discussed, one can look further into the digitalization process and understand its main aim. Digitalization is a process whereby digitized data gets used in order to change the way an organization works, corresponds to its customers, or interacts within a company (Hess et al. 2017). Moreover, the digitized data gets used to start new business concepts and achieve a competitive advantage (Unruh & Kiron 2017). The digitalization process mainly refers to the effect the adaption of digital data has on society, organizations, or individuals' levels (Legner et

al. 2017). E.g. the website Facebook has dramatically changed the way humans communicate and how businesses conduct their marketing. The digitalization process is not anything new; it has been going on for over fifty years, and has from there on, continuously changed the world (Kagermann & Winter 2018). Therefore, it is essential to divide the process into three phases. The first phase includes the computer's invention as a replacement for traditional devices such as typewriters and the overall first attempts to digitize analog formats into digital formats (Legner et al. 2017). The following phase refers to the implementation of the internet as a global infrastructure that enabled companies to communicate with low effort and offered new business opportunities. The third phase of digitalization is the current race of constant development and invention of new technologies that inter alia, enable greater storages (e.g., cloud systems) or increase the speed of operating systems (Legner et al. 2017; Hess et al. 2017).

Digitalization is seen as a significant driver for growth and innovation within a business. Businesses that digitalize their activities prove to be more competitive in the world market and thus, more appealing for investments (Bellakhal & Mouelhi, 2020).

Parviainen et al. (2017) highlight in their study the digitalization's impact on an organization's way of operating and the changes in the organization's goal setting. The process can be divided into three different steps: Internal efficiency, external opportunities, and disruptive change. Internal efficiency refers to the benefits of digitalization, such as the relief of communication, increased quality, or the elimination of manual steps. The second step of the process is external opportunities. This concept refers to the new possibilities digitalization brings to an organization's way of operating (Parviainen et al. 2017). It enables companies to use new technologies for sales, distribution, and to build new marketing campaigns. Consequently, companies can virtually advertise their goods and services using online platforms, such as social media or websites. As a result, new business concepts can be developed, higher turnover can be achieved, and the resulting shift can improve stakeholder relationships (Bellakhal & Mouelhi, 2020). The final impact digitalization can cause on an organization are disruptive changes. Disruptive change occurs when an organization changes its operation due to digitalization (Parviainen et al. 2017).

However, in order to achieve a business's digitalization, investments into digital infrastructure, including new computers, IT experts, and the latest software, are required. Such tools are connected with high costs that make the digitalization process more appealing to large-scale enterprises rather than for SMEs. (Bellakhal & Mouelhi, 2020). Simultaneously, a delay in a company's digital adaption can lead to a disadvantage on the market because competitors started their digitalization earlier and already benefit from the benefits digitalization brings to an organization (Westerman et al. 2011)

One can deduct from this analysis that digitalization enables enhanced connectivity, administrative, and business costs to be minimized and offers broad access to finance, thus enhancing efficiency. Furthermore, the use of digital technologies can be seen to increase the organization's productivity (Bellakhal & Mouelhi, 2020).

2.1.3 Digital Transformation

An organization's digital transformation describes the process whereby the use of digital technology drastically changes the organizations' way of operating to achieve improved productivity, performance, and an enhanced customer/employee experience with an overall positive impact on the organization's culture and revenue (Matt, Hess and Benlian 2015; Piccinini et al. 2015). Unlike digitization and digitalization, digital transformation is about building new business models. A well-known example of creating new business models caused by a digital transformation is taxi services' transformation. Mergel et al. (2019) emphasize that applications such as Uber disruptively transform entire industries by introducing new digital technologies. Uber has rapidly changed the traditional way of taking a taxi and replaced it with a more convenient, app-based alternative (Mergel et al. 2019). This example highlights the possible consequences a digital technology can bring to the market and should encourage organizations to adjust and transform their business models to stay competitive with upcoming innovations, trends, applications, or services (Kotarba, 2018). A recent study has shown that companies that successfully went through a digital transformation show a robust competitive advantage when launching a new digital service or product (Grebe et al. 2018).

The most effective way to guide an organization through a digital transformation is to have a clear strategy (Brown & Brown 2019). Albukhitan (2020) divides his digital transformation strategy (DTS) into six steps, where each step has a clear objective. The first step of the strategy includes the process whereby an organization needs to define a realistic long-term goal with a specific focus on creating a competitive advantage and overcoming current weaknesses in its organizational structure. Moreover, an organization's focus should be to use technologies that create value for its customers rather than focusing on their competitors' technologies. The second step of the DTS refers to identifying operational processes that need an update or an innovative replacement and identifying the organization's digital maturity (Albukhitan, 2020). Identifying the maturity level is crucial because higher levels of digital maturity have a positive impact on an organization's performance and customer satisfaction (Grebe et al. 2018).

Moreover, according to the study of Grebe et al. (2018), business leaders believe that digital technology is essential for the long-time success of an organization. The next step of the strategy involves deciding how an organization can strengthen its relationships with its customers and employees. The organization's goal should be to identify creative ways to increase customer engagement that could arise by leveraging, for instance, social media (Albukhitan, 2020). The use of social media helps to build a strong relationship with an organization's customers and facilitates sales by making the customer aware of current promotions (Sashi, 2012).

In the fourth step, the organization needs to choose its preferred technology provider, who can match the organization's goal and objectives of the transformation. The organization should select a provider that can construct an excellent digital infrastructure that is easily accessible and provides excellent customer support (Albukhitan, 2020). Customer support is essential to customer satisfaction and crucial for a long-term customer-organization relationship (Reibstein, 2002). The fifth step of the strategy is creating a clear timeline and schedule to ensure the success of the transformation. The transformation can consume much time and human capital, and therefore it is useful to have a plan to control whether everything goes accordingly. In the final step of the strategy, the organization should create a clear leadership style to match the new digital environment. Moreover, it is highly recommended to have a

group of IT experts to ensure a successful digital transformation and to prepare for possible trends in the future (Albukhitan, 2020).

2.1.4 Corona's Impact on Digitalization

Rapid digitalization occurred as a result of social distancing. Due to the outbreak of Covid-19, businesses had to find innovative solutions to deliver their services online. Companies had to adapt to the new way of operating in a short time period. Employees had to set up their home offices and started communicating remotely (Papagiannidis, Harris and Morton, 2020).

Baig et al. (2020) highlights that institutions adopted digital technologies five years faster than usual. Due to the pandemic, institutions had to undergo a digital transformation of their business practices within eight weeks (Baig et al. 2020). As an example, supermarkets had to change their entire business model from brick-and-mortar grocery selling to online grocery stores with a delivery service. As a result, existing online stores which, for instance, offer groceries, gained more popularity during the lockdown. Consumers were unable to go to the grocery stores due to their country's lockdown restrictions or their fear of contagion (Sheth 2020).

The rapid wave of digitalization did not only apply to businesses. Nearly all sectors had to switch to a remote alternative to be able to follow their pre-pandemic schedules. Schools may have been closed, but students still had their classes according to the same schedule online (Iivari, Sharma and Ventä-Olkkonen, 2020). However, digitalization has been in process even before the pandemic. The digitalization of the retail industry is a well-known phenomenon. Nowadays, consumers strongly favor retail stores that have an online store due to the availability of information such as stock levels and prices (Mäenpää & Korhonen, 2015). A retail store's digital transformation primarily shows advantages for a business rather than drawbacks. Consequently, a delayed adoption of digital services may have a drastic outcome for specific industries.

This can be seen in the case of the travel sector. Although the tourism industry is a growing one, brick-and-mortar travel agencies are constantly experiencing a decline in demand. Consumers are more emancipated and can now contact hotels and airlines without the help of an intermediary (Mäenpää & Korhonen, 2015). This development

emphasizes the importance of steady digital development and that the digitalization process has been emerging way before and not simply resulting from the pandemic. The Covid-19 pandemic only fastened the adoption due to an emergency state.

The outbreak of the novel disease Covid-19 has dramatically impacted the consumers' choice of shopping online or offline. The shift in the mean of shopping caused a rapid increase in e-commerce sales in Europe. According to a recent study from CRR (2020), European online retail sales are expected to increase by up to 31 percent in 2020. Countries such as Germany have had an increase in online sales of 22 percent in 2020. In countries where the Covid-19 had a more severe outbreak, such as in Spain or Italy, online sales increased even more significantly. The total increase in Spain's online sales is estimated to be around 75 percent higher compared to the previous year. Moreover, it is also projected that Italy's online retail revenues will grow by 53 percent in 2020. In 2021, a slight decrease in retail sales is expected (CRR, 2020). Covid-19 has significantly increased worldwide e-commerce website traffic. In June 2019 the global e-commerce website traffic amounted to 16.2 billion global visits, one year later the visits increased up to approximately 21.96 billion and therefore surpassed 2019s holiday season visits (SEMrush, 2020).

2.2 Online Vs. Offline Shopping

Consumers determine how they shop, depending on their desire (Sarkar & Das, 2017). Before pandemics, the majority of consumers still preferred to shop in traditional land-based retail stores in order to have an authentic experience (Sarkar & Das, 2017). Consumers differ from each other in their personal preference of shopping online or offline. Some consumers highly value time-efficient shopping combined with a broad variety of products and alternatives, whereas other consumers favor the personal interaction with sales assistants and the ability to be able to have physical contact with the product (Levin, Levin & Wellner, 2005). Moreover, studies have shown that consumers prefer direct physical evaluation of their desired products prior to a completed purchase (Levin, Levin, Heath, 2003). Compared to online shops brick-and-mortar stores have a greater maturity. Consumers who chose those have fewer expectations of finding a lower price when comparing prices with different stores

close by. Conversely, consumers who shop online are more sensible for prices and try to find the best deal by comparing several websites (Scarpi, Pizzi & Visentin, 2014).

The weather is another crucial factor affecting consumers' choice of choosing brick-and-mortar retail over online shopping (Badorf & Hoberg, 2019). Sales can significantly increase or decrease, depending on the forecast. In their report, Badorf & Hoberg (2019) stressed that the turnover could fluctuate up to 25.9 percent based on the weather. Online shops, on the other hand, are not dependent on the weather. Since brick-and-mortar stores underlay ongoing running costs such as water and electricity, the overall operating costs are significantly higher than online stores and make it more challenging to compete with online retailers' extreme sales actions (Sarkas & Das, 2017).

However, land-based stores will always have at least one crucial advantage over online shops namely, customer support. A well working customer support can help build longtime customer relationships which usually have great value to an organization (Ahmad, 2002). Online retailers try to overcome this obstacle by implementing chatbots and instant customer support, but no technology could replace in-store assistance who actively tries to solve a matter from face-to-face (Chung et al. 2018; Chang, Wang and Yang, 2009).

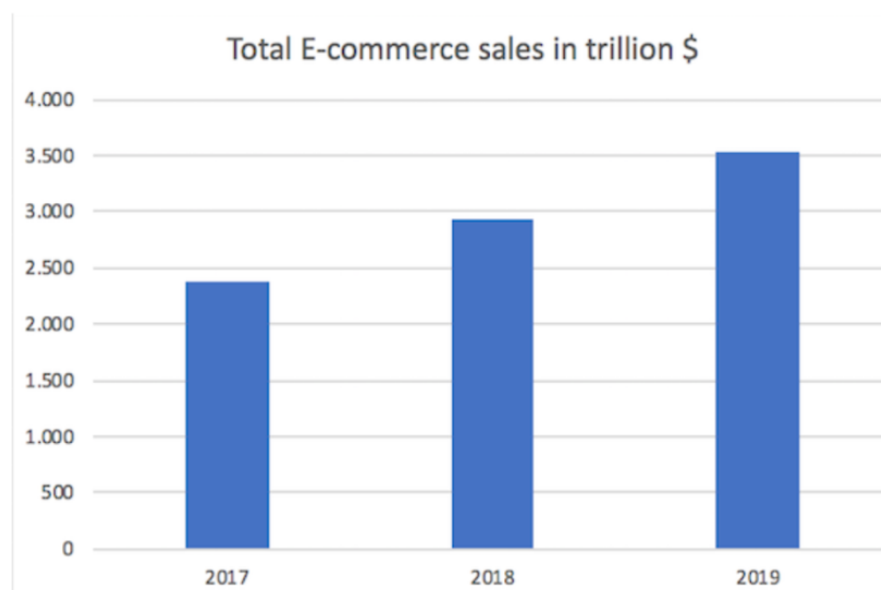


Figure 2 Global E-commerce sales 2017-2019 (based on [eMarketer 2019b])

Figure 2 highlights the development of e-commerce sales between 2017 and 2019. In 2017, global e-commerce sales totaled to approximately 2.382 trillion dollars. In 2018, global sales rapidly increased to 2.982 trillion dollars, representing a percentage increase of 25.19 percent. In the following year, 2019, global e-commerce sales continued increasing to an overall amount of approximately 3.535 trillion dollars. The percentage increase for 2019 was respectively 20.71 percent compared to 2018. Within three years, e-commerce sales increased by 48.4 percent, highlighting the growth potential of online retail in the future.

The global retail industry's significant ongoing changes can also be noticed when analyzing the percentage share e-commerce has on all retail sales in the world. In 2015 global e-commerce contributed a share of 7.4 percent to all global retail sales. Only four years later, in 2019, e-commerce sales were responsible for 14.1 percent of all global retail sales. The percent share of global e-commerce sales on all global retail sales is expected to increase to 22 percent by 2023 (eMarketer, 2019a). However, the forecast of the expected sales for 2023 was estimated before the global pandemic started. Mobile devices have an essential contribution to the thriving development of online retail. It has been measured that in 2019 approximately 52 percent of the global online users had ordered a product or service online in the previous month. Additionally, in Austria, 38 percent of all online shoppers conducted a purchase online in the past month (We Are Social, DataReportal, Hootsuite, 2020).

According to a statistic by CotentSquare (2020), in October 2020, the overall online traffic on supermarket websites has increased by 34.8 percent compared to January 2020. On the contrary, online traffic on tourism-related websites has decreased by 43.7 percent.

2.3 Consumer Intention and Motivation to Shop Online

Behavioral intention refers to the individual's motivation and willingness to perform a specific behavior. If the individual's motivation is high, the desired behavior occurs more likely than not (Ajzen, 1991). A similar concept applies to the consumer's intention to buy, in which the purchase intention refers to the consumer's motivation to consume a product or service (Morwitz, 2012). Purchase intention may further be described as the consumers' willingness to engage in the exchange process on an

e-commerce website. The exchange process includes sharing private information, transaction history, and a starting business relationship (Zwass, 1998). Another definition by Shah et al. (2012) highlights that purchase intention can also be related to consumers' motivation to buy a specific brand.

Chang & Wildt (1994) emphasize that a product's perceived value enormously influences consumers purchase intention. If a product appears to have good quality, the consumers tend to have a high purchase intention. Additionally, if the quality is low, the consumer's purchase intention is likewise. Customer online purchase intention can also be defined as the readiness to get involved in transactions that are transmitted online. These transactions involve a process in which information gets transferred in order to purchase a product online (Pavlou, 2003).

Consumers' buying intention are further strongly influenced by the presentation of the product. It has been proven that online stores can enhance consumers' purchase intention by advertising their products with photographs from various angles, including real-life use scenarios (Then & DeLong, 1999).

2.3.1 Factors Influencing Purchase Intention

Numerous factors have an active impact on consumers' intention and motivation to consume a product or service. The most common motivation drivers are motives such as risk, loyalty, trust, or convenience, but already trivial factors can impact the intention (Suki, 2001). The design of a website can have an enormous influence on consumer purchase intention. Consumers tend to buy products from websites that have a colorful and bright layout as these enhance consumers' moods and increase purchase intention (Pelet & Papadopoulou, 2012).

2.3.1.1 Convenience

Consumers tend to have less time available for purchasing goods and services due to increased professional responsibilities, which tend to consume more time.

Therefore, consumers have to look for new alternatives that enable them to save time (Bhatnagar et al. 2000). The internet provides various options to save time, for instance, through the broad offer of online stores.

Online stores seem to be more convenient due to the absence of big crowds and long waiting times (Jiang, Yang and Jun, 2013).

Furthermore, Online search convenience refers to the easier accessibility of product information online and is considered one of the most influential motives when deciding between shopping online or offline (Verhoef, Neslin and Vroomen, 2007; Omotayo & Omtope, 2018). Consumers strongly favor online channels due to the high level of convenience it brings about. Online channels provide valuable information about recent offers, price discounts, and personalized recommendations without significant physical activity (Dekimpe, Geyskens and Gielens, 2019). Moreover, consumers can shop countless products from several websites without being limited by time or location. Besides the simplicity of having countless products available online for 24 hours, seven days a week, the consumer also benefits from avoiding big crowds, making the shopping even more convenient and safe (Jiang, Yang and Jun, 2013). Online stores have implemented several new features to improve the shopping experience. New presentation features such as easy product description or customer review systems help consumers easily find their best personal fit. Short product descriptions and a review section can help fasten the information search and achieve a higher shopping convenience. Additionally, online shops maximize their customers' convenience by implementing easy and known payment methods. If the provided payment methods are too complicated, the online store reduces consumers' shopping convenience and risks a shopping cart abandonment (Jiang, Yang and Jun, 2013).

2.3.1.2 Perceived Risk

Perceived risk can be defined as the risk consumers face when buying a product. The risk reflects both the inability to fulfill the desired satisfaction and the possible resulting loss (Sweeney, Soutar and Johnson, 1999). Samadi and Yaghoob-Nejadi (2009), further define perceived risk as the consumer's expectancy that the made decision can negatively affect the consumer.

Moreover, it has been proven that perceived risk has a significant negative influence on consumers' intention and motivation to shop online in the future (Forsythe et al. 2006). Forsythe et al. (2006) further address risk factors such as financial risks, product

risks and time risks, and their influence on consumers' perception of shopping online. The results highlight that consumers with a high frequency of shopping online perceive less risk than consumers with a low frequency of shopping online.

Consumers can experience a different form of perceived risk. One popular form of risk is the perceived financial risk that can be defined as the risk of losing money by purchasing a product that does not meet the expectations and, therefore, can be seen as a relatively poor purchase decision (Zielke & Dobbelstein, 2007). Likewise, a poor purchase decision can also refer to psychological risks. According to Ueltschy et al. (2004), Psychological risks refer to consumers' dissatisfaction after buying a product that does not satisfy their needs. Moreover, consumers are concerned about being a victim of internet fraud. The main concern is hereby that a third-party uses, for instance, the credit card information for unauthorized uses (Salam et al. 2003).

Those risks are more likely to appear when consumers shop online due to the absence of physical contact. Additionally, studies have shown that consumers face a higher level of perceived risk when shopping online, which negatively influences consumer intention and willingness to purchase online (Liu & Wei, 2003; Lee & Tan, 2003).

However, due to Covid-19, consumers perceive an increased risk when shopping in brick-and-mortar stores. The ongoing spread of the infectious disease increases the consumer's likelihood to purchase online in order to reduce the risk of infecting with Covid-19 (Gao et al., 2020). The danger that Covid-19 poses to consumers seems to be greater than the other risks and encourage consumers to purchase online.

2.3.1.3 Trust

Trust is known to be the basis of every trade, whether online or offline. Consequently, a lack of trust can result in a loss of efficiency and sales (Abdulgani & Suhaimi, 2014). In the online retail environment, the concept of trust refers to the promises two parties can rely on, meaning that both sides, consumer and seller, stick to their promises (e.g., the consumer pays, merchant delivers product/service) (Kolsaker & Payne, 2002). Wang et al. (2009) suggest a positive relationship between trust and online shopping activities. Trust has a significant impact on consumers' purchase

intention, meaning that consumers tend to have a more frequent purchase intention when trust exists. Moreover, knowledge is seen as a crucial factor for building trust in online retailers meaning that consumers with rich knowledge about the retailer mostly trust them (Wang et al., 2009).

Furthermore, trust is assumed to be one of the most influential factors for an online shop's success. If an online shop cannot build a stable trust relationship with its customers, the shop is most likely to fail by reason of the consumer's doubts and concerns about getting involved in cyber fraud (Chiemek, Ewiewkaepfe, 2011). Cyber fraud is a potential risk and includes false advertisements of products and non-delivery of the chosen goods (Miyazaki and Fernandez, 2001). Moreover, consumers are concerned that online retailers sell their private contact information to third parties without having their consent (Hoffman, Novak and Peralta, 1999). Online retailers can support the consumer's trust-building process by incorporating characteristics such as service quality, security features, warranties, and fair privacy policies (Martín & Camarero, 2008).

2.3.1.4 Electronic Word-of-Mouth

Electronic Word-of-Mouth (eWom) can increase the consumers' trust in online retailers, reduce the perceived purchase risk, and therefore increase purchase intention towards the desired item (Jing et al., 2016).

eWom has recently gained much importance due to its strong influence on consumer's choice of products. Consumers take existing reviews very seriously and then evaluate whether to purchase the product or not (Doh and Hwang, 2009). Moreover, eWom's generated information appears to be more useful to consumers since the information is based on previous customers' experience with the product/service and not provided by the seller (Brown, Broderick & Lee, 2007).

Furthermore, the concept of eWom always includes active and passive consumers. The active consumers contribute to the website by providing information about their personal experience with the product/service whereby passive consumers use the

active consumer's provided information to find out if the product matches their needs (Khammash and Griffiths, 2011).

Erkan & Evans (2016) analyzed the effects of friends' product reviews on social media and the effects of strangers' product reviews on shopping websites on consumer's purchase intentions. Consumers are more affected by the eWom from strangers on websites than by their friends' eWom owing to the greater quantity of anonymous reviews. Moreover, online website reviews seem to be more detailed than friends' reviews (Erkan & Evans, 2016). Finally, eWom also has a significant impact on the first step of the consumer purchase decision process, in which the consumers seek information. Therefore, reviews of other customers seem to be a great first source of information for further evaluation and information search (Lee et al. 2008).

2.3.1.5 Perceived Service Quality

Perceived service quality can be described as the consumer's perception of the received service quality compared to their expectations (Jiang & Wang, 2006). Consumers evaluate the service quality among the received satisfaction resulting from the service. Especially in online retail, e-service quality is seen as one of the critical factors of becoming or remaining a successful e-business due to the consumers' ability to compare product features and prices much more comfortably than in an offline retail environment (Santos, 2003). Besides that, a higher level of service quality does not only bring benefits to the organization's competitive advantage but also strengthens consumer's intention to purchase products online (Santos, 2003; Gao et al., 2015). Ahmed et al. (2017) suggest that high service quality increases the consumers' purchase intention to buy on the desired website. Moreover, the study highlights that high service quality can directly affect the consumer's choice of revisiting the online shop (Ahmed et al. 2017). Finally, service quality can be achieved by minimizing the cost of time combined with the service (Hui et al. 1998).

2.3.1.6 Perceived Usefulness

Perceived usefulness refers to the consumer's perceived benefits resulting from the online shopping activities. A benefit of online shopping is for instance the easiness of comparing several websites with each other to find the best match (Barkhi & Wallace,

2007). Online retailers that manage to provide easy access to useful information can increase consumer purchase intention towards their products and services (Chen & Teng, 2013). Hanjaya, Kenny, and Gunawan (2019) suggest in their study that consumers start to expect personalized content and unique offers from a retailer. If retailers cannot deliver personalized content, consumers tend to switch to competitors (Hanjaya, Kenny and Gunawan, 2019).

2.3.2 Consumer-Purchase-Decision Process

Consumers' decision-making refers to the multi-step process that consumers cross in order to make a purchase decision (Erasmus, Boshoff and Rousseau, 2010). Engel et al. (1968) conducted one of the earliest research on the consumer purchase decision process and divided it into five stages. The five stages describe how consumers first recognize an upcoming need, secondly seek for information, in addition, evaluate the given alternatives, and then only make the purchase. The decision-making process's final step describes the post-purchase stages whereby consumers, for instance, evaluate if the product satisfied their needs (Engel et al. 1968). However, digitalization has fundamentally impacted the decision process due to the increasing flow and access to information, greater availability of stores, and other digital features (Khan, 2015).

For instance, the second stage of the traditional five-stage decision process model describes how consumers search for information. When comparing the information search in brick-and-mortar stores with the information search conducted online, it can be noticed that the brick-and-mortar store information search is much more time consuming than the online information search (Gupta, Su and Walter, 2004)

Nowadays, consumers are highly influenced by the easy accessibility of information and spend more time researching information in order to maximize their purchase satisfaction (Chowdhury, Ratneshwar, and Mohanty, 2008). Consumers have a different level of information about specific products (Kaas, 1982).

Those, consumers with extensive product knowledge spend the vast majority of their time researching information about the brand. In contrast, consumers with just a fair amount of product knowledge spend much of the time researching the product's basic characteristics and potential alternatives. (Kaas, 1982; Sproule & Archer, 2000).

Schwartz et al. (2002) imply that consumers that continuously try to maximize their satisfaction are more likely to be unsatisfied after the actual purchase. Moreover, this so called "maximizer" also tend to be less satisfied in their life. It has been highlighted that "maximizer" have less self-esteem and tend to regret more decisions (Schwartz et al. 2002).

2.3.3 Demographics

KPMG (2017) indicates that Generation X is the most active online shopping generation in the world. It is highlighted that Generation X approximately completes 20 percent more purchases than Millennials due to Generation X's higher availability of funds for online and offline shopping. Generation X refers to all consumers born between 1961 and 1979 and Millennials refer to all consumers born between 1980 and 1999 (Gurău, 2012).

However, it is assumed that Millennials will exceed Generation X soon (KPMG, 2017). Figure 3 displays the preference of shopping online of Millennials, Generation X, Baby Boomers and Seniors in the United States. In 2017 Millennials were with 67 percent the leading generation of shopping online as the preferred medium of shopping. Generation X had with 56% a lower preference for shopping online (BigCommerce, 2017). Millennials' higher adaption and preference for online shopping can result from the fact that the generation got born into a technologically advanced world. Generation X, on the other hand, constantly had to adapt to upcoming technologies (Bennett, Maton and Kervin, 2008).

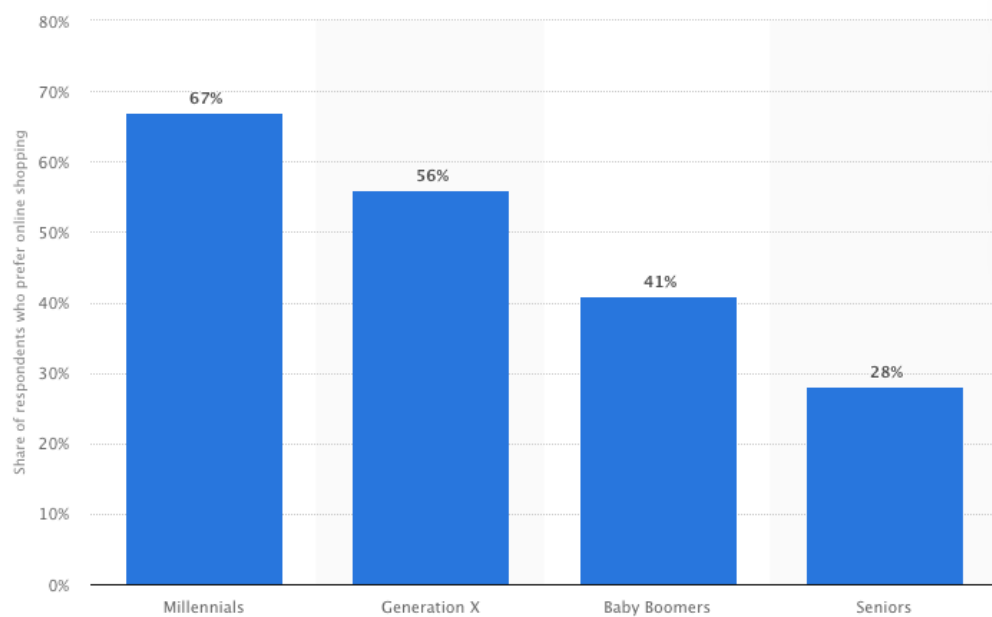


Figure 3 Online Shopping Preference in the United States 2017 (BigCommerce, 2017)

A more recent study analyzed the demographic share of customers who purchased a travel ticket online in 2019. The survey was performed through interviews with over 1800 respondents in Great Britain. The highest portion of people who bought travel tickets online in 2019 were Millennials with an average age between 25 to 34. In contrast, consumers above 65 had 20 percent of the respondents, and thus, the smallest share of completed online ticket purchases in 2019 (Office for National Statistics (UK), 2019).

Furthermore, gender shopping difference is also vital to determine when speaking about demographics. First of all, men tend to spend more time and money in online shops than women (Cyr & Bonanni, 2005). This disparity in online shopping can result from different gender shopping preferences. Women tend to highly value in-store face-to-face conversations with the assistants and enjoy the overall social interactions whereby men strongly favor the convenience online store offer (Dittmar, Long and Meek, 2004). Moreover, women strongly value instore evaluation of the desired products in order to determine if they like them (Cho, 2004). Men, on the other hand, mainly buy electronics online, where a physical evaluation is not necessarily needed (Dittmar, Long and Meek, 2004). Statista (2017) display in their statistic that 23 percent of male consumers in the United States shop online every week.

By contrast, only 17 percent of female consumers shop every week. Additionally, 41 percent of the females' responses stated that they shop several times per month. This number is slightly higher than in the male group, where "only" 39 percent shop multiple times per month (Statista, 2017). Finally, men's general purchase intention and motivation to shop online are greater compared to that of women (Hasan, 2010).

2.3.4 Geographical Influence

Consumers tend to shop online when the accessibility and density of brick-and-mortar retail stores is comparatively low. Rural areas are more likely to have a lower density of stores compared to urban cities (Farag et al. 2006). Additionally, in case of a low density of retail stores, consumers in rural areas use the internet to overcome the lack of local supply and therefore save the travel to neighboring cities (Ren & Kwan, 2009).

Moreover, in rural areas, consumers that do not have the possibility of accessing physical stores due to age, physical health or mental health tend to shop more online (Morganosky & Cude, 2000). Deblasio (2008) suggests in his study that consumers in rural areas use the internet more frequent to book leisure activities compared to consumers in urban regions.

2.4 Hypothesis

Finally, the researcher defined the following hypothesis on the basis of the Literature review:

H0a: There is no significant difference between the online shopping frequency before and the online shopping frequency after the outbreak of the Pandemic

H1a: There is a significant difference between the online shopping frequency before and the online shopping frequency after the outbreak of the Pandemic

H0b: There is no significant difference between the product ranking choices before the pandemic and the product ranking choices after the outbreak of the pandemic

H1b: There is a significant difference between the product ranking choices before the pandemic and the product ranking choices after the outbreak of the pandemic

H0c: There is no significant relationship between the choice of preferred shopping channel and gender

H1c: There is a significant relationship between the choice of preferred shopping channel and gender

H0d: There is no significant difference between concerns of shopping in stores and the age group

H1d: There is a significant difference between concerns of shopping in stores and the age group

3 Methodology

The following chapter aims to present the Methodology of this thesis. First, the chapter introduces the existing research methods and designs. In addition, it highlights the questionnaire development and the applied scaling. Additionally, the chapter includes a subsection that highlights the data collection. Finally, a description of the data analysis is provided as well as a small chapter concerning the applied research ethics.

3.1 Research methods

Every research needs to employ the right research method in order to be able to collect and analyze the needed primary data. There are three existing research methods: Qualitative, quantitative, and mixed methods, whereby all three methods differ in their respective research design (Creswell, 2014). First of all, the qualitative research method primarily focuses on exploring difficulties faced, e.g., by a group of individuals. This approach is mainly shaped by in-depth interviews and the researcher's interpretation of the collected data from the interviews. On the other hand, the quantitative method tests the research objectives' relationships among the defined variables. The primary data are most commonly collected by the use of surveys or experiments.

The mixed-methods approach is a combination of the qualitative and quantitative approaches and is assumed to deliver a more in-depth understanding than the two methods alone (Creswell, 2014; Matthew & Ross, 2010).

The selection of the appropriate research method can be challenging for the researcher. Every research problem requires a different design to deliver an accurate result. The researcher should decide to apply the quantitative research method when, e.g., the factors that influence an outcome need to be identified. On the contrary, if the researcher researches a relatively new topic, the qualitative method is more appropriate. Similar in the case of the researcher's uncertainty towards the important variables of the study. The mixed-methods approach seems to be the best approach when the two alternative methods do not produce enough data to answer the research question (Creswell, 2014).

For this study, the quantitative research method was selected as an appropriate method to collect the needed primary data. Moreover, the researcher decided to use the non-experimental design survey. One key advantage of a non-experimental design is the absence of the researcher caused manipulation on the independent variable. Non-experimental designs mainly try to discover and describe the relationships among variables without the active influence of the researcher (Christensen, Johnson and Turner, 2014). Another beneficial factor of non-experimental designs is that a well formulated questionnaire can provide a high validity and reliability of the measurement. An additional strength of a non-experimental design is that the data can be collected completely anonymously. However, non-experimental designs such as questionnaires have also numerous disadvantages, including the risk of a low participation, the participant's inability to complete the questionnaire successfully, and the relatively high amount of needed time to analyze the survey data (Christensen, Johnson and Turner, 2014). The researcher decided to use a questionnaire design as an appropriate measure to identify the participants' attitudes towards online and offline shopping as well as the influence of the Covid-19 pandemic. The questionnaire helps to identify relationships among the variables and help to determine a result for future research implications.

Finally, the post-positivist worldview guided the researcher through the research by helping him formulating hypotheses to test the defined theory. Afterward, the research can either support or reject the defined hypothesis (Creswell, 2014).

3.2 Questionnaire development

The online questionnaire was conducted to investigate what factors affect consumers' decision to shop online or offline and the influence of Covid-19 on this decision-making process. The basis of the topic was already introduced in the literature review, now the researcher tries to collect enough primary data to answer the research questions and to determine if the defined hypotheses are supported or rejected.

In the first subsection, the participants had to evaluate statements concerning factors that can influence an individual's intention to shop online and general questions concerning the participants' preferences of where to shop. Numerous statements from this subsection are based on the questionnaire used by Akroush & Al-Debei (2015), including *"I shop online because I can shop in privacy at home"*, *"I shop online because it can save me the effort of buying what I want from offline retail stores"*. Moreover, the author used further statements based on other questionnaires. These statements are for instance *"I shop online because it is a good option to buy things when time is short"* and *"I shop online because the quality of decision making is improved"* (Chocarro, Cortinas and Villanueva, 2013; Goraya et al., 2020).

The researcher also asks the participants to indicate what medium is usually used to conduct online shopping, including mediums such as smartphones, tablets, and computers.

The second section was divided into three further subsections. Participants were asked to indicate their agreement level with factors influencing the decision to shop online. Examples of this section are statements such as *"I shop in physical stores because I value the physical experience in the store"* or *"I shop in physical stores because I can physically evaluate the products"* (Akroush & Al-Debei, 2015). Additionally, the researcher incorporated statements from another questionnaire including the following statements *"I shop in physical stores because I like the help and friendliness I can get at local stores"* and *"I shop in physical stores because I like the*

energy and fun of shopping at local retail stores" (Swinyard & Smith, 2003). However, both subsections try to investigate the most influential factors towards deciding whether to shop online or offline. The first section's final subsection tries to identify which products the respondents prefer to shop online or offline. The respondents have to indicate what product group they usually prefer to shop online, and which products are mostly bought in physical stores.

The third section of the questionnaire consists of determining the influence of the Covid-19 pandemic on the consumer's decision to shop online or offline. In this section, the respondents have to indicate to what extent their shopping behavior has changed, including statements such as *"I only go to stores to purchase necessary products such as food and beverage"* or *"I decided to postpone larger expenditures for after the pandemic"* (Netcomsuisse & Unctad, 2020). Furthermore, the researcher asked the participants to indicate their online shopping frequency before and during the pandemic. The question was designed based on an existing questionnaire by Laguna et al. (2020) and includes scaling of *"every day, two/three times per week, once a week, and once a month"*. Several statements that are based on already existing questionnaires have been modified to match the research objective.

The final part of the questionnaire concerns demographics. In this section, the participant has to indicate their basic demographic factors, including gender, age, nationality, education level, and household size. It has been proposed that the inclusion of demographics can help to obtain a better understanding of the data (Fowler, 2009). 5-point-Likert scale was applied to assess participants opinions to the statements presented in the sections one, two and three. With this scaling method, the participants were able to indicate to what extent they agree to a statement easily. The 5-point-Likert scale was divided into: 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

3.3 Data Collection

According to Fink (2003), there are four existing survey instruments, including interview self-administered questionnaire, structured record review, and structured observation. In the case of this research, the self-administered questionnaire is applied in order to collect the needed primary data. The self-administered

questionnaire is characterized by questions handed out to the target population and are then answered anonymously. These questions can be distributed by giving the questionnaires out in a paper form or by using online tools (Fink, 2003). Due to the current situation, the researcher decided to use the online platform Google Docs as the platform for distributing the questionnaire. Additionally, the absence of physical contact enhances the respondent's motivation to answer the question, and it also has been proven that respondents tend to be more honest when the interviewer is absent (Brace, 2018). The questionnaire was distributed over different online channels, including e-mail, social media, and messenger services.

Moreover, an online questionnaire is the most cost-effective alternative. The distribution and analysis of the questionnaire can be done with little to no cost. The researcher can also address large audiences without being limited by geographic boundaries and other physical obstacles (Brace, 2018). Marsden & Wright (2010) highlight that participants can be influenced by the interviewer's behaviors or attributes throughout the interview. Therefore, respondents of an online questionnaire tend to be more precise and unbiased in the interviewer's absence. Finally, the researcher decided to collect the primary data by using the convenience sampling method. Convenience sampling refers to the collection of data through easily accessible participants (Etikan et al., 2016). The sampling method enabled the researcher to collect 117 valid responses in the time frame of 10 days.

3.4 Data Analysis

The data analysis is a crucial part of the research since it is needed to answer the research question. According to Matthews & Ross (2010), the analysis can be divided into a three-stage process. The first stage includes the summarizing of the collected data. In addition, the researcher starts describing the collected data. In the second stage of the process, the researcher further describes the data, including its key features. Moreover, in this stage, the relevance of the data for answering the research objective is investigated. In the final stage of the three-stage process, the researcher determines the data's relationships among the variables (Matthews & Ross, 2010). After successfully analyzing the data, the researcher can either develop his own theory or contribute additions to existing theories (Matthews & Ross, 2010). The researcher

analyzed the collected data by using the statistical analysis software, SPSS. Moreover, Excel was used to create graphs and additional tables.

This study consists of a set of variables. Independent variables refer to those that are not affected by a change happening, among other variables. On the contrary, dependent variables get affected by change in the independent variable (Matthews & Ross, 2010). Based on that knowledge, the researcher has defined several variables. This research's independent variables are variables such as gender, household size, age, level of education, and the Covid-19 Pandemic. The research's defined dependent variables are variables such as consumers' purchase intention, consumer purchase motivation, and consumer risk perception.

3.5 Research Ethics

First of all, the participants voluntarily answered the questionnaire. Moreover, it is the researcher's highest priority to keep the participants' identities anonymous. The questionnaire was constructed in a way that only basic questions were asked to ensure that no personal information including name or email can ever be revealed. The researcher only used the collected primary data and will not be shared with any other third party.

Additionally, the researcher provided information regarding the purpose of the study at the beginning of the questionnaire. Furthermore, the participants got a notice that they are at any time able to stop the questionnaire.

4 Data Analysis

The following chapter includes several subsections in which the result of the questionnaire is analyzed. The first subsection provides an overview of the sample characteristics. Afterwards, the factor influencing the decision to shop online and offline are analyzed. This is followed by an analysis of the product ranking and factor ranking. In the end, statements concerning the shopping experience after the outbreak of Covid-19 are analyzed. The final part of the data analysis is the analysis of the preferred device to shop online.

4.1 Sample Characteristics

A total of 117 respondents participated in the questionnaire. 53.0% of all respondents were male participants 45.3% female. Moreover, 1.7% of the participants indicated their gender as "other". Table 1 shows the frequency distribution of gender among the participants.

Gender	Frequency	Percent
Male	62	53
Female	53	45,3
Other	2	1,7
Total	117	100

Table 1 Gender of the Respondents

The sample includes all age groups, whereby with 76.9%, most of the participants are at an age between 18 and 30. The other age groups are less significant, with 12.8% for the age group 31-49 and 9.4% for the age group 50-65. Finally, only one respondent was above 65.

Age	Frequency	Percent
18-30	90	76,9
31-49	15	12,8
50-65	11	9,4
Above 65	1	0,9
Total	117	100

Table 2 Age of the Respondents

Another crucial demographic factor is the participants' household size. The household size is essential because it needs to be determined if there is a correlation between household size and the participants' shopping behavior. Table 3 illustrates the household sizes of the 117 participants. It can be highlighted that with 40.2% of all responses, most participants live in a single household. 33.3% of the respondents indicated that they live in a household with 4-5 family members and is followed by 24.8% of the respondents living in a family with 2-3 members. Only 1.7% of the sample indicated to live in a household with more than six household members.

Household Size	Frequency	Percent
Single	47	40,2
Family of 2-3	29	24,8
Family of 2-3	39	33,3
Family with more than 6	2	1,7
Total	117	100

Table 3 Household Size of the Respondents

Table 4 illustrates the nationality of the participants. With 75.2% of all responses, the majority of the participants are Europeans. Moreover, 11.1% were from Africa, 4.3% from Asia, 4.3% from South America, 3.4% from North America, and finally 1.7% from Australia/Oceania.

Nationality	Frequency	Percent
Europe	88	75,2
Africa	13	11,1
North America	4	3,4
South America	5	4,3
Asia	5	4,3
Australia/Oceania	2	1,7
Total	117	100

Table 4 Nationality of the Participants

The final demographic factor analyzed in the study was the education level. The participants could choose between several education levels, including compulsory education, High school graduate, Apprenticeship, Vocational training, Bachelor's degree, Master's degree, and doctorate degree. With 49.6% of all respondents, roughly half of the sample indicated a bachelor's degree. This number seems logical when taking a look at in Table 2 illustrated dominating age group.

Education Level	Frequency	Percent
Compulsory Education	2	1,7
High School Graduate	29	24,8
Apprenticeship	9	7,7
Vocational Training	3	2,6
Bachelor's degree	58	49,6
Master's degree	14	12
Decorate Degree	2	1,7
Total	117	100

Table 5 Education Level of the Respondents

In table 6, the participants were asked which shopping mode they currently prefer. It can be highlighted that with 53.0% percent of all answers, online shopping is the most popular shopping mode of the sample. Only 35.0% percent indicated that they prefer shopping offline in retail stores over shopping online. 12% percent of the respondents could not clearly identify their preferred shopping mode and decided to choose the hard to answer alternative.

Preferred Shopping Mode	Frequency	Percent
Online	62	53
Offline	41	35
Hard to Answer	14	12
Total	117	100

Table 6 Preferred Shopping Mode of the Respondents

Furthermore, the researcher performed a Mann-Whitney U test to analyze if a significant difference between gender and the choice of shopping channel exists. Table 7 presents the resulting p-value and proves that there is no significant difference between gender and the choice of shopping channel ($p = 0.293 > 0.05$).

Test	Preferred Mode
Mann-Whitney U	1474.500
Wilcoxon W	3427.500
Z	-1.052
Asymp. Sig. (2-tailed)	.293

Table 7 Mann-Whitney U test for Preferred Mode and Gender

Finally, the researcher performed a Kruskal-Wallis test to analyze if a significant difference between age group and the choice of shopping channel exists. The results show that there is no significant difference ($p = 0.174 > 0.05$). Table 8 shows the test result.

Test	Preferred Mode
Kruskal-Wallis H	4.972
df	3
Asymp. Sig.	.174

Table 8 Kruskal-Wallis test for Preferred Mode and Age Group

When comparing the means of the participants' online shopping frequency, it can be noticed that the mean is lower after the outbreak of the pandemic compared to the mean before the outbreak.

The mean score of the participants' frequency of online shopping before the pandemic is $M = 3.39$, and the mean score after the outbreak is $M = 2.88$. Giving that 1= Every day; 2= two/three times a week; 3= Once a week; 4= Once a month, and 5= I do not shop online illustrates that a lower mean value indicates an increased online shopping frequency after the outbreak of the pandemic. Table 9 shows the means of the shopping frequency before and after the pandemic. Moreover, the share of participants who indicated not to shop online went from 11.1% down to 3.4%, showing that the Covid-19 pandemic motivated people to shop online. Furthermore, the substantial decrease in the percentage value of the frequency category *once a month* and the substantial increase in the frequency categories *once a week* and *two/three* times a week demonstrates the participants' increased online shopping frequency. The changes in the frequency distribution before and after the pandemic are presented in figure 4.

	N	Minimum	Maximum	Mean	Std. Deviation
Frequency Before Outbreak	117	1	5	3.39	1.034
Frequency After Outbreak	117	1	5	2.88	.948
Valid N (listwise)	117				

Table 9 Frequencies of Online Shopping Before and After the Outbreak of Covid-19

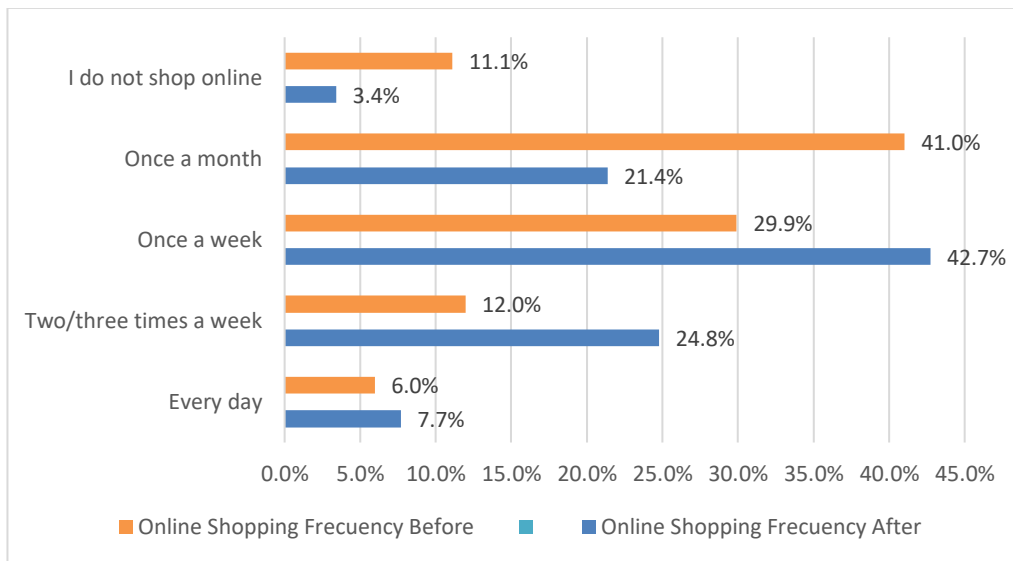


Figure 4 Graphical distribution of the Frequencies of Online Shopping Before and After the Outbreak of Covid-19

Moreover, a t-test was performed to analyze if there is a significant difference between the online shopping frequency before and the online shopping frequency after the outbreak of the Pandemic. Table 10 shows the result of the t-test and proves that there is a difference between the online shopping frequency before and after the pandemic ($p = <0.001 < 0.05$; $t = 6.712$). Hence, H_0 can be rejected, and H_1 gets accepted.

Paired Differences									
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Frequency Before Outbreak - Frequency After Outbreak	.513	.826	.076	.361	.664	6.712	116	<.001

Table 10 T-Test for Online Shopping Frequency Before and After the Outbreak

4.2 Participants Motivating Factors to Shop Online

In this part of the survey, the questionnaire participants were confronted with statements regarding online shopping. These statements were based on other research papers, including Akroush & Al-Debei (2015), Chocarro, Cortinas and Villanueva (2013) and Goraya et al. (2020). The participants were able to decide to what extent they agree by using a 5-point Likert scale (1= strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree). The highest mean score was 3.91 and the lowest mean score was 3.27.

The participants had the highest level of agreement with the statement concerning the enhanced simplicity and visibility of discounts and prices when shopping online (M= 3.91) as well as with the statement concerning the improved visibility of products when shopping online (M= 3.90). Another statement that received a lot of agreement concerns the convenience of online store's 24/7h availability. Convenience seems to be a crucial factor when deciding whether to shop online or offline (M= 3.87). Besides the increased level of convenience, the participants also seem to value the privacy gained from shopping online. The mean score of 3.71 indicates that the participants value the higher level of privacy and that this factor is more essential than other factors, including gathering information (M= 3.65) or saving effort (M= 3.54). The statements that received the lowest amount of agreement concerned the improved quality of the decision-making (M= 3.27). The participants do not seem to value or experience an improvement in their decision making when they shop online. Table 11 shows the Mean values from the 5-point Likert scale.

	I shop online because it is easier to see discounts and prices	I shop online because I have a greater variety of products	I shop online because it is a good option to buy things when time is short	I shop because it can save me the effort of buying what I want from offline	I shop online because I can gather more information	I shop online because I value the convenience of 24/7h availability	I shop online because I can shop in privacy at home	I shop online because the quality of decision-making is improved
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				retail stores				
Mean	3.91	3.90	3.69	3.54	3.65	3.87	3.71	3.27
N	117	117	117	117	117	117	117	117
Std. Deviation	1.111	1.070	1.156	1.141	1.199	1.134	1.273	1.229

Table 11 Mean Values of Online Shopping Statements

Additionally, the researcher performed several Mann-Whitney U tests to determine if there is any significant relationship between the motivating factors to shop online and the participants' demographic characteristics. Table 12 shows the Mann-Whitney U tests results of all statements with gender as their grouping variable. The result of Whitney U test proves that there is a significant difference between shopping online because of the increased variety of products and gender. The p-value of the statement is $p = 0.010$ and therefore rejects H_0 and accepts H_1 ($0.010 < 0.05$). However, all other statements do not have a significant difference towards this demographical characteristic.

Test	I shop online because it is easier to see discounts and prices	I shop online because I have a greater variety of products	I shop online because it is a good option to buy things when time is short	I shop because it can save me the effort of buying what I want from offline retail stores	I shop online because I can gather more information	I shop online because I value the convenience of 24/7h availability	I shop online because I can shop in privacy at home	I shop online because the quality of decision-making is improved
Mann-Whitney U	1317.000	1203.000	1510.000	1608.000	1393.500	1317.500	1424.500	1432.500
Wilcoxon W	3270.000	3156.000	3463.000	3039.000	3346.500	3270.500	3377.500	3385.500
Z	-1.918	-2.592	-.773	-.203	-1.449	1.913	-1.275	-1.214
Asymp. Sig. (2-tailed)	.055	.010	.439	.839	.147	.056	.202	.225

Table 12 Mann-Whitney U test for Statements Concerning Online Shopping and Gender

To evaluate the influence of further demographic characteristics, including age group and household size on the participants motivation to shop online, the researcher performed several Kruskal-Wallis tests. Table 13 shows the p-values resulting from the Kruskal-Wallis test from the statements regarding motivational factors to shop

online. The table does not show a p-value below 0.05, and therefore, there is no significant difference between the age groups and the motivational factors. A similar outcome resulted from the Kruskal-Wallis test concerning the relationship between household size and the motivation to shop online. The smallest p-value of the tests was $p = 0.069$. Table 14 shows the p-values of the performed tests.

Test	I shop online because it is easier to see discounts and prices	I shop online because I have a greater variety of products	I shop online because it is a good option to buy things when time is short	I shop because it can save me the effort of buying what I want from offline retail stores	I shop online because I can gather more information	I shop online because I value the convenience of 24/7h availability	I shop online because I can shop in privacy at home	I shop online because the quality of decision-making is improved
Kruskal-Wallis H	2.660	3.179	4.267	1.129	3.432	3.003	7.296	1.781
df	3	3	3	3	3	3	3	3
Asymp. Sig	.447	.365	.234	.770	.330	.391	.063	.619

Table 13 Kruskal-Wallis Test, for Statements Concerning Online Shopping and Age Groups

Test	I shop online because I can gather more information	I shop online because I value the convenience of 24/7h availability	I shop online because I can shop in privacy at home	I shop online because the quality of decision-making is improved	I shop online because it is easier to see discounts and prices	I shop online because I have a greater variety of products	I shop online because it is a good option to buy things when time is short	I shop because it can save me the effort of buying what I want from offline retail stores
Kruskal-Wallis H	.987	2.176	6.900	1.616	4.432	6.761	7.081	5.130
df	3	3	3	3	3	3	3	3
Asymp. Sig	.804	.537	.075	.656	.218	.080	.069	.163

Table 14 Kruskal-Wallis Test, for Statements Concerning Online Shopping and Household Size

4.3 Participants Motivating Factors to Shop Offline

In this part of the questionnaire, the participants were confronted by several statements concerning different factors motivating them to shop offline.

These statements were based on other research papers, including Akroush & Al-Debei (2015) and Swinyard & Smith (2003). The participants were again able to decide to what extent they agree by using a 5-point Likert scale (1= strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree). In this part, the highest mean score was M= 4.21, and the lowest mean score was M= 3.09. Compared to the highest mean score that resulted from the online shopping statement section (M= 3.91), the mean score in the offline shopping statement section is 0.3 higher (M= 4.21> M= 3.91). The higher mean value indicates here a greater agreement of all participants with the statement. The participants had the highest level of agreement with the statement concerning the ability of a physical evaluation of the desired products (M= 4.21). Moreover, the second greatest mean score (M= 3.97) concerns the ability to compare different products in the store. Resulting from these two means scores, it is noticeable that the participants highly value a physical interaction with the products. This experience cannot be copied from an online retailer and seems to be an essential motivating factor to shop in traditional brick and mortar stores. Moreover, the high value of a physical experience in a store is also reflected in the mean score of M= 3.67 that resulted from a statement concerning the importance of a physical experience in a store. However, this section's lowest mean score (M= 3.09) resulted from a statement concerning the in-store customer service as a motivational factor to shop offline.

	I shop in physical stores because I value the physical experience in the store	I shop in physical stores because I receive a huge amount of customer satisfaction	I shop in physical stores because I like the help and friendliness, I can get at local stores	I shop in physical stores because I like the energy and fun of shopping at local retail stores	I shop in physical stores because I can physically evaluate the products	I shop in physical stores because I can directly compare products with each other
Mean	3.67	3.15	3.09	3.36	4.21	3.97
N	117	117	117	117	117	117
Std. Deviation	1.287	1.162	1.200	1.242	1.063	1.174

Table 15 Mean Values of Offline Shopping Statements

To clarify the possible influence of demographic characteristics on the motivation to shop offline, the researcher performed several Mann-Whitney U tests as well as numerous Kruskal-Wallis tests.

The Mann-Whitney U tests were performed to identify any significant relationships between the participants' motivation to shop offline and gender. Table 16 shows the p-values resulting from the conducted test. Three of the statements have a p-value smaller than 0.05 and are therefore significant. The statements concerning the received energy and fun when shopping offline ($p = 0.046 < 0.005$), the possibility of physical evaluation ($p = 0.016 < 0.005$) and finally the possibility of comparing the products in the store ($p = <0.001 < 0.005$) have a significant relationship with gender.

Test	I shop in physical stores because I value the physical experience in the store	I shop in physical stores because I receive a huge amount of customer satisfaction	I shop in physical stores because I like the help and friendliness I can get at local stores	I shop in physical stores because I like the energy and fun of shopping at local retail stores	I shop in physical stores because I can physically evaluate the products	I shop in physical stores because I can directly compare products with each other
Mann-Whitney U	1436.500	1509.000	1410.000	1298.000	1250.000	1030.500
Wilcoxon W	3389.500	2940	2841	3251	3203	2983.500
Z	-1.203	-.755	-1.345	-1.993	-2.409	-3.644
Asymp. Sig. (2-tailed)	.299	.438	.179	.046	.016	<.001

Table 16 Mann-Whitney U test, for Statements Concerning Offline Shopping and Gender

Furthermore, the researcher performed several Kruskal-Wallis tests to identify any significant relationships between the participants' motivation to shop offline and their educational level. However, table 17 highlights that no significant relationship between offline shopping motivation and education level exists. Moreover, the researcher also tested for a significant relationship between offline shopping motivation and age. Table 18 shows no significant relationship between the motivation to shop offline and the age group ($p > 0.05$).

Test	I shop in physical stores because I value the physical experience in the store	I shop in physical stores because I receive a huge amount of customer satisfaction	I shop in physical stores because I like the help and friendliness, I can get at local stores	I shop in physical stores because I like the energy and fun of shopping at local retail stores	I shop in physical stores because I can physically evaluate the products	I shop in physical stores because I can directly compare products with each other
Kruskal-Wallis H	4.380	7.021	4.868	7.713	1.085	4.714
df	6	6	6	6	6	6
Asymp. Sig	.625	.319	.561	.260	.982	.581

Table 17 Kruskal-Wallis Test, for Statements Concerning Offline Shopping and Education level

Test	I shop in physical stores because I value the physical experience in the store	I shop in physical stores because I receive a huge amount of customer satisfaction	I shop in physical stores because I like the help and friendliness I can get at local stores	I shop in physical stores because I like the energy and fun of shopping at local retail stores	I shop in physical stores because I can physically evaluate the products	I shop in physical stores because I can directly compare products with each other
Kruskal-Wallis H	4.402	3.145	3.460	2.595	4.375	6.763
df	3	3	3	3	3	3
Asymp. Sig	.221	.370	.326	.458	.224	.080

Table 18 Kruskal-Wallis Test, for Statements Concerning Offline Shopping and Age Group

For the second part of the survey, the participants were asked to rank product groups according to their likelihood to buy them before and after the pandemic. The participants had to indicate seven choices, including the following product categories: Groceries; Fashion; Gifts; Accessories; Household supplies; Skin-care products, and Fitness/Wellness products.

The first choice had a value of 1, the second choice a value of 2, the third choice a value of 3, the fourth choice a value of 4, the fifth choice a value of 5, the sixth choice a value of 6, and the seventh choice a value of 7. Therefore, the lower the mean score, the better the position in the ranking. Table 19 presents the mean values from before and after the pandemic. Prior the pandemic, the product category groceries had a mean value of $M= 4.6$. However, after the pandemic outbreak, this value decreased to $M= 4.48$, indicating that participants were more likely to buy Groceries online than before. Another product category that gained popularity after the outbreak of the pandemic is household supplies. Household supplies had before the outbreak, a lower mean score ($M= 4.51$) before the outbreak than after ($M= 4.21$). This decrease highlights the participants' significantly increased likelihood to shop household supplies online than before. Moreover, fitness and wellness products were better ranked after the outbreak ($M= 4.90$) than before ($M= 4.97$). The other remaining product groups, Gifts; Accessories; Skin-care products and Fashion had a higher mean value after the pandemic outbreak and therefore received a higher ranking than before. The increase of the mean scores indicates that the participants' likeliness to buy the products decreased. The product category with the most significant increase in the mean value was skin-care products, with an increase of 0.18.

Before the pandemic, the mean value was lower (M= 4.38) and, therefore, better ranked than after the outbreak (M= 4.56). For fashion the mean rank before the pandemic was M= 2.68 and after the outbreak M= 2.79. The participants were less likely to shop fashion online after the outbreak than they were prior to it. The product category gifts, had a mean value of M= 3.12 before the pandemic and M= 3.19 after the outbreak. The mean value increase reflects that the participants were less likely to buy gifts online than before. Finally, the mean scores indicate the participants decreased willingness to buy accessories online after (M= 3.88) than before (M= 3.74).

Product	Mean Before the Outbreak	Mean After the Outbreak
Groceries	4,6	4,48
Fashion	2,68	2,79
Gifts	3,12	3,19
Accessories	3,74	3,88
Household Supplies	4,51	4,21
Skin-care Products	4,38	4,56
Fitness/Wellness Products	4,97	4,9

Table 19 Mean Comparison Before/After the Outbreak

Figure 5 presents the mean values of the product categories from before and after the outbreak. The product categories household supplies and skin-care products present the most noteworthy changes whereby gifts and fitness/wellness products have the least changes. To be able to evaluate the significance of the mean values changes several t-tests got performed. Table 20 presents the results of the t-tests. The highest p-value of the output is $p= 0.721$ and the lowest $p= 0.050$. Therefore, there is only one significant difference between the ranking before and after the outbreak of the pandemic. In the ranking the product category household supplies shows significant differences between the ranking from before and after the outbreak of Covid-19 ($p= 0.05 = 0.05$). The other product categories do not show substantial differences. However, the categories that got least affected by the outbreak of Covid-19 are fitness/wellness products ($p= 0.721 > 0.05$) and gifts ($p= 0.627 > 0.05$).

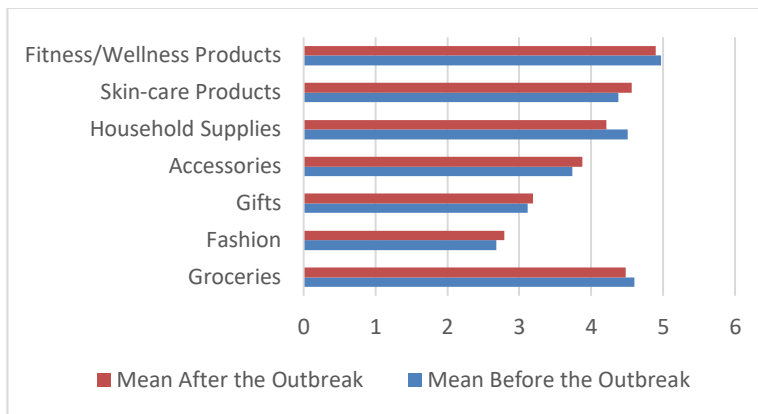


Figure 5 Graphical Distribution of Mean Ranks Before and After the Outbreak

Product Category	Mean	t-value	Sig. (2-tailed)
Ranking Groceries Before / Ranking Groceries After	0.12	0.560	0.577
Ranking Fashion / Ranking Fashion After	-0.10	-0.604	0.547
Ranking Gifts Before / Ranking Gifts After	-0.06	-0.487	0.627
Ranking Accessories Before / Ranking Accessories After	-0.14	-0.990	0.324
Ranking Household Supplies Before / Ranking Household Supplies After	0.30	1.976	0.050
Ranking Skin-Care Products Before / Ranking Skin-Care Products After	-0.18	-1.181	0.240
Ranking Fitness/Wellness Products Before / Ranking Fitness/Wellness Products After	0.07	0.359	0.721

Table 20 T-test results Product Categories

Since the outcome of the t-test seemed surprising, the researcher decided to perform an extended analysis by additionally analyzing the median values. However, table 21 presents a similar result, with only the category Household Supplies showing a difference in the median value from before and after the pandemic outbreak. All the other product categories show the same median value before and after the outbreak of the pandemic, indicating the participants did not substantially change their ranking for the time after the outbreak and therefore support the results of the t-tests performed by using the mean values.

Product Category	Median Before the Pandemic	Median After the Outbreak
Groceries	5	5
Fashion	2	2
Gifts	3	3
Accessories	4	4
Household Supplies	5	4
Skin-Care Products	5	5
Fitness/Wellness Products	6	6

Table 21 Median Values of Product Categories Ranking

In a subsequent part of the questionnaire, the participants were asked to rank the factors according to their influence on the decision whether to shop online or offline. The participants were asked to indicate their first, second, third, fourth and fifth choice regarding factors influencing their decision to shop online. Low mean values mean that the specific factors have a strong influence on the decision, whereby high mean values indicate weaker influence on the decision to shop online. Table 22 presents the factor influencing the decision to shop online. The factor with the lowest mean value and therefore the most influential factor for decision to shop online is the product price (M= 2.4). Moreover, the second most influential factor is the time to acquire the product (M= 2.75). The trust in seller (M= 2.97) and the product quality (M= 2.66) are ranked slightly higher and therefore have a weaker influence on the decision where to buy. However, the majority of the participants rank the concerns of fraudulent behavior as their last choice (M= 4.22). In figure 6 the mean values are visually represented.

Factor	Mean
Time to acquire the product	2.75
Product price	2.4
Trust in the seller	2.97
Product quality	2.66
Concerns of fraudulent behavior	4.22

Table 22 Median Values of Factor Choice Ranking

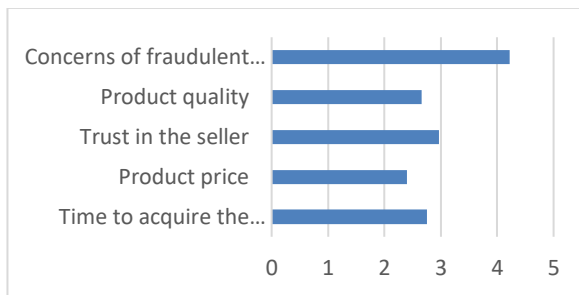


Figure 6 Graphical Distribution of Factor Choice

Since the mean values do not provide any information about demographics, the researcher performed several Kruskal-Wallis tests as well Mann-Whitney U tests. The results represented in Table 23 and 24 show that there is no significant difference between ranking factors and gender. Male and females do not differentiate from each other when ranking the factors. Moreover, table 24 shows that there is also no difference between the age groups.

Test	Ranking Product Quality	Ranking Time to Acquire	Ranking Product Price	Ranking Product Trust	Ranking Concerns
Mann-Whitney U	642.000	644.000	623.500	650.500	634.000
Wilcoxon W	762.000	4739.000	4718.500	4745.500	4729.000
Z	-.312	-.294	-.502	-.232	-.436
Asymp. Sig. (2-tailed)	.755	.768	.616	.816	.663

Table 23 Mann-Whitney U test, for the Factor Choice Ranking and Gender

Test	Ranking Time to Acquire	Ranking Product Quality	Ranking Product Price	Ranking Product Trust	Ranking Concerns
Kruskal Wallis Test	2.342	2.412	3.648	.064	4.656
df	3	3	3	3	3
Asymp. Sig.	.505	.491	.302	.996	.199

Table 24 for the Factor Choice Ranking and Age Groups

4.4 Participants Shopping Behavior After the Outbreak of the Pandemic

In the final part of the questionnaire, the participants were asked to indicate to what extent they agree or disagree with the statements concerning the shopping experience in the times after the outbreak by using a 5-point Likert scale (1= strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree). In total, the participants had to evaluate five questions. The highest mean score of this section was $M= 3.62$ and the lowest mean score $M= 3.01$. The statement concerning the increased online shopping behavior has with $M= 3.62$ the highest mean score and, therefore, the highest agreement among the 117 participants. Due to the restrictions and the substantial limitation in society, the statement with the second-highest level of agreement ($M= 3.35$) concerns the fact that the participants only visit stores to purchase necessary products, including food and beverages. Finally, the statements concerning the participants' concerns of shopping in stores and physical damage concerns have low mean scores with $M= 3.21$ and $M= 3.01$.

The low mean scores represent that the vast majority of the sample population either disagrees or has a neutral opinion about the topic. The mean scores are represented in Table 25.

	N	Minimum	Maximum	Mean	Std. Deviation
I am shopping more often online than before	117	1	5	3.62	1.278
I am concerned about shopping in stores	117	1	5	3.35	1.162
I only go to stores to purchase necessary products such as food and beverage	117	1	5	3.21	1.242
I decided to postpone larger expenditures for after the pandemic	117	1	5	3.12	1.254
I am concerned for my physical health	117	1	5	3.01	1.133
Valid N (listwise)	117				

Table 25 Mean Values of Statements concerning Post-Covid Behavior

Since Covid-19 especially endangers older adults, testing for differences between purchase behavior statements after the outbreak of the pandemic and age is essential. The researcher performed several Kruskal Wallis tests to analyze for any significant difference between shopping behavior and age. Table 26 shows that there is no significant difference between concerns of shopping in stores and the age group ($p= 0.537 > 0.05$) as well as no difference between increased online shopping frequency and the age group ($p= 0.162 > 0.05$). Moreover, the other statements concerning concerns for the physical health ($p= 0.701 > 0.05$) and the postponement of large expenditures for after the pandemic ($p= 0.600 > 0.05$) prove that there are no significant relationships between those motivational factors and the age group. However, one significant difference could be observed, namely that there is a significant relationship between only buying necessary products in the store and the age group ($p= 0.050 = 0.050$).

Test	I am concerned about shopping in stores	I am shopping more often online than before	I only go to stores to purchase necessary products such as food and beverage	I decided to postpone larger expenditures for after the pandemic	I am concerned for my physical health
Kruskal-Wallis H	2.173	5.144	7.827	1.870	1.419
df	3	3	3	3	3
Asymp. Sig	.537	.162	.050	.600	.701

Table 26 Kruskal-Wallis Test, for Statements concerning Post-Covid Behavior and Age Group

Furthermore, the author analyzed if there are significant differences between the participant's shopping behavior after the outbreak and education level. Table 27 shows the results of the performed Kruskal-Wallis test. There are no significant disparities between the factors including increased shopping frequency ($p= 0.159 > 0.05$), the postponement of larger expenditures ($p= 0.657 > 0.05$), the concerns for the physical health ($p= 0.222 > 0.05$), the decision to only go to stores to purchase necessary products ($p= 0.988 > 0.05$) and the education level. However, the result also shows that there is a significant difference between general concerns about shopping in stores and education level ($p= 0.014 < 0.05$).

Figure 7 demonstrates that participants with a higher educational level are more concerned than participants with lower educational level.

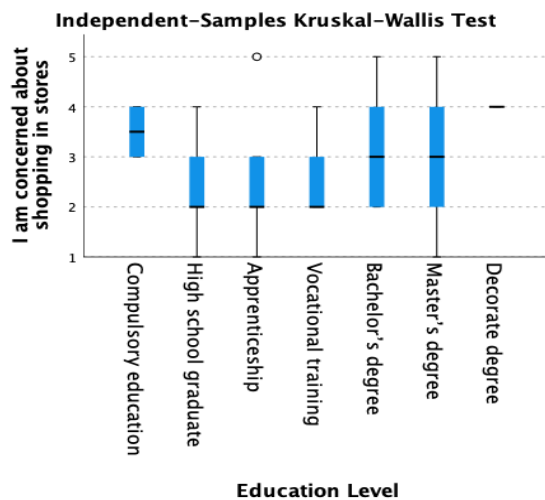


Figure 7 Graphical Distribution of Concerns about shopping in stores and Education Level

Test	I am concerned about shopping in stores	I am shopping more often online than before	I only go to stores to purchase necessary products such as food and beverage	I decided to postpone larger expenditures for after the pandemic	I am concerned for my physical health
Kruskal-Wallis H	15.894	9.270	.931	4.148	8.225
df	6	6	6	6	6
Asymp. Sig	.014	.159	.988	.657	.222

Table 27 Kruskal-Wallis Test, for Statements concerning Post-Covid Behavior and Education Level

4.5 Preferred shopping device of the participants

At the end of the second part of the survey, the participants were asked to indicate to what extent they agree on statements concerning the choice of device to shop online. The participants were able to rank the statements by using a 5-point Likert scale (1= strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree).

The researcher provided three different forms of devices, including smartphones, tablets, and PCs. The highest level of agreement had PCs with a mean score of M= 3.88.

On the other hand, the lowest level of agreement had tablets with a score of $M = 2.65$. Finally, smartphones are in between with a mean score of $M = 3.46$. Table 28 shows the three statements and the calculated mean score as well as the standard deviation.

	N	Minimum	Maximum	Mean	Std. Deviation
When I shop online, I purchase them by using my smartphone	117	1	5	3.46	1.249
When I shop online, I purchase them by using my Tablet	117	1	5	2.65	1.275
When I shop online, I purchase them by using my PC	117	1	5	3.88	1.205
Valid N (listwise)	117				

Table 28 Mean Values of Preferred Devices to Shop Online

Additionally, the researcher performed several Mann-Whitney U tests to analyze if there is a significant difference between the preferred device to shop online and gender. Table 29 shows the from the test resulting p-values. The values of shopping online by using a smartphone ($p = 0.589$) and shopping online by using a tablet ($p = 0.936$) stipulate that there is no significant relationship between the preferred device to shop online and gender. However, there is a significant relationship between using a PC to shop online and gender ($p = 0.004 < 0.05$).

Test	When I shop online, I purchase them by using my smartphone	When I shop online, I purchase them by using my Tablet	When I shop online, I purchase them by using my PC
Mann-Whitney U	1550.500	1629.000	1151.500
Wilcoxon W	3503.500	3060.000	3104.500
Z	-.541	-.081	-2.902
Asymp. Sig. (2-tailed)	.589	.936	.004

Table 29 Mann Whitney- U Test, for Statements concerning Post-Covid Behavior and Gender

Furthermore, the researcher performed three Kruskal-Wallis tests, to analyze if there is a significant differentiation between the preferred device to shop online and age. Table 30 presents the from the tests resulting p-values. The p-values prove that there is no substantial difference between the preferred device to shop online and age in the cases of smartphones as the preferred device ($p = 0.0512 > 0.05$) and Tablet as the preferred device ($p = 0.724 > 0.0334$). However, there is a difference between PCs as the preferred device to shop online and age group ($p = 0.034 < 0.05$).

Test	When I shop online, I purchase them by using my smartphone	When I shop online, I purchase them by using my Tablet	When I shop online, I purchase them by using my PC
Kruskal-Wallis H	2.305	1.321	8.644
df	3	3	3
Asymp. Sig	.512	.724	.034

Table 30 Kruskal-Wallis Test, for Statements concerning Post-Covid Behavior and Age Group

5 Findings and Discussion

The following chapter aims to discuss the findings and elaborate if the hypotheses can be accepted or rejected.

The analysis of the questionnaire presented several significant differences between the variables. It also proved that demographic factors, such as gender, have a crucial influence on the participants' decisions. The first hypothesis which claims that there is a significant difference between the online shopping frequency before and the online shopping frequency after the outbreak of the pandemic got accepted. Both, the changes in the mean values as well as the t-test results demonstrate that there is a significant difference in the participants' online shopping frequency after the outbreak of Covid-19. This is most probably due to the substantial restrictions and lockdown regulations that hinders people from shopping offline as usual. Products that usually would have been shopped offline are now being shopped online.

The second hypothesis, which claims that there is a significant difference between the product ranking choices before and the product ranking choices after the outbreak of the pandemic got accepted. However, in the ranking only one product category (Household Supplies) showed a significant difference between the product choices before and after the pandemic. The other product categories roughly remained the same and did not show any noteworthy differences. The increased likelihood to purchase household supplies online can also be explained by the shortage of household supplies (e.g., disinfectant) at the beginning of the pandemic. This shortage might have encouraged the participants to shop this category online. Moreover, the

absence of changes in the other product categories' ranking can be explained by the government's continuous regulation changes. The majority of the brick-and-mortar stores were still open after the pandemic outbreak, enabling the participants to shop in local stores between May and November 2020. Moreover, most participants answered in a time frame where no active lockdown was enforced in Austria.

The third hypothesis, which claims that there is a significant relationship between the choice of preferred shopping channel and gender got rejected. The performed Mann-Whitney U test did not indicate any significant p-values, and therefore proves that there is no significant relationship between the choice of preferred shopping channel and gender. Men as well as Women do not significantly differ when choosing their preferred shopping channel.

The final hypothesis, which states that there is a significant difference between concerns of shopping in stores and the age group, got rejected. The performed Kruskal-Wallis test shows no significant difference between concerns of shopping stores and the age group. This result seems surprising since Covid-19 especially endangers elderly adults, and therefore concerns from this age group were expected. However, this is most likely due to the lack of participation of older adults. As Table 2 demonstrated, there was only one participant above 65 and, thus, only one person that is particularly endangered by the disease. It would probably have given a different outcome if the sample had included a more significant number of older adults.

Besides the hypotheses testing the researcher also tested for other variables to gain a deeper understanding of the topic. Hence, the analysis suggests that factors such as product price and time to acquire a product strongly influence the consumers decision where to buy. These findings are similar to other studies including and Jiang, Yang and Jun (2013). Finally, the analysis highlights that PCs are the participants preferred medium to shop online.

6 Conclusion

The following chapter aims to conclude the Bachelor Thesis. The conclusion is divided into two parts. The first part addresses the practical implications and the second part the limitations of the thesis.

6.1 Practical Implications

Covid-19 has undoubtedly influenced our everyday lives significantly. The needed rapid shift from daily live activities from offline to online has not only changed the way we work, study, or live; it also has had an immersive influence on the consumer's shopping behavior.

The primary purpose of this research was to identify what affects consumers' decision to shop online vs. offline as well as the influence of Covid-19 on this process. In the literature review, essential terms and processes were defined and analyzed to help the researcher understand the importance of digitalization and the consumers' motivation to shop online. Afterwards, the researcher conducted a questionnaire and was able to reach out to 117 participants successfully. The questionnaire consisted of several questions concerning, for instance, the changes in the shopping frequency since the outbreak, as well as the changes in the product choices. Moreover, the researcher tried to identify how Covid-19 has changed the overall shopping experience. The research question *what affects consumers' decision to shop online vs. offline* can be answered by analyzing the result of the questionnaire. The study revealed that consumers strongly value the physical interaction with the desired products. Statements concerning physical interaction with products, including the physical evaluation of the product and the possibility of a physical comparison, have received an extremely high agreement level. Almost 80% of the participants either agreed or strongly agreed with the statements concerning physical evaluations.

On the contrary, the study highlighted that consumers strongly value the high level of convenience, online shopping contributes to their life. This convenience results from factors such as the easiness to see discounts and prices and the greater availability of products compared to offline stores. Hence, the answer to the research question is that convenience factors influence the consumers' decision to shop online, and

physical factors influence the consumers to shop offline. These results support the findings made by Levin, Levin, Heath (2003) and Levin, Levin & Wellner (2005).

The research also tried to evaluate the influence of Covid-19 on the digitalization of the retail industry. At the beginning of the questionnaire, the participants were asked to indicate their preferred shopping mode. 53% of all participants indicated online as their preferred shopping mode. This result displays the tremendous importance of online shopping channels and the continuously decreasing importance of offline shopping channels (35% of the participants prefer to shop offline). The study also revealed a significant difference between the online shopping frequency before and after the pandemic, showing that the participants' online shopping frequency increased. Furthermore, Covid-19 has changed the consumers' likelihood to buy specific product categories online. The researcher was able to identify one significant difference between the participants' choices among the product categories before and after the outbreak of Covid-19.

Several differences were able to be highlighted when evaluating the differences between the factors motivating to shop online/offline and the demographic characteristics. The results show that there is one significant difference between online shopping because of the greater variety and gender. The other statements do not show any differences between gender, age group, and household size. However, factors influencing the consumers' motivation to shop offline showed more significant differences. Three statements presented a significant difference between the motivation to shop offline and gender. The other demographic characteristics did not show any significant differences. Concerning other questionnaire questions, the analysis revealed significant differences between the age group and preferred device to shop online and a significant difference between being concerned about shopping in-store and the education level. The analysis showed that participants with higher education prove to be more concerned about shopping in stores since the outbreak of Covid-19.

6.2 Limitations

The study confronted numerous limitations throughout the research. First of all, the study was conducted during the time of Covid-19. Governments have continuously changed regulations and jumped from lockdown to lockdown. These ongoing changes could have influenced the sample population's perception towards online and offline shopping. Moreover, only a limited number of sources about Covid-19 were available, which complicated the research process. Another limitation of this research may have been the survey. Participants with only average skills in English might have been confused by the questions.

Further, there is always a high possibility that participants get wearied after a while and stop answering the questions thoughtfully. This action can lead the outcome of the survey in the wrong direction. It is possible that this applies for the question regarding the ranking of the product choices before and after the pandemic. Some participants might not have understood how the ranking works or were not taking the evaluation serious. Moreover, it is possible that asking for frequencies and rankings before the pandemic may have been too challenging to respond to for some participants. Finally, the sample population of 117 participants could be considered too small. Additionally, the questionnaire was answered by only one participant above 65. Higher participation of this age group would have been essential for analyzing statements concerning concerns for physical health.

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Appendix

Dear survey participants,

For my Bachelor Thesis, I chose to explore the impact of Covid-19 on the digitalization process in Austria, with a particular focus on the influence on the consumers' decision to shop online or offline. In the past years, the retail industry has changed enormously due to the ongoing digitalization. This study will explore the factors that affect consumers to decide whether to shop online or offline, and Covid-19s influence on this process.

All responses will solely be used for this study and are anonymized and will not be shared with any other third parties.

Thank you for your participation. The survey takes approximately 5 minutes. I kindly ask you to please answer all questions truthfully.

Best regards,

Maximilian P. Matz

Shopping Habits

In the following section general questions regarding your shopping behavior are asked. Please indicate how frequently you shopped online before and after the pandemic as well as rank the products you prefer to shop online.

What is your preferred mode of shopping?

Online

Offline

Hard to answer

Please indicate, how frequently you shopped online within one month before the outbreak of the pandemic (i.e. August 2019)?

- a. Every day
- b. two/three times per week
- c. Once a week
- d. Once a month
- e. I do not shop online

Please indicate how likely were you to shop online for different categories of products before the outbreak of the pandemic (i.e. August 2019) Rank the products listed below

1= First Choice; 2= Second Choice 3= Third Choice; 4= Fourth Choice; 5= Fifth Choice; 6= Sixth Choice; 7= Seventh Choice

- a. Groceries
- b. Fashion
- c. Gifts
- d. Accessories
- e. Household Supplies
- f. Skin-Care Products
- g. Fitness/Wellness Products

Please indicate, how frequently you shopped online within one month after the outbreak of the pandemic (i.e. after March 2020)?

- a. Every day
- b. two/three times per week
- c. Once a week
- d. Once a month
- e. I do not shop online

Please indicate how likely were you to shop online for different categories of products after the outbreak of the pandemic (i.e. March 2020) ? Rank the products listed below

1= First Choice; 2= Second Choice 3= Third Choice; 4= Fourth Choice; 5= Fifth Choice; 6= Sixth Choice; 7= Seventh Choice

- a. Groceries
- b. Fashion
- c. Gifts
- d. Accessories
- e. Household Supplies
- f. Skin-Care Products
- g. Fitness/Wellness Products

Please rank which factor is the most influencing when deciding where to buy?

1= First Choice; 2= Second Choice 3= Third Choice; 4= Fourth Choice; 5= Fifth Choice

- a- Time to acquire the product
- b. Product Price
- c. Trust in seller
- d. Product Quality
- 4. Concerns of fraudulent behavior

Online Shopping Habits

In the following section please indicate how strongly you agree or disagree with the statements describing your online shopping perception and habits.

1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

- a. I shop online because it is easier to see discounts and prices
- b. I shop online because I have a greater variety of products
- c. I shop online because it is a good option to buy things when time is short
- d. I shop online because it can save me the effort of buying what I want from offline retail stores
- e. I shop online because I can gather more information
- f. I shop online because I value the convenience of 24/7h availability
- g. I shop online because I can shop in privacy at home
- h. I shop online because the quality of decision-making is improved

Preferred medium to shop online

1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

- a. When I shop online I purchase them by using my smartphone
- b. When I shop online I purchase them by using my Tablet
- c. When I shop online I purchase them by using my PC

Offline Shopping Habits

In the following section please indicate how strongly you agree or disagree with the statements describing your offline shopping perception and habits.

1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

- a. I shop in physical stores because I value the physical experience in the store
- b. I shop in physical stores because I receive a huge amount of customer satisfaction
- c. I shop in physical stores because I like the help and friendliness, I can get at local stores
- d. I shop in physical stores because I like the energy and fun of shopping at local retail stores
- e. I shop in physical stores because I can physically evaluate the products
- f. I shop in physical stores because I can directly compare products with each other

Covid-19

Please indicate to what extent do you agree or disagree with the statements regarding your shopping experience in the Covid-19 times.

1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

- a. I am shopping more often online than before
- b. I am concerned about shopping in stores
- c. I only go to stores to purchase necessary products such as food and beverage
- d. I decided to postpone larger expenditures for after the pandemic
- e. I am concerned for my physical health

Section 3: Demographics

In the following section please fill in your basic demographic information.

Which gender are you?

- Female
- Male
- Other

What age group are you in?

- 18-30
- 31-49
- 50-65
- Above 65

Size of your household?

- Single
- Family of 2-3
- Family 4-5
- Family with more than 6

Where are you from?

Europe

Africa

North America

South America

Asia

Antarctica

Australia/Oceania

What is your highest level of education?

Compulsory education

High school graduate

Apprenticeship

Vocational training

Bachelor's degree

Master's degree

Decorate degree