

INFLUENCES OF COVID-19 ON ONLINE SHOPPING BEHAVIOR:  
A COMPARATIVE CASE STUDY

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INFLUENCES OF COVID-19 ON ONLINE SHOPPING BEHAVIOR:

A COMPARATIVE CASE STUDY

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## DECLARATION OF ORIGINALITY

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## ABSTRACT

Influences of COVID-19 on Online Shopping Behavior:

A Comparative Case Study

Technological developments and digitalization accelerated the growth of online shopping and increased its market share. The impact of the Covid-19 Pandemic on the e-commerce market and the consumer also acted as a catalyst in online shopping. The purpose of this study is to examine, analyze, and compare the changing online shopping behaviors of people in Turkey and Germany during the COVID-19 Pandemic. For this purpose, academic articles, statistics, and survey methods were used while collecting data. This study reveals significant outputs in terms of determining how people react to online shopping in the event of a social crisis such as a pandemic, thus enabling Turkish retail e-exporter companies to better understand how to react to changes in consumer behavior in Germany while comparing it to consumer behavior in Turkey.

## ÖZET

COVID-19'un Online Alışveriş Davranışlarına Etkileri:

Karşılaştırmalı Vaka Çalışması

Teknolojik gelişmeler ve dijitalleşme, online alışverişte büyümesini hızlandırdı ve pazar payını artırdı. Covid-19 Pandemisi'nin e-ticaret piyasası ve tüketici üzerinde yarattığı etki de online alışverişte katalizör görevi gördü. Bu çalışmanın amacı, COVID-19 Pandemisi sırasında Türkiye ve Almanya'da insanların değişen online alışveriş davranışlarını incelemek, analiz etmek ve karşılaştırmaktır. Bu amaçla veriler toplanırken akademik makaleler, istatistikler ve anket yöntemi kullanılmıştır. Bu çalışma, pandemi gibi bir sosyal kriz durumunda insanların online alışverişe nasıl tepki vereceğini belirleme açısından önemli çıktılar ortaya koymaktadır. Böylelikle, Türk perakende e-ihracatçı şirketlerinin Türkiye'de tüketici davranışlarıyla kıyaslayarak Almanya'daki tüketici davranışlarındaki değişikliklere nasıl tepki vermeleri gerektiğini daha iyi anlamalarını sağlamaktadır.

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# CHAPTER 1

## INTRODUCTION

A new type of coronavirus appeared in Wuhan city of China in the last months of 2019. Although the Chinese government tried to hide this new virus and its possible effects on public health from the public in order not to cause any panic, they had to eventually explain the situation to the public. Both the easy transmission of the virus and the high level of globalization in the world caused the virus to spread rapidly to other countries. Ultimately, on March 11, 2020, The World Health Organization (WHO) declared the new type of coronavirus (COVID-19) outbreak an official global pandemic. In a short period, most governments began to take extensive health measures in full cooperation with the World Health Organization. First, they advised preventive measures such as; washing/cleaning hands regularly, keeping a certain physical distance from other people, and wearing masks in closed spaces. However, as the virus started to infect more and more people, governments had to take more restrictive measures such as partial or complete lockdowns that can last for days or even weeks. The panic atmosphere and the lockdown policy, have caused people to spend more time on the internet. This situation led to the acceleration of the growth of the e-commerce sector, which had been in a trend of increasing market share in recent years against brick-and-mortar stores before the pandemic.

The purpose of this study is to analyze how the pandemic has changed the online shopping behavior of consumers in developing and developed countries. To this aim, the online shopping behavior of consumers in Turkey and Germany is compared while analyzing the factors that helped grow their online shopping behavior with the pandemic. Within the framework of its purpose; this study

contributes to the literature by collecting and analyzing primary data from two different markets Germany and Turkey. In the analysis, the macro-economic (economic indicators and development levels of Turkey and Germany) and micro-economic data (e-commerce industry development levels and online consumer behavior in Turkey and Germany) are taken into account. In addition, by its comparison of consumer behavior in Turkey and Germany, this study not only provides insights into e-commerce activities of companies in Turkey but also provides valuable insights into the e-export targets of companies in Turkey, since Germany is Turkey's largest export partner according to the indicators provided by Trading Economics (8.6% of Turkey's total export with a value of \$19.31 billion in 2021), thus contributing to the private sector and international trade.

This study consists of 5 chapters with the first chapter being the introduction part.

The second chapter explains the developments and factors in the rise of online shopping, indicates the advantages and disadvantages of online shopping, makes a comparison of online shopping in Turkey and Germany, explains consumer behavior briefly and examines consumer behavior during the pandemic, mentions cultural dimensions and orientations in order to better understand the relationship between culture and consumer behavior, and finally gives detailed information regarding the online shopping behavior in Turkey and Germany during the pandemic.

The third chapter, first, provides data regarding the research model. Then, it explains the method for the factor analysis, puts forward hypotheses, and makes a reliability analysis.

The fourth chapter demonstrates the findings of the study in line with the analysis methods it uses for the study.

The fifth chapter summarizes the study and explains its contributions and limitations.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Developments and factors in the rise of online shopping

The concepts of trade and shopping have been in people's lives for thousands of years, enabling them to maintain their lives by exchanging goods and/or services for money or barter. Over time, with the increase in the human population, and the effects of agriculture and urbanization, shopping has started to take place in shops and marketplaces. Thanks to the technological developments that accelerated after the industrial revolution and the digital revolution that followed, shopping has been moved from physical environments to virtual platforms. The activity of shopping carried out on these platforms is called online shopping. In this method of shopping, the customer is able to buy goods and services without any need to move to a store physically or deal with an intermediary sales representative (Sunitha & Gnanadhas, 2014).

Since the first online stores started operating in 1992 (New World Encyclopedia, 2019), the e-commerce sector has drawn a graph that has increased its turnover and market share until today. Factors and developments such as the increase in internet speed and penetration, the trend of transition to digitalization in many sectors such as banking and marketing along with commerce, the launch and spread of smart phones, the development of the transportation sector, and the strengthening of the logistics infrastructure, the increasing number of platforms and people that can advertise products and services such as social media applications and influencers to a large number of people in a short time have accelerated and reinforced the worldwide development and rise of online shopping. With the current trend of growth, it has

been expected that thanks to the years of these developments the monetary volume of global retail e-commerce is estimated to reach 6.54\$ trillion in 2023, accounting for roughly 18% of total global retail trade (Figure 1).

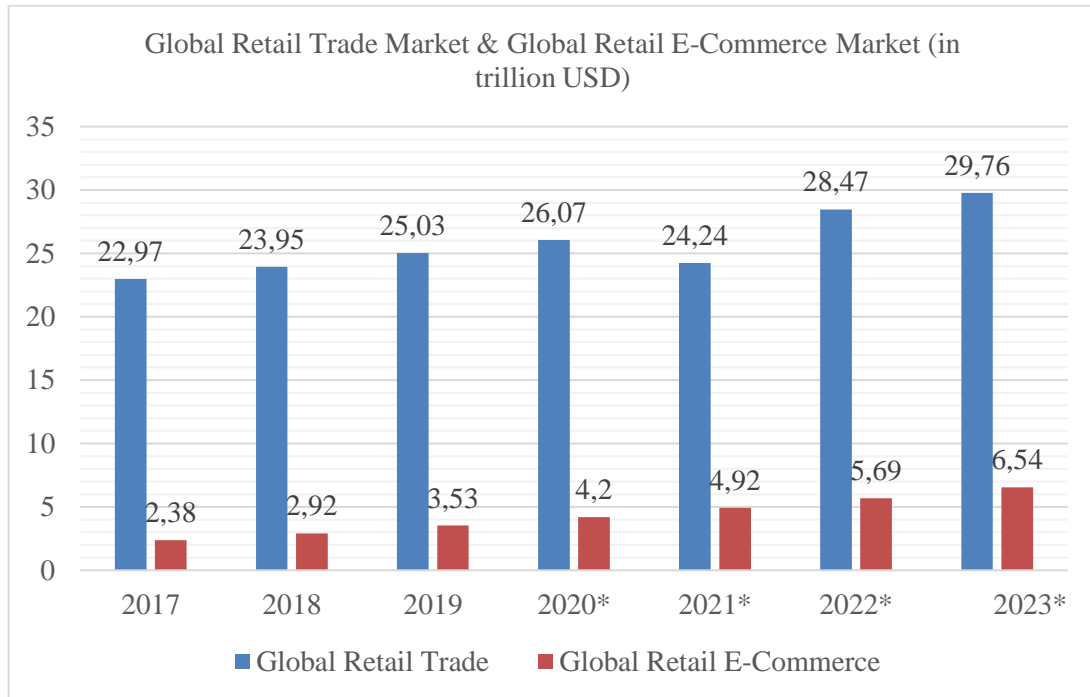


Figure 1. The market size of the global retail trade market and global retail e-commerce market from 2017 to 2023. (in trillion U.S. dollars).

Source: [Lipsman, May, 2019]

## 2.2 Advantages and disadvantages of online shopping

Along with technological developments online shopping has gradually become more and more convenient for customers. Since they don't have to go outside and just browse the brands' or marketplaces' websites, e-commerce brings quite a comfort to customers. This may offer assistance to customers' search for the purchase of more extensive extend of items and spare their time. They can investigate items and compare costs between venders. In addition, online shopping frequently offers deals advancement or markdown codes creating more fulfilled shopping opportunities for customers. Besides, online shopping gives point-by-point info regarding the items

while offering data regarding the earlier orders for searched products, thus paving the way for more satisfied shopping decisions for customers (Braholli, 2022).

Furthermore, online shopping offers convenience regarding quick shopping with no need for traveling, timelessness regarding making an order and/or purchase, variety of products and/or services to be purchased, ratings and/or reviews facilitating product selection, comparison shopping regarding products and prices, and more discounts thanks to no physical store costs. Offline shopping, on the other hand, offers the ability to touch and / or try the product, customer support during shopping, a physical shopping experience, immediate delivery after purchasing, and quick return and refunds (Sarkar & Das, 2017).

Product rating and reviews are considered key advantageous assets of online shopping for consumers. A study (Basu & Sondhi, 2021) conducted in India with participants from diverse demographics comparing consumer purchasing criteria in online shopping vs brick-and-mortar store shopping of premium brands in the apparel category found that in online shopping criteria such as; positive and high rating/review, campaigns with price advantage, comparability with other brands, and free delivery and return options came first. As for offline shopping, it has been determined that the store design, the aesthetic appearance of the displayed products, the customer care level of the store employees, and the shopping experience, in general, are the prominent criteria (Table 1).

Table 1. Advantages and Disadvantages of Online Shopping & Offline Shopping

Shopping Process	Shopping Type	
	Online Shopping	Offline Shopping
Convenience	No need for traveling	The necessity to cover a distance to reach the product
Timeless Shopping	Orders and purchases can be made on 7/24	Purchase in store
Variety	Various products at one click	Only the products available in the store
Consumers' Rating / Review	Product ratings and/or reviews facilitating the product selection	The need to know the brand and/or product via previous purchasing experience
Comparison Shopping	Quick product and price comparison	The requirement to scan aisles and shelves in store
Discounts	More campaigns regarding discounts thanks to no physical store cost	Fewer campaigns regarding discounts due to the physical store cost
Tangibility & Trialability	Experiencing the product through an audio/visual platform	Ability to touch and/or try the product
Customer Support	Support via chatbots or e-mails; rarely real-time online or telephone support	Ability to get support from real sales representatives during the shopping
Shopping Experience	Only virtual shopping experience	Physical shopping experience
Delivery	Certain delivery time after purchasing	Instant delivery after purchasing in the store
Return & Refunds	Time for assessment of complaints, certain delivery and refund time	Quick return and refund in store
Sustainability	More CO2 emissions and plastic pollution	More environmentally friendly thanks to the bulk distribution of goods between production facility, warehouse, and physical store

Advantage
Disadvantage

Other studies on this topic suggest that convenience is the key factor for choosing online shopping over offline shopping. Online shopping has convenience in terms of quick access to information, detailed search opportunities, and saving time (Schröder & Zaharia, 2008). When the online shopper typologies are examined, convenience has been observed to be the main shopping motivation of the online shopper compared to the traditional shopper (Ganesh, Reynolds, & Luckett, 2010). In addition, the opportunity to participate in auction campaigns on certain online shopping platforms makes it more appealing compared to offline shopping (Khan & Rizvi, 2010).

However; when it comes to sustainability in terms of the environment and the carbon footprint of consumers on the environment, online shopping is in a mostly disadvantaged position in its current form. The two major disadvantages of online shopping, in terms of sustainability, are excessive packaging and increased carbon emissions (Igini, 2022). The packaging and delivery of goods contribute significantly to the CO<sub>2</sub> emissions associated with plastic production and transportation, damaging ecosystems and adding enormous amounts of waste to the land. Recent research by the local organization Green Sense estimates that 780 million pieces of packaging trash from online shopping were produced in Hong Kong alone during the year 2020. The survey also revealed that each product used 2.18 pieces of packaging on average in the same year, most of which were made of mixed materials that are challenging to recycle.

Premium delivery options, which have been popular in recent years, are also one of the reasons that increase in emissions. Because sometimes a single product is distributed for kilometers with a smaller vehicle, rather than a bulk delivery with a single vehicle. As for transportation, according to data specific to the USA for 2020,

27% of carbon emissions originate from transportation (EPA, 2022). Considering that 52% of this is due to small commercial vehicles, it can be said that deliveries made for online shopping have a large share in carbon emissions.

Still, the packaging waste and carbon emission issues stemming from the increased online shopping can be solved in near future by applying reusable packages and discarding free product returns for customers. Thus, more sustainable solutions will have to be implemented, as half of the purchases will be through online channels just in the UK (ParcelLab, Sustainability in E-Commerce, 2020). In line with this fact, innovative solutions can increase sustainability in online shopping. For instance; Zalando requires sellers to send a predetermined amount of products to Zalando's warehouse by forecasting 16 weeks of stock before shipping their products (Zalando, 2022a). The same marketplace allows the sellers to sell their products to the marketplace for a certain fee, using the liquidation method (Zalando, 2022b), in order to facilitate the sale of products left at the end of the season. Within the framework of these solutions, Zalando helps sellers and consumers reduce their carbon footprint on the environment.

### 2.3 Online shopping in Turkey and Germany

Turkey and Germany are two G20 countries that are members of joint organizations such as NATO and have long-standing intense commercial relations between them. Before examining the development of online shopping in Turkey and Germany, it would be appropriate to compare some socio-economic data between the two countries.

World Economic Situations and Prospects (WESP) published by every year by United Nations, classifies countries into three main groups: developed economies,

economies in transition, and developing economies. This is done to demonstrate the basic economic indicators of countries. According to the indicators published by United Nations, Turkey is classified as a developing country and Germany is classified as a developed economy. When categorized according to economies by per capita GNI, Turkey is classified as an upper-middle-income nation, while Germany is classified as a high-income nation (United Nations, WESP, 2017).

Table 2. Comparison of Socio-Economic Data of Germany and Turkey  
Source: [The World Bank, 2021]

Country	Turkey			Germany		
	2019	2020	2021	2019	2020	2021
Year	2019	2020	2021	2019	2020	2021
Population (in million)	83.429	84.339	85.042	83.092	83.160	83.129
GDP (current US\$ in trillion)	0.761	0.719.95	0.815.27	3.89	3.85	4.22
GDP per capita (current US\$ in thousand)	9.121	8.536	9.586	46.794	46.752	50.801
GDP growth (annual %)	0.9	1.8	11	1.1	-4.6	2.9
Unemployment (% of the total labor force)	13.7	13.1	13.4	3.1	3.8	2.5
Inflation, consumer prices (annual %)	15.2	12.3	19.6	1.4	0.5	3.1

As seen in the information and comparison table above (Table 2), it would be expected for Germany to have an earlier built and more formidable e-commerce infrastructure and an online shopping consumer base with higher purchasing power. However, making a comparison of the factors that play a role in the development of online shopping mentioned in "Chapter 2.2" will create a more comprehensive approach before the comparison of online shopping behavior in Turkey and Germany during the pandemic.

In both Turkey and Germany, the e-commerce sector has developed gradually from the early 2000s to the pandemic process, excluding the 2000 and 2008 global economic crises. Especially, the rapid increase and spread of internet use

since the 2000s, the use of smart phones since the 2010s, and the widespread use of social media platforms, which have become an indispensable part of digital marketing in a short period, and the increase in the number of users have made online shopping more popular (Chmielarz, Zborowski, Jin, Atasever & Szpakowska, 2022). In addition, the widespread use of credit cards, the development of online payment systems, and the more widespread and reliable online shopping platforms have also contributed to the growth of online shopping both in Turkey and Germany.

### 2.3.1 E-commerce revenues in Turkey and Germany

According to the data shared by Statista, it is seen that e-commerce revenues in Turkey have almost doubled, from approximately 12.1\$ billion to over 22.8\$ billion in 2017 (Figure 2). It is predicted that these figures will increase to around 46 billion dollars in 2025. It is also estimated that approximately half of this revenue will be created by electronic devices. Similarly, according to Statista data, the increase in e-commerce revenues in Germany between 2017 and 2021 draws a similar graph. E-commerce revenues, which were around 1 billion euros in 2000, rose to 99.1 billion euros in 2021 increasing almost 100 times compared to the figures in 2000 (Figure 3).

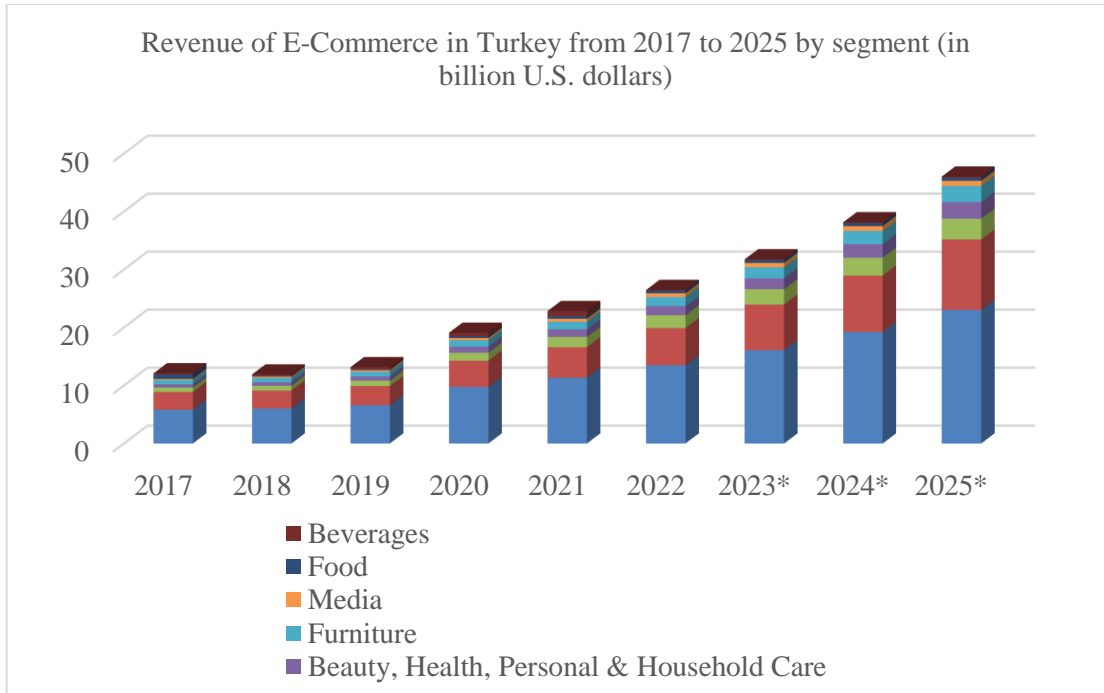


Figure 2. Revenue of e-commerce in Turkey from 2017 to 2025. by segment (in million U.S. dollars)

Source: [Statista, April, 2022]

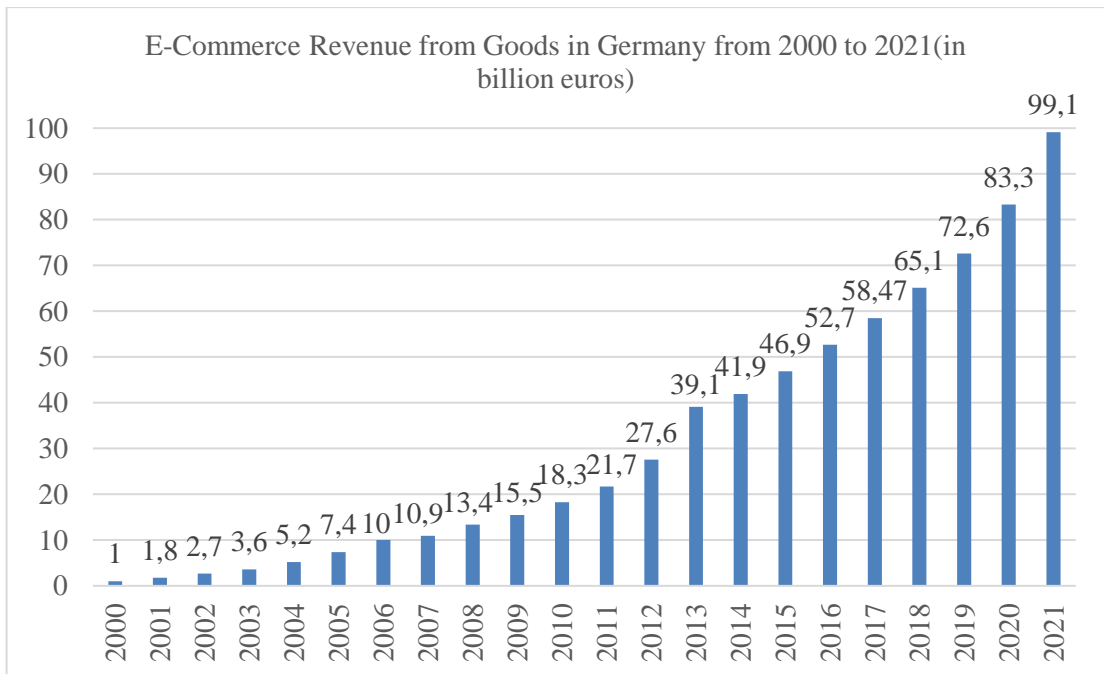


Figure 3. E-commerce revenue from goods in Germany from 2000 to 2021 (in billion euros)

Source: [Statista, January, 2022]

### 2.3.2 Internet penetration

According to the annual results of the Household Information Technologies (IT) Usage Research Reports published by the Turkish Statistical Institute (the first research done in 2007 and the last one published on August 26. 2022), internet usage in Turkey has increased continuously between 2007 and 2022 (Figure 4). According to the data published by the same institution, it is seen that online shopping has increased in parallel with internet usage in the same period. In 2022, the rate of households accessing the internet increased to 94.1% (92% in 2021 and 19.7 in 2007), while the rate of individuals aged 16-74 using the internet increased to 85% (82.6% in 2021. and 30.1% in 2007). The rate of online shopping of individuals aged 16-74 also increased to 46.2% in 2022 (44.3% in 2021. and 5.65% in 2007).

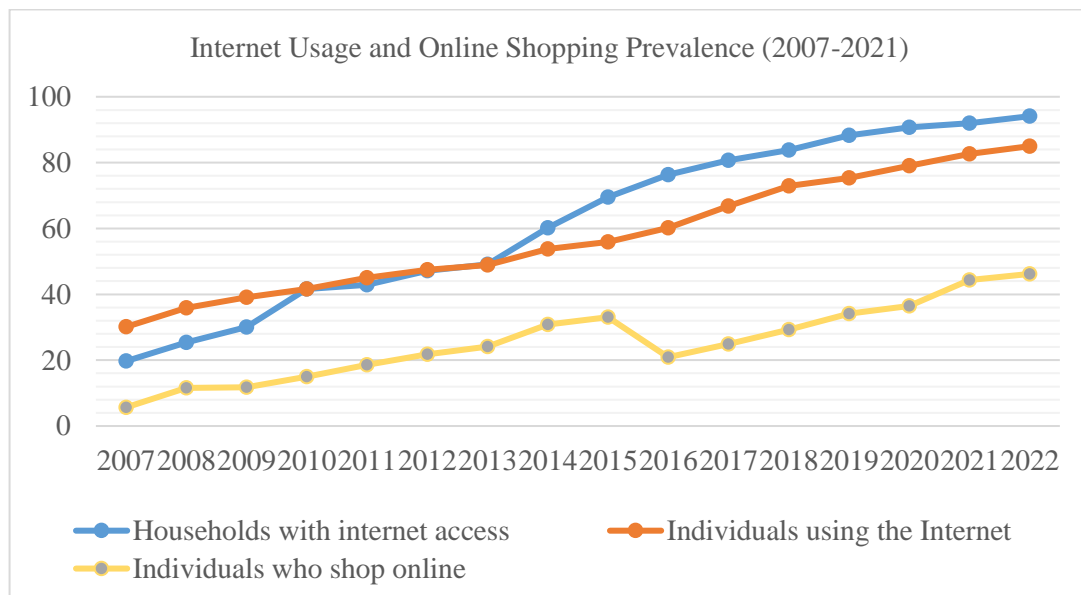


Figure 4. Household information technologies (IT) usage research reports  
Source: [Turkish Statistical Institute, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022]

When the internet penetration and online shopper rates in Germany are analyzed, it is seen that the internet user rate has reached 95% in 2022 from 6.5% in

1997, according to Statista data. Although small decreases are observed from time to time, the rate of online shoppers also increased from 54.1% in 2002 to 95% in 2021 (Figure 5 and 6).

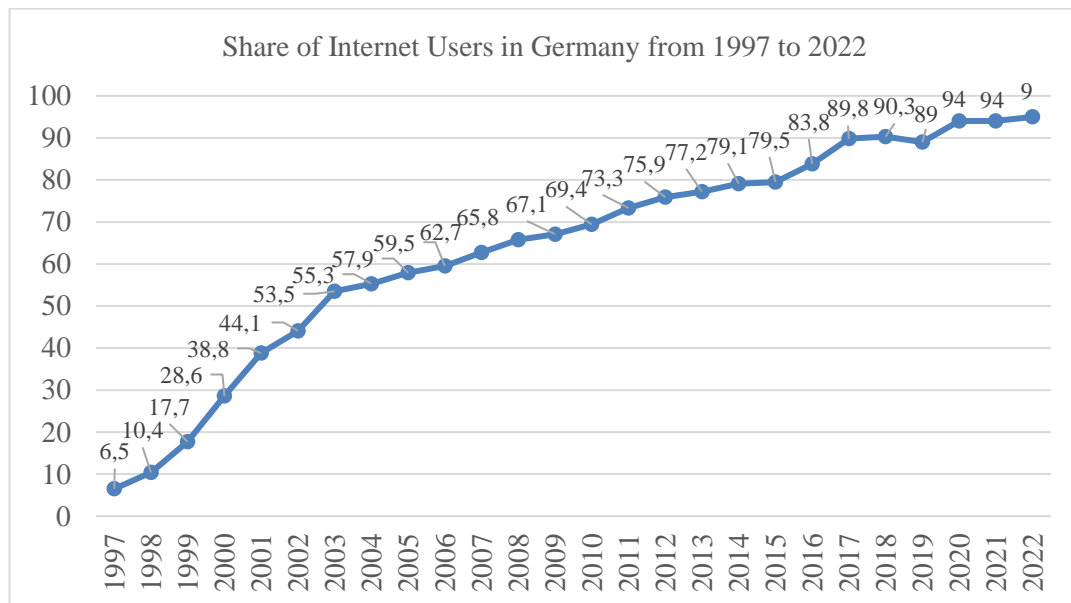


Figure 5. Share of internet users in Germany from 1997 to 2022  
Source: [Statista, November, 2022]



Figure 6. Share of online shoppers among internet users in Germany in selected years between 2002 and 2021  
Source: [Statista, January, 2023]

### 2.3.3 Smartphone use

As smartphone use facilitates online shopping through easy access to digital payment systems, advertisements, and social media platforms, it can be concluded that it has a positive effect on the growth of the online shopping market in Turkey and Germany.

According to Statista data, the number of smartphone users in Turkey increased from 3.47 million in 2010 to 65.63 million in 2021 (Figure 7). In 2025, this number is expected to increase to 73.91 million. The situation in Germany is similar to that in Turkey. The number of smartphone users in Germany increased from 6.31 million in 2009 to 62.61 million in 2021 (Figure 8).

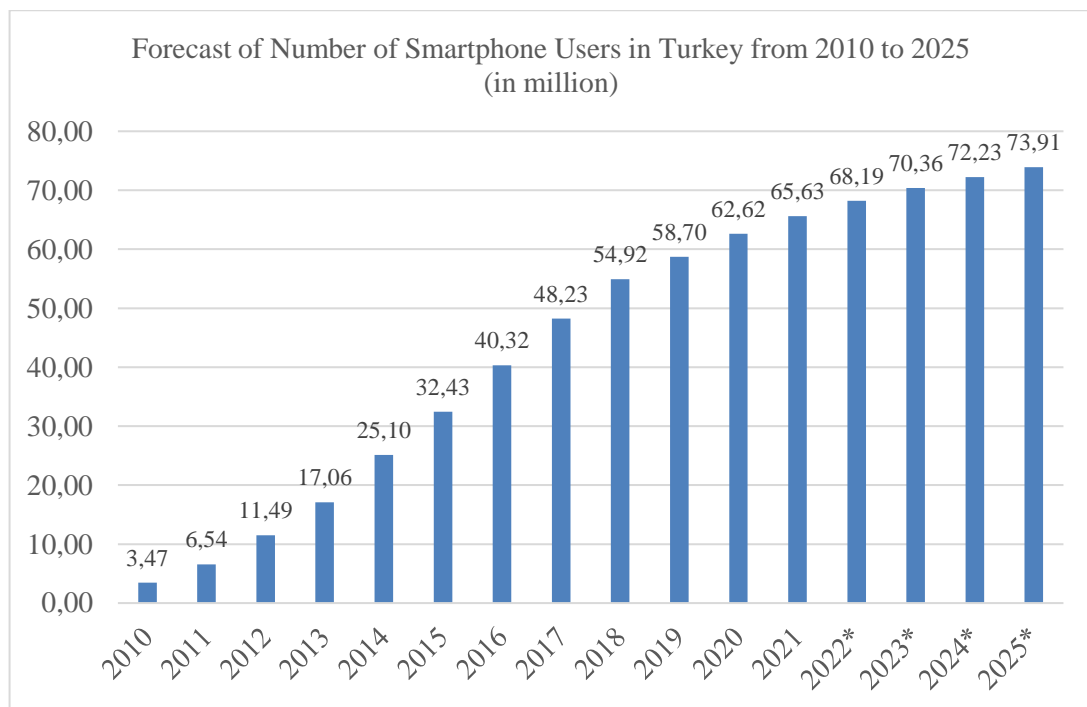


Figure 7. Forecast of the number of smartphone users in Turkey from 2010 to 2025 (in millions)

Source: [Statista, May, 2021]

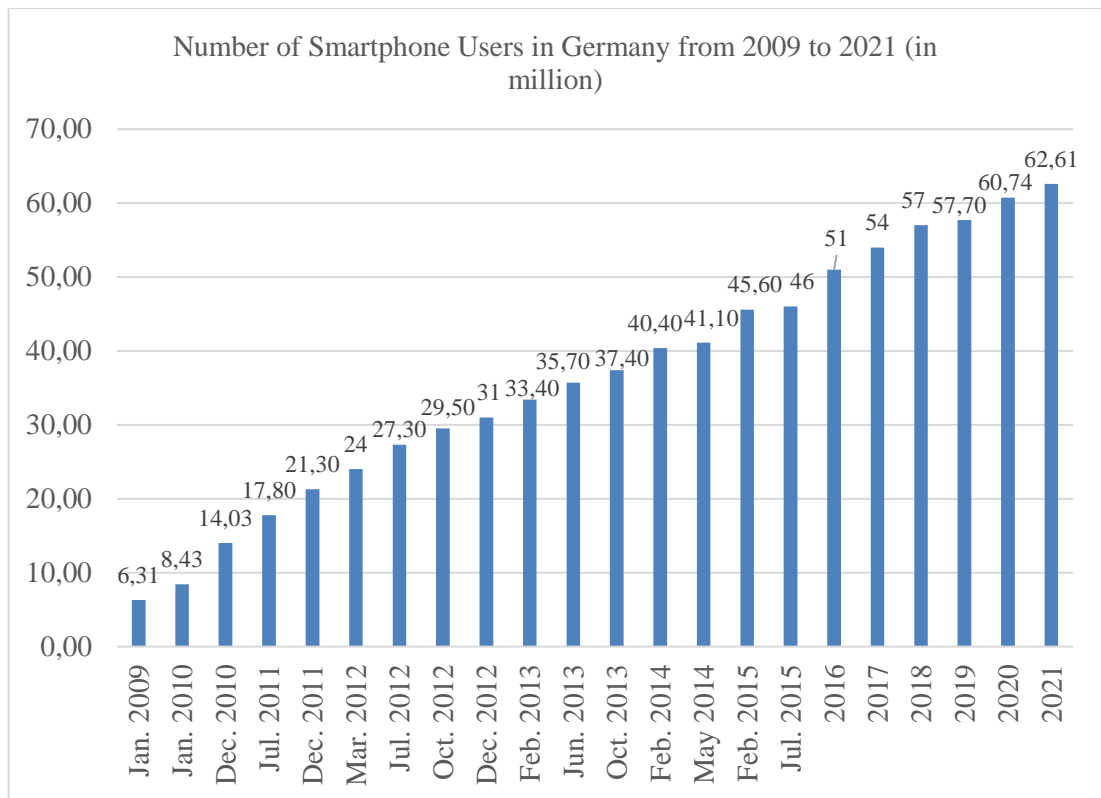


Figure 8. Number of smartphone users in Germany from January 2009 to 2021 (in millions)

Source: [Statista, November, 2021]

### 2.3.4 Use of social media

The use of social media provides an increase in sales for online shopping through both influencer marketing and classical digital marketing advertisements. Social media users are more likely to shop online, especially when detailed and consistent product content is presented. It has been observed that individuals from younger segments such as the X generation and Y generation prefer online shopping in many categories, especially product categories such as electronics and clothing, and the decision mechanisms in the purchasing process are influenced by the use of social media (Jothi & Gaffoor, 2017).

For this reason, the use of social media, which draws an increasing graph in Turkey and Germany, creates the prediction that online shopping will come to the

fore more in the future. According to Statista data, the rate of social media users among internet users in Turkey increased from 63.56% in 2018 to 78.43% in 2022. This rate is expected to exceed 87% in 2027 (Figure 9). Similarly, the use of social media is increasing in Germany. The number of social media users in Germany - which was 41.91 million in 2017 - increased to 57.45 million in 2021. In 2025, this number is expected to exceed 69 million (Figure 10).

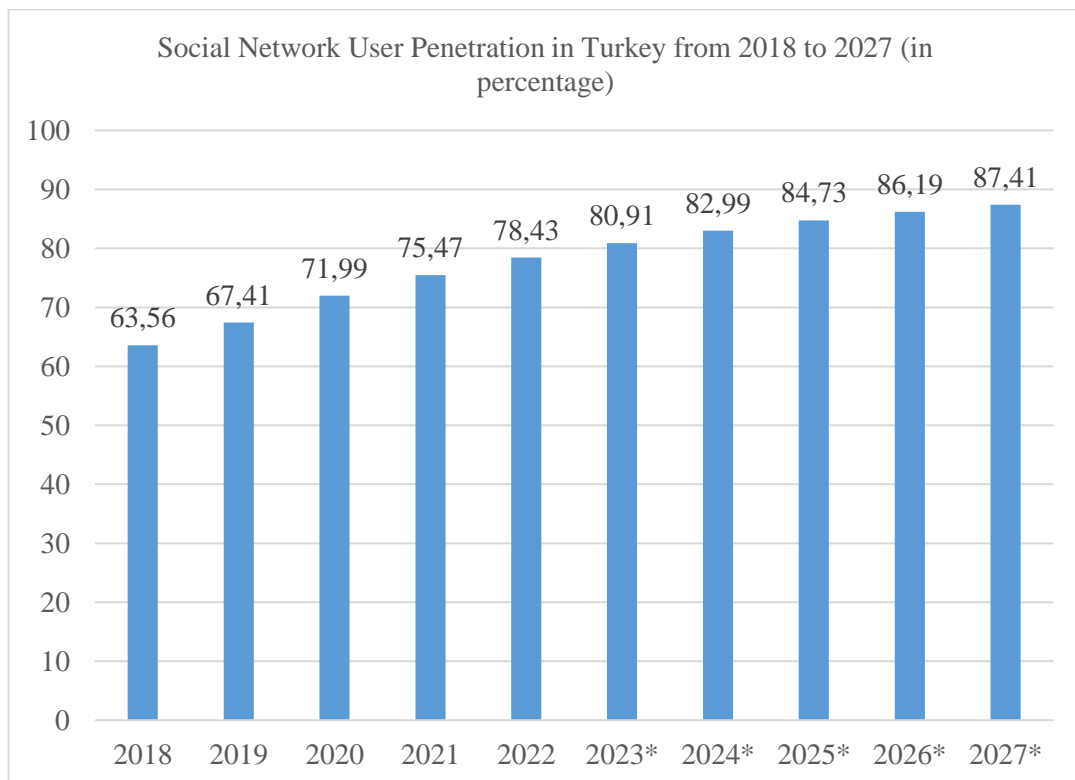


Figure 9. Social network user penetration in Turkey from 2018 to 2027  
Source: [Statista, June, 2022]

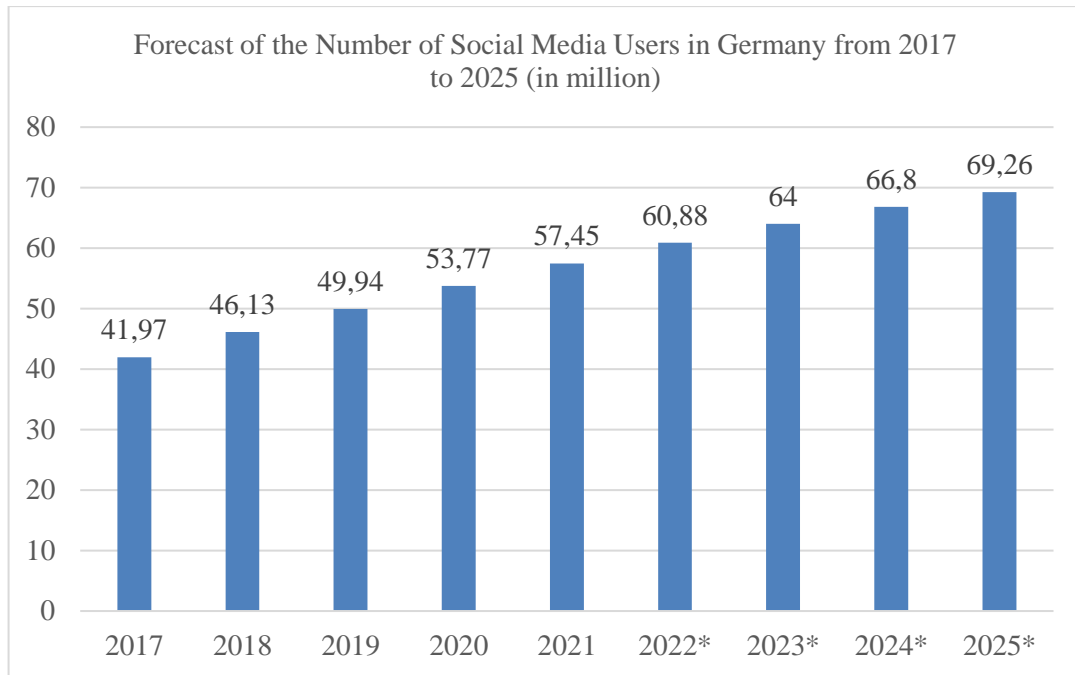


Figure 10. Forecast of the number of social media users in Germany from 2017 to 2025 (in millions)  
Source: [Statista, May, 2021]

### 2.3.5 Credit cards and online banking

Undoubtedly, any kind of transaction is a natural part of shopping. And, evidence suggests that digital banking systems, which are currently developing both in Turkey and around the world, have created a catalyst effect in online shopping with the pandemic. The widespread use of contactless payment methods, in addition to the classical payment methods made by credit cards and debit cards, has made online shopping both faster and easier (Ağan, 2020). Shoppers who have more opportunities regarding banking services are more likely to turn to online shopping. This is because, these people have a certain monetary capacity and they adapt to online shopping more easily by using online payment methods (Çera, Phan, & Androniceanu, 2020).

According to the data shared by Statista, the number of credit cards used in Turkey is expected to increase from 51.07 million in 2010 to 70.16 million in 2025

(Figure 11). In line with these data, credit card penetration is expected to rise from 29% in 2010 to the forecasted level of 41% in 2025 (Figure 12).

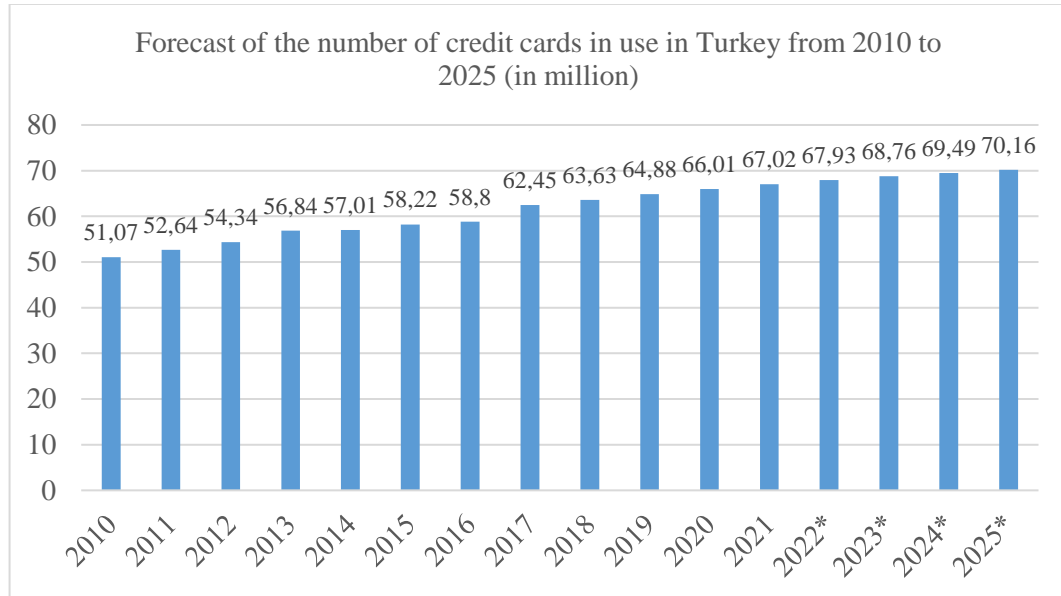


Figure 11. Forecast of the number of credit cards in use in Turkey from 2010 to 2025  
Source: [Statista, May, 2021]

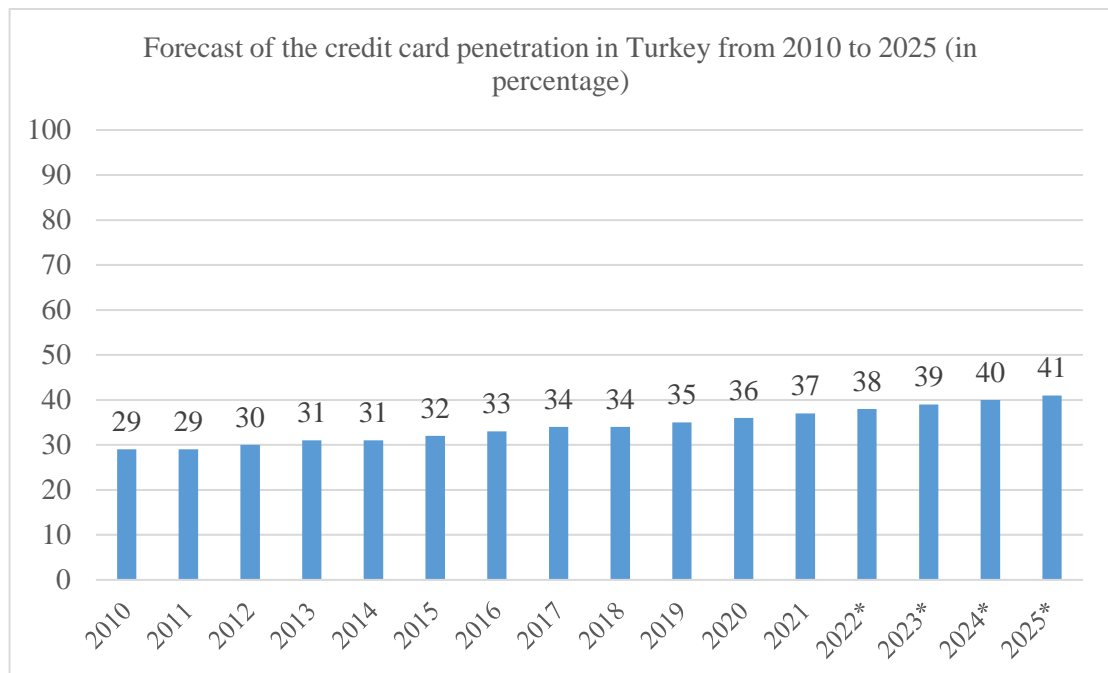


Figure 12. Forecast of the credit card penetration in Turkey from 2010 to 2025  
Source: [Statista, May, 2021]

In addition, according to the data presented by the Banks Association of Turkey, the number of mobile banking users - which was 21.865 million in December 2017 - increased to 53.234 million in December 2020 (The Banks Association of Turkey, 2021).

When the numbers regarding banking and payment methods in Germany are examined, it is seen that the number of credit cards and debit cards used in the total population has increased (Table 3). Also, the number of credit cards per capita - which was 0.36 in 2010 - rose to 0.57 in 2020. And, the number of debit cards per capita, which was 1.45 in 2010, escalated to 1.65 in 2020 (Figure 13). In addition, it is estimated that the rate of online banking penetration - which was 33% in 2010 - will increase to 57% in 2025 (Figure 14).

Table 3. Total Number of Credit Cards and Debit Cards in Germany from 2000 to 2021

Source: [Statista, December, 2022]

Total Number of Credit Cards and Debit Cards in Germany from 2000 to 2021		
Year	Credit cards	Debit cards
2000	16.640.125	92.809.583
2001	17.969.221	93.233.552
2002	17.776.609	93.657.522
2003	17.923.256	90.014.676
2004	17.993.928	88.501.794
2005	18.349.187	88.478.043
2006	18.260.338	89.709.341
2007	22.244.245	100.740.254
2008	22.212.135	100.667.168
2009	24.225.438	101.908.661
2010	25.341.315	102.413.713
2011	26.139.257	103.957.375
2012	27.594.543	105.593.639
2013	28.682.770	105.169.256
2014	31.254.093	104.099.927
2015	33.145.436	106.102.740
2016	33.725.627	108.951.095
2017	35.052.289	109.311.646
2018	35.897.289	111.550.509
2019	37.282.383	115.665.139
2020	40.574.349	118.392.446
2021	38.439.319	121.332.167

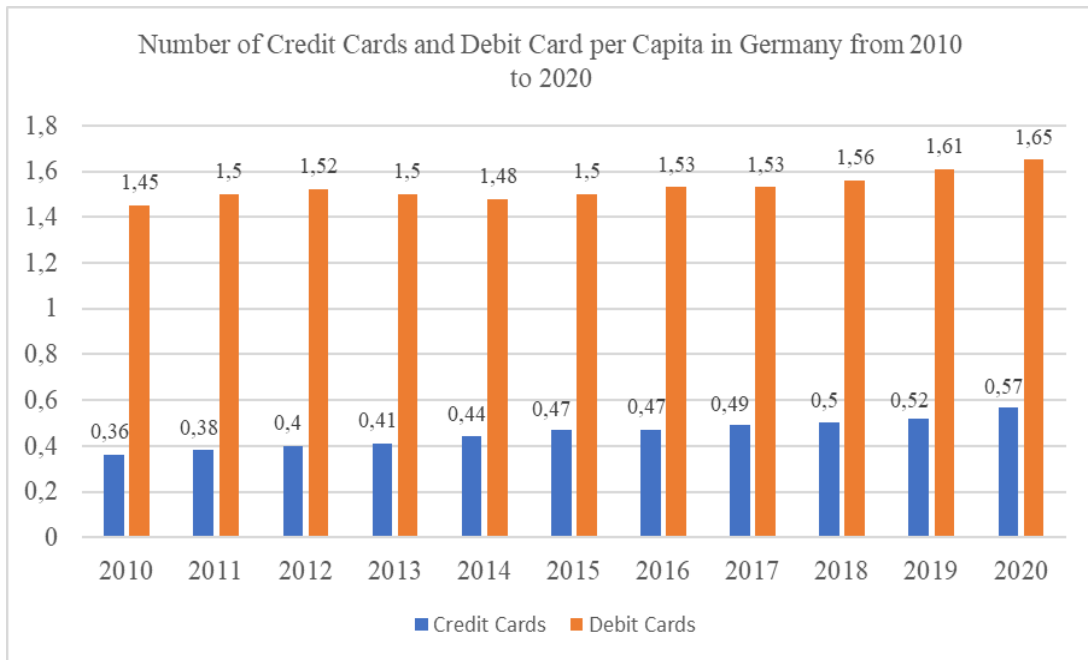


Figure 13. Number of credit cards and debit cards per capita in Germany from 2010 to 2020  
Source: [Statista, April, 2022]

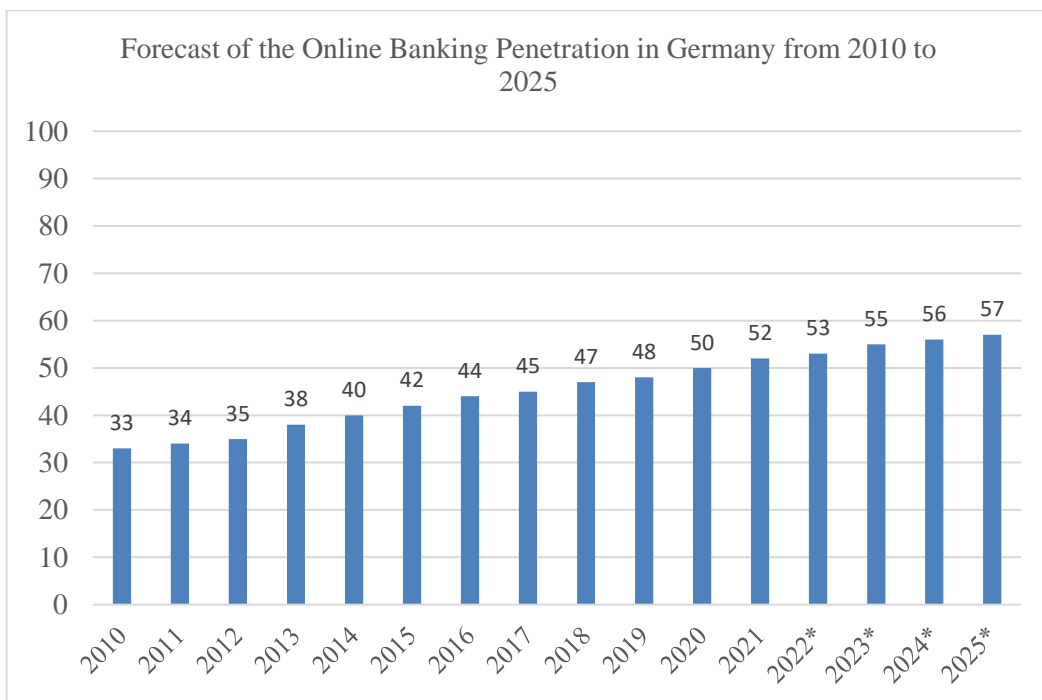


Figure 14. Forecast of the online banking penetration in Germany from 2010 to 2025  
Source: [Statista, May, 2021]

## 2.4 Consumer behavior

Consumer behavior is defined as the selection, acquisition, and use of goods and services to satiate consumer needs. The processes behind consumer behavior are numerous. The consumer looks for the items he/she would like to consume first, and then he/she only selects those that provide the greatest benefit. However, some factors might affect the customer's purchasing behavior. These factors can be classified as cultural factors, social factors, personal factors, and psychological factors. Psychological factors such as; perceptions and attitudes can result in a change in consumer behavior, especially during a crisis like a pandemic. A specific example is the drop of 38% in Chinese goods shipped into the US during the pandemic. This example demonstrates both the political and the panic aspects, as consumers may want to stop buying Chinese products both because of blaming the Chinese government for attempting to hide the spread of the disease and also trying to protect themselves and their families from touching the products that may infect them with the virus (Braholli, 2022).

During the pandemic, some factors that influence both shopping behavior in general and online shopping behavior have been unearthed. Fear of disease, risk aversion motive, fear of scarcity, uncertainty, stress, and anxiety have been the common factors influencing online shopping behavior (Islam, Pitafi, & Arya, 2021). And the outcome of these factors in shopping behavior has generally manifested as panic buying, stockpiling, and impulsive shopping behavior with a hedonistic motive.

Panic buying refers to a behavioral action generally appearing in the advent of a crisis (Arafat, Hussain, & Kar, 2020). And, by the analysis of 613 media reports in English, it has been concluded that fear of scarcity was the greatest factor

triggering panic buying (Arafat, Kar, & Menon, 2020) since it has been referred to about 75% of the reports (n =456).

The theory of planned behavior may also explain panic buying and stockpiling since it argues that external factors leave little space for control over behaviors in terms of decision-making (Ajzen, 2011). Indeed, lockdowns and social restrictions led to people's loss of control over their purchasing behavior, which reinforced their risk-aversion motive. The risk aversion motive (Schröder & Zaharia, 2008) emerges from the consumer's inability to evaluate the possible negative outcomes and the severity of such negative outcomes of a shopping decision. In this sense, it is expected that consumers in both Turkey and Germany have a risk aversion motive to some degree regarding offline shopping, as the perceived risk is the risk of disease transmission.

In addition, a previous study from Singapore (Sim, Chan, & Chong, 2010) focusing on the psychosocial and coping mechanisms used by the people during the SARS outbreak in 2003 indicates that uncertainty regarding the outcome of the outbreak was the main point of concern among people. This created anxiety, depression, and the fear of losing control of the situation resulting in panic buying. A study made in New Zealand during the COVID-19 Pandemic shows similar results. The fear of inability to reach essential goods stemming from the uncertainty arising from the COVID-19 Pandemic resulted in panic buying and stockpiling of essential goods such as groceries (Hall, Fieger, & Prayag, 2021). It can be concluded that this result stems from the fear of scarcity during the crisis (Pantano, Pizzi, & Scarpi, 2020) and Media news and changes in the buying behavior of people around have made a cumulative change in purchasing behavior and led to panic buying and stockpiling in the general population (Arafat, Kar, & Menon, 2020).

## 2.5 Cultural dimensions and orientations

Consumer behavior is also affected by cultural orientations. Hofstede's Cultural Dimensions Theory (Hofstede, 1980) explains the cultural orientations and behavior of individuals on average. Since Turkish and German cultures are distinct from one another in many aspects such as; language, religious belief, industrial development, traditions, family, literature, music, haute couture, cuisine, art, etc. It is expected that people from those have different online consumer behavior.

According to Hofstede's classification of cultures (Hofstede, 1980), there are 6 dimensions - power distance, uncertainty avoidance, individualism vs collectivism, masculinity vs femininity, and short vs. long-term orientation - applicable to different cultures including the one - restraint vs indulgence - put forth by later scholars (Nickerson, 2022).

### 2.5.1 Power distance

Power distance explains the tendency regarding the distribution of power in a society. Cultures inclined to look for a more equal distribution of power are classified as low power distance cultures. Cultures having a more strict hierarchy in their society are classified as high power distance cultures.

### 2.5.2 Individualism vs collectivism

In individualistic societies, success and individual rights are at the forefront and more importance is attached to individual goals. In collectivist societies, the interests and happiness of the society always come first, and loyalty and solidarity are given great importance.

### 2.5.3 Masculinity vs femininity

While a feminine society supports cooperation and comfort, a masculine society attaches importance to competitiveness and goal orientation.

### 2.5.4 Uncertainty avoidance

Uncertainty avoidance reflects the tolerance of a culture against an ambiguous situation with no certain outcome that can be estimated initially. Societies with low certainty avoidance have low tolerance regarding uncertainty, and they tend to have more anxiety in terms of any change, thus they prefer not to take many risks and preserve the status quo. On the other hand, societies with high certainty avoidance have a higher tolerance regarding uncertain situations, as a result, they are more open to new and unexpected events and less afraid to take risks.

### 2.5.5 Short-term orientation vs long-term orientation

While societies with short-term orientation favor short-term success and focus on the near future, societies with long-term orientation have long-term achievements. Features like thrift and saving are more commonly seen in societies with a long-term orientation.

### 2.5.6 Restraint vs indulgence

This classification is constituted by the level of control of a society in terms of desires and impulses. Restraint societies are better at suppressing their impulsive behavior compared to indulgent societies whose spending and sense of freedom tend to be higher.

According to the comparison chart below (Figure 15), created with the help of the country comparison tool of Hofstede Insights, Turkey is a collectivistic and feminine society with high power distance and high uncertainty avoidance showing neither long-term nor short-term orientation and being neither indulgent nor restraint. On the other hand, Germany is an individualistic and masculine society with low power distance and high uncertainty avoidance showing long-term orientation and restraint.

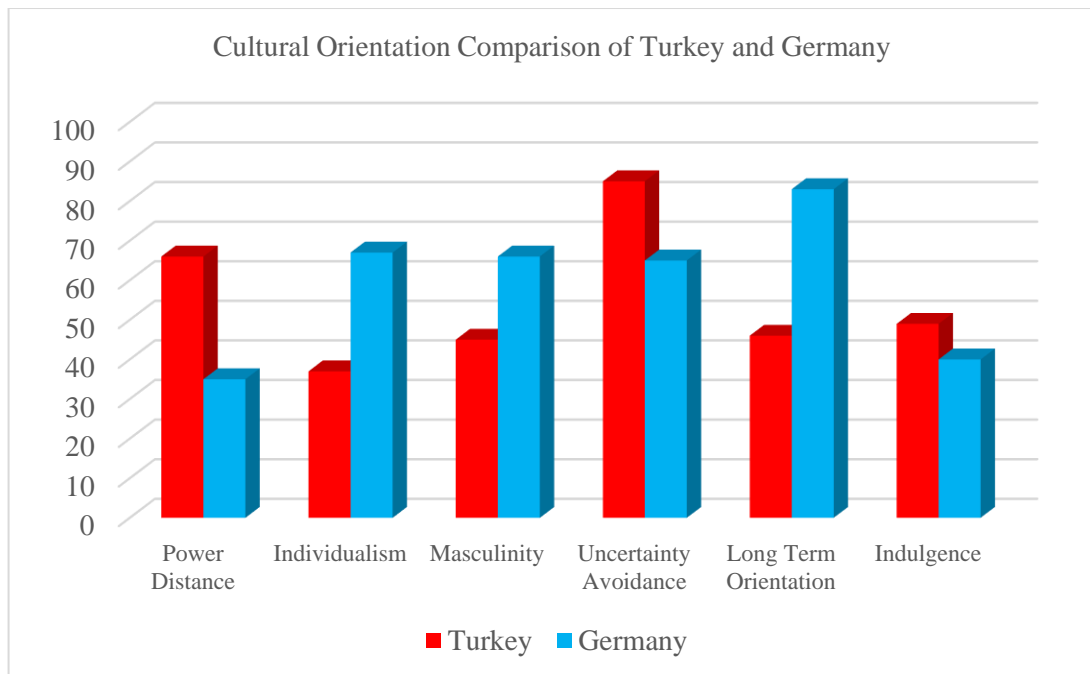


Figure 15. Cultural orientation comparison of Turkey and Germany  
Source: [Hofstede Insights, 2022]

Various studies from literature (Smith, Deitz, & Royne, 2013; Al-Alawi & Ismail, 2016; Eroglu & Piçak, 2011) also support the comparison chart above. and according to Hall’s study (Hall & Hall, 2001), regarding cultural orientations convenience and functional aspect of online shopping in German culture should be high since German culture can be classified as monochronic and low-context, in

which people view online shopping as time-saving and target oriented activity in terms of accessing goods and services (Smith, Deitz, & Royne, 2013). In this case, it can be estimated that the pandemic might have a catalyst effect in increasing the prevalence of online shopping even more. However, unlike German culture, Turkish culture is classified as polychronic and high-context (Nieżgoda, Szutowski, & Szulczyńska, 2017) in which, time is intertwined with many events simultaneously and interactions with people. Thus, physical experience during shopping might be more significant than a specific goal. In this case, it is expected that the pandemic has necessarily restricted the time to be spent in shopping malls under normal conditions.

## 2.6 Online shopping behavior in Turkey and Germany during the pandemic

During the pandemic, measures such as social distancing and lockdowns around the world caused people to be more alone and/or stay at home in general. As a result, time spent on smartphones and social media has increased. Therefore, the time to spend on online shopping has also increased. There have been many developments regarding online shopping during the pandemic both in Turkey and Germany.

In Turkey, the food supply chain as well as the trust-based systems that previously determined how and where the food is obtained have been disrupted by COVID-19. Unexpected price rises stretched household budgets; empty stores and last-minute lockdowns upended previously made arrangements; online shopping brought momentary comfort with conditions. The relatively short supply chain in Turkey has made it easier for online shopping to spread to society (Abiral & Atalan-Helicke, 2020).

The increase in the time spent on the internet and smart phone usage has been effective in the spread of online shopping to society as well. A cross-country

study carried out in Turkey, Poland, and China comparing the online shopping behavior of consumers between the first months of 2020 (before the COVID-19 pandemic) and the first months of 2021 (during the pandemic) indicates that internet usage in Turkey increased by 50% during the pandemic, and smartphones are the most popular electronic device for internet and online shopping in Turkey with 64%. According to the study, the rate of those who do online shopping frequently in Turkey before the pandemic was 28%. However, it was observed that this rate increased by 50% during the pandemic. In all three countries where the cross-country study was conducted, it was revealed that online shopping was generally done from time to time before the pandemic, but after the pandemic, this situation changed in favor of online shopping in all three countries (Chmielarz, Zborowski, Jin, Atasever & Szpakowska, 2022).

Fear of disease and risk aversion has been the main determinants of purchasing behavior in all segments of online shoppers in Turkey (Karaođlan & Hamşiođlu). This led to an increase in online shopping penetration by 42%. Fear of disease led to stocking up on basic food products, while stress factors increased the consumption of snacks (Zuluđ, Temur, & Kaya, 2022). Anxiety and uncertainty have also been factors that influence online shopping behavior. While fear of disease led to the behavior of stocking up on basic food products, anxiety, and uncertainty led to an increase in the consumption of unhealthy foods such as junk food and fast food (Kaya, Uzdil, & Cakirođlu, 2020). This is further supported to be true via McKinsey's research conducted in April 2020 during the early pandemic period, an increase has been expected in non-essential consumption such as snacks and personal care among consumers in Turkey. In the case of online shopping, household essentials, personal care, snacks, and entertainment have been the rising consumption

categories (McKinsey, Turkish consumer sentiment during the coronavirus crisis, 2020).

Consumers in Turkey exhibited stocking behavior in basic consumer goods such as flour, pasta, oil, sugar, and toilet paper that can be used for a long time without spoiling. Consumption in the apparel category, on the other hand, has decreased (Belbağ, 2021). However, stocking behavior was not observed in every food product. Although there was an increase in online food shopping during the pandemic process, there was not the same increase in perishable products such as meat products. This is due to the tendency to stock up on non-perishable foods in a crisis like a pandemic (Haskaraca & Bostancı, 2020).

In Germany, consumer behavior similar to Turkey was observed in many respects. When examined in general, the stocking behavior stemming from the fear of scarcity was seen intensely in Germany. Grocery and non-perishable food purchases increased drastically. This kind of change came to the fore, especially, during the first months of the pandemic. According to a report published by The German Federal Statistical Office, the change in the sales of consumer goods in percentage between the period - August 2019 to January 2020 - has seen drastic variation (Table 4). The demand for soap and toilet paper has seen the highest numbers 12th week (Destatis, 2020):

Table 4. Sales of Selected Consumer Goods - Percentage Changes Compared to the Period August 2019 to January 2020  
Source: [Destatis, 2020]

Sales of Selected Consumer Goods Percentage Changes Compared to the Period August 2019 to January 2020				
Product	Week 9	Week 10	Week 11	Week 12
Soap	122	153	235	337
Toilet tissue	56	99	131	211
Pasta	109	150	140	117
Flour	150	99	192	105
Sugar	76	39	101	100
Rice	206	41	163	208
Disinfectants	659	751	206	-49
Apples	46	13	65	42
Beer	-9	-9	-4	-5
Strained tomatoes	106	88	205	171
Yeast	96	51	132	52

In Germany, the grocery business has undergone a remarkable transformation as a result of the pandemic. In March 2020, "non-essential" stores were shut down by the government as a precaution in an effort to stop the pandemic. However, grocery stores were permitted to be active provided that they complied with the provisions published by the government regarding hygiene. The government's strict attitude regarding the pandemic and the fear of infection influenced German citizens' shopping behavior triggering panicked shopping behavior, especially regarding groceries. They stocked up as much food as they could against the uncertainty they felt towards the future using online shopping channels to avoid the risk of infection. A study published by PWC indicates that 52% of online shoppers bought more groceries during the pandemic (Grunkowski, & Martinez, 2022). In line with these data, another study demonstrates that nonperishable food purchases in Germany skyrocketed as soon as the coronavirus outbreak started

because of the emerging perception of the positive outcome against the fear of scarcity (Lehberger, Kleih & Sparke, 2021).

Moreover, some demographic differences were detected in anxiety-oriented behaviors based on stress and uncertainty. In a study focusing on shopping frequency and shopping behavior, it has been found that the stress and anxiety levels of participants of more frequent shoppers were higher compared to less frequent shoppers. Online shopping prevalence was also observed to be higher among more frequent shoppers with their main scope of online shopping being nutrition and pharmacy. 38.2% of the more frequent shoppers reported purchasing only nutrition and pharmacy products more than before. However, the percentage of more shopping regarding clothes (24.3%), and electric equipment (20.8%) were relatively high. This purchasing behavior can be explained in terms of the fear of losing control. In this sense, female gender and younger age were shown to be variables resulting in being more prone to negative emotion stemming from the fear of losing control, and eventually leading to impulsive shopping behavior (Georgiadou, Koopmann, & Müller, 2021)

On the other hand, another study focused on shopping behavior and shopping frequency based on food consumption. The cross-country analysis indicates that depending on the sort of food consumed, between 15% and 42% of the participants who took part in the study, altered their consumption frequency during the pandemic.

In Denmark and Germany, people purchased and consumed foods that lasted longer and more frequently. Stress-eating was also an observed behavior, thus the consumption that activates the dopamine mechanism has seen an increase. In Italy, foods like snacks, and junk food; in Denmark pastries and alcohol; in Norway,

sugary foods and beverages, and in Germany ready-made meals, sugary snacks, and alcoholic drinks were started to be preferred more frequently (Janssen, Chang, & Hristov, 2021).

In addition, some studies were also conducted before the pandemic that could shed light on possible online shopping behavior during the pandemic process. For instance; a study focused on the relationship between demographic characteristics to online shopping perspective and online shopping behavior. It was carried out in Germany between December 2012 and January 2013 with 412 participants demonstrating that working mothers (having at least one child and working at least a part-time job), young professionals (working people aged up to 39 years), and people who are 65+ years old were found to know about online shopping and showed more interest in online grocery shopping (77.1% of young mothers, 92.7% of young professionals, 85.7% of people aged 65+ showed interest) compared to other groups (57.1% showed interest) in the survey. 84.5% of all participants did not mind paying an additional fee for home delivery. 70.9% of all participants expressed that convenience in online shopping is the most attractive side of online shopping. Saving time has been found to be the most appealing aspect of online shopping for young mothers and young professionals, while the ability to get rid of the physical burden was the most important aspect for people aged 65+ years. Regarding the product groups, participants showed a positive attitude towards buying products that do not spoil for a long time, such as snacks.

However, they showed some reluctance to buy fresh fruit and vegetables, chilled/frozen food, fresh meat, and / or fish through online channels, because of a lack of trust towards the freshness and/or quality of the products (Seitz, Pokrivčák, & Tóth, 2017).

Furthermore, a research report focusing on the online shopping behaviors in Germany during the pandemic with a forecast for the future, published by McKinsey & Company, indicates that groceries and household supplies made up the primary online shopping categories in Germany during the pandemic as outlined in other studies. The results also demonstrate that digital habits acquired during the pandemic will remain to be a reality after the pandemic as well. Online purchases in electronics and books categories will continue to be popular, while slight drops regarding purchases of groceries will be observed. On the other hand, online purchases in travel, entertainment, and apparel categories are expected to increase (Herbert, Nyssens, & Vallöf, 2020).

## CHAPTER 3

### METHODOLOGY, ANALYSIS AND RESULTS

#### 3.1 Model

This study aims to examine and analyze the online shopping behaviors of people residing in Turkey and Germany during the COVID-19 Pandemic. For this purpose, academic literature and statistical data have been used extensively. To better detect the influences of the COVID-19 Pandemic on online consumption behaviors; utilitarian behavior, hedonic behavior, convenience, sustainability, digitalism, reliability, and ease of payment factors are listed under the “Online Shopping” category as the scales that naturally affect online shopping. In order to analyze the direct effects of the pandemic on online shopping; social distancing, fear of disease, and fear of scarcity factors are listed under the “Covid Effect” category. All these scales have been measured under the questions of the questionnaire specifically designed for this study.

The survey starts with a question asking about the country of residence of the respondents. If the answer to this question is Turkey, the survey questions continue in Turkish, and if the answer is in German, the survey questions continue in German. Participants who stated that they did not shop online were not required to answer the remaining questions of the survey. The following 6 questions were asked to evaluate general shopping behavior on a psychological and perceptual basis. In order to identify the infrastructural and behavioral data that naturally affect online shopping, the participants were asked to compare their online shopping experiences with their traditional shopping experiences, taking into account their online shopping experiences. After this section consisting of 23 questions, 13 questions to be used in

analyzing the effects of the pandemic on online shopping were directed to the participants. Before the last section, which includes questions about demographic information, 10 categories were created based on basic needs and secondary needs in order to interpret how the online shopping categories have undergone a change in terms of customer demand. In order to form the right questions, the information gathered from the literature review has been diligently considered and interpreted. Except for the questions based on demographic information, all questions were prepared following the Likert question type. A total of 240 participants answered the questions. While 128 of the 240 participants participated in the survey from Turkey, 112 participated in the survey from Germany. Survey questions in Turkish, German, and English were added to this study under the titles of Appendix in this study.

### 3.2 Method of factor analysis

Studies from the literature indicate that skewness and kurtosis is a viable method for the aim of assessing normal distribution (Trochim & Donnelly, 2006).

Table 5. Skewness and Kurtosis Table for Turkey

Scale	N	Skewness	Kurtosis
Online Shopping			
Utilitarian Behavior	128	-0.66	-0.707
Hedonic Behavior	128	-1.107	0.333
Convenience	128	-0.377	-0.157
Sustainability	128	-0.833	-0.597
Digitalism	128	-0.652	-0.566
Ease of Payment	128	-1.085	0.589
Reliability	128	-0.274	-0.104
Covid Effect			
Social Distancing	128	-0.979	0.597
Fear of Disease	128	-0.881	-0.263
Fear of Scarcity	128	-0.628	-0.19

Table 6. Skewness and Kurtosis Table for Germany

Scale	N	Skewness	Kurtosis
Online Shopping			
Utilitarian Behavior	112	-0.619	-0.941
Hedonic Behavior	112	-1.119	0.053
Convenience	112	-0.307	-0.125
Sustainability	112	-1.328	0.292
Digitalism	112	-0.562	-1.136
Ease of Payment	112	-0.595	-0.559
Reliability	112	-0.824	0.28
Covid Effect			
Social Distancing	112	-0.503	-0.14
Fear of Disease	112	-0.789	-0.037
Fear of Scarcity	112	-0.614	-0.305

As seen in Table 5 and Table 6, skewness and kurtosis values have been calculated for assessing normal distribution (Trochim & Donnelly, 2006). Since all values are between +2 and -2, it can be assumed that the normal distribution hypothesis is confirmed at all scales. Studies from the literature indicate that skewness and kurtosis is a viable method for the aim of assessing normal distribution (Gravetter & Wallnau, 2014).

### 3.3 Hypotheses of the research

- i. The levels of Covid Effect factors vary significantly depending on the participants' education level.
- ii. The levels of Covid Effect factors vary significantly depending on the participants' age.
- iii. The levels of Covid Effect factors vary significantly depending on the participants' occupation.
- iv. The levels of Covid Effect factors vary significantly depending on the participants' perceived income level.

- v. The levels of Covid Effect factors vary significantly depending on the participants' gender.
- vi. The levels of Covid Effect factors vary significantly depending on the participants' marital status.
- vii. The levels of online shopping factors vary significantly depending on the participants' education level.
- viii. The levels of online shopping factors vary significantly depending on the participants' age.
- ix. The levels of online shopping factors vary significantly depending on the participants' occupations.
- x. The levels of online shopping factors vary significantly depending on the participants' perceived income level.
- xi. The levels of online shopping factors vary significantly depending on the participants' gender.
- xii. The levels of online shopping factors vary significantly depending on the participants' marital status.
- xiii. The importance of the ease of payment in online shopping of participants predicts the importance of convenience in online shopping for them.
- xiv. The fear of scarcity of participants predicts the fear of disease for them.
- xv. The importance of digitalism in online shopping of participants predicts the importance of the ease of payment in online shopping for them.
- xvi. The hedonic behavior of participants in terms of online shopping predicts the fear of disease for them.

### 3.4 Reliability analysis

As mentioned, an internal reliability analysis was conducted by using Cronbach's Alpha and Spearman-Brown (Spearman's Rho) methods. The main reason for using Spearman-Brown is one of the scales that have only two questions and the studies from the literature (Eisinga, Grotenhuis, & Pelzer, 2013) argue that using Spearman-Brown instead of Cronbach's Alpha for assessing the reliability of the two-item scale is more accurate.

The reliability hypothesis is confirmed when the p-value  $< 0.05$ . Also, if Cronbach's Alpha is between 0.6-0.7, the scale can be acceptable (Arslan, Cigdemoglu, & Moseley, 2012). If Cronbach's Alpha score is higher than 0.7, it is also considered acceptable (Hair, Black, & Babin, 2010).

Table 7. Reliability Analysis Results for Turkey

Scale	N	Cronbach's Alpha	Spearman's Rho (p-Value)
Online Shopping			
Utilitarian Behavior	128	0.79	
Hedonic Behavior	128	0.855	
Convenience	128	0.707	
Sustainability	128	0.844	
Digitalism	128	0.807	
Ease of Payment	128	0.746	
Reliability	128	0.707	
Covid Effect			
Social Distancing			$<0.01$
Fear of Disease	128	0.759	
Fear of Scarcity	128	0.706	

Table 8. Reliability Analysis Results for Germany

Scale	N	Cronbach's Alpha	Spearman's Rho(p-Value)
Online Shopping			
Utilitarian Behavior	112	0.84	
Hedonic Behavior	112	0.853	
Convenience	112	0.636	
Sustainability	112	0.91	
Digitalism	112	0.868	
Ease of Payment	112	0.737	
Reliability	112	0.654	
Covid Effect			
Social Distancing			0.026
Fear of Disease	112	0.799	
Fear of Scarcity	112	0.72	

Since Cronbach's Alpha value is higher than 0.7 in most of the scales, it can be assumed that those scales are reliable, more than enough to proceed (Table 7 and 8). For the Convenience and Reliability categories in Germany, Cronbach's Alpha value is between 0.6-0.7 but as stated in the literature (Arslan, Cigdemoglu, & Moseley, 2012), those scales also can be acceptable. Moreover, the Social Distancing scale is also highly reliable since the sigma value for Spearman's Rho is lower than 0.01.

## CHAPTER 4

### FINDINGS

All questionnaire data has been arranged and the sample of the study consisted of 128 participants from Turkey and 112 participants from Germany. In total, 240 participants' answers have been assessed. This data has been evaluated in terms of 2 main categories (Covid Effect and Online Shopping) and 10 sub-categories of them. Evaluation results have been appended to the following sections:

#### 4.1 Evaluation of demographic findings

All participants have been evaluated in terms of demographic data types, which include gender, age, education level, occupation, perceived income status, and marital status. Then, the distribution of participants in terms of those data types has been calculated. Statistical data has been appended to the following sections.

Table 9. Distribution of Participants by Gender in Turkey

Gender	f	%
Male	51	39.8%
Female	77	60.2%

Table 10. Distribution of Participants by Gender in Germany

Gender	f	%
Male	51	45.5%
Female	61	54.5%

As shown in Table 9 and Table 10, in Turkey, 39.8% of the participants were male, and 60.2% of the participants are female in Turkey. As for Germany, 45.5% of the participants were male and 54.5% of the participants are female.

Table 11. Distribution of Participants by Age in Turkey

Age	f	%
18-25	31	24.2%
26-35	36	28.1%
36-49	28	21.9%
50-64	33	25.8%

Table 12. Distribution of Participants by Age in Germany

Age	f	%
18-25	21	18.8%
26-35	25	22.3%
36-49	29	25.9%
50-64	37	33.0%

As shown in Table 11 and Table 12, in Turkey, 24.2% of the participants were between the ages of 18-25. 28.1% of the participants were between the ages of 26-35. 21.9% of the participants were between the ages of 36-49 and 25.8% of the participants were between the ages of 50-64. As for Germany, 18.8% of the participants were between the ages of 18-25. 22.3% of the participants were between the ages of 26-35. 25.9% of the participants were between the ages of 36-49 and 33% of the participants were between the ages of 50-64.

Table 13. Distribution of Participants by Education Level in Turkey

Education Level	f	%
Primary School	24	18.8%
High School	24	18.8%
Bachelor's Degree	40	31.3%
Master's Degree	17	13.3%
PhD	23	18.0%

Table 14. Distribution of Participants by Education Level in Germany

Education Level	f	%
Primary School	30	26.8%
High School	21	18.8%
Bachelor's Degree	24	21.4%
Master's Degree	13	11.6%
PhD	24	21.4%

As shown in Table 13 and Table 14, in Turkey, 18.8% of the participants were elementary school graduates, 18.8% of the participants were high school graduates, 31.3% of the participants were having bachelor's degrees, 13.3% of the participants were having master's degree, and 18.0% of the participants were having Ph.D. As for Germany, 26.8% of the participants were elementary school graduates, 18.8% of the participants were high school graduates, 21.4% of the participants were having bachelor's degrees, 11.6% of the participants were having master's degrees, and 21.4% of the participants were having Ph.D.

Table 15. Distribution of Participants by Occupation in Turkey

Occupation	f	%
Student	25	19.5%
Public Sector Employee	20	15.6%
Private Sector Employee	52	40.6%
Employer	14	10.9%
Housewife	8	6.3%
Retired	4	3.1%
Unemployed	5	3.9%

Table 16. Distribution of Participants by Occupation in Germany

Occupation	f	%
Student	17	15.2%
Public Sector Employee	23	20.5%
Private Sector Employee	52	46.4%
Employer	15	13.4%
Housewife	2	1.8%
Retired	1	0.9%
Unemployed	2	1.8%

As shown in Table 15 and Table 16, in Turkey, 19.5% of the participants were students, 15.6% of the participants were public sector employees, 40.6% of the participants were private sector employees, 10.9% of the participants were employers, and 6.3% of the participants were housewives, 3.1% of the participants were retired, and 3.9% were unemployed. As for Germany, 15.2% of the participants were students, 20.5% of the participants were public sector employees, 46.4% of the participants were private sector employees, 13.4% of the participants were employers, and 1.8% of the participants were housewives, 0.9% of the participants were retired, and 1.8% were unemployed.

Table 17. Distribution of Participants by Income Level in Turkey

Perceived Income	f	%
Low Income	12	9.4%
Low-Middle Income	28	21.9%
Middle Income	47	36.7%
Middle-High Income	26	20.3%
High Income	15	11.7%

Table 18. Distribution of Participants by Income Level in Germany

Perceived Income	f	%
Low Income	10	8.9%
Low-Middle Income	27	24.1%
Middle Income	32	28.6%
Middle-High Income	27	24.1%
High Income	16	14.3%

As shown in Table 17 and Table 18, in Turkey, 9.4% of the participants believe that they have low income, 21.9% of the participants believe that they have low-middle income, 36.7% of the participants believe that they have middle income, 20% of the participants believe that they have middle-high income, and 11.7% of the participants

believe that they have a high income. As for Germany, 8.9% of the participants believe that they have low income, 24.1% of the participants believe that they have low-middle income, 28.6% of the participants believe that they have middle income, 24.1% of the participants believe that they have middle-high income, and 14.3% of the participants believes that they have high income

Table 19. Distribution of Participants by Marital Status in Turkey

Marital Status	f	%
Married	63	49.2%
Single	65	50.8%

Table 20. Distribution of Participants by Marital Status in Germany

Marital Status	f	%
Married	60	53.6%
Single	52	46.4%

As shown in Table 19 and Table 20, in Turkey, 49.2% of the participants are married, and 50.8% of the participants are single. As for Germany, 53.6% of the participants are married, and 46.4% of the participants are single.

#### 4.2 Online shopping in product categories

In line with the data in the literature, Food & Beverage category has seen the most increase both in Turkey and Germany, while Tourism & Travel has seen the most decrease. Below (Table 21 and 22) are the results regarding the change level of consumer shopping preferences during the pandemic in the following categories (1=Decreased a lot, 2=Decreased a lot, 3=Neither increased nor decreased, 4=Increased, 5=Increased a lot).

Table 21. Percentage Change of Online Shopping Figures in Product Categories During the Pandemic Process in Turkey

Categories	1	2	3	4	5	Increase/ Decrease Rate
Food & Beverage	0.8%	3.1%	27.6%	30.7%	37.8%	64.6%
Health & Hygiene	8.7%	20.5%	31.5%	26.0%	13.4%	10.2%
Clothing & Shoes	15.7%	18.9%	36.2%	17.3%	11.8%	-5.5%
Electronic Products	3.9%	18.1%	35.4%	24.4%	18.1%	20.5%
Home Gadgets	3.9%	14.2%	33.9%	28.3%	19.7%	29.9%
White Goods & Furniture	34.6%	19.7%	29.1%	12.6%	3.9%	-37.8%
Movie, Music	17.3%	20.5%	26.8%	20.5%	15.0%	-2.4%
Book, Magazine	16.5%	16.5%	26.8%	17.3%	22.8%	7.1%
Souvenirs & Jewelry	29.1%	15.7%	27.6%	10.2%	17.3%	-17.3%
Office Equipment	32.3%	15.7%	29.9%	12.6%	9.4%	-26.0%
Personal Care & Cosmetics	18.1%	18.1%	20.5%	26.0%	17.3%	7.1%
Sports and Hobby	23.6%	11.0%	29.1%	20.5%	15.7%	1.6%
Tourism & Travel	37.8%	22.8%	31.5%	3.9%	3.9%	-52.8%

Table 22. Percentage Change of Online Shopping Figures in Product Categories during the Pandemic Process in Germany

Categories	1	2	3	4	5	Increase/ Decrease Rate
Food & Beverage	0.0%	0.0%	19.6%	40.2%	40.2%	80.4%
Health & Hygiene	3.6%	14.3%	29.5%	30.4%	22.3%	34.8%
Clothing & Shoes	14.3%	23.2%	32.1%	16.1%	14.3%	-7.1%
Electronic Products	5.4%	20.5%	18.8%	25.0%	30.4%	29.5%
Home Gadgets	0.0%	17.0%	25.9%	23.2%	33.9%	40.2%
White Goods & Furniture	25.9%	33.9%	22.3%	15.2%	2.7%	-42.0%
Movie, Music	18.8%	15.2%	25.9%	20.5%	19.6%	6.3%
Book, Magazine	20.5%	19.6%	19.6%	21.4%	18.8%	0.0%
Souvenirs & Jewelry	21.4%	19.6%	25.9%	22.3%	10.7%	-8.0%
Office Equipment	21.4%	21.4%	25.0%	23.2%	8.9%	-10.7%
Personal Care & Cosmetics	17.0%	14.3%	21.4%	25.9%	21.4%	16.1%
Sports and Hobby	17.0%	23.2%	19.6%	20.5%	19.6%	0.0%
Tourism & Travel	29.5%	35.7%	34.8%	0.0%	0.0%	-65.2%

### 4.3 ANOVA and independent T-test analysis

#### 4.3.1 Analyses regarding the Covid effect section

Table 23. ANOVA Analysis Results of Education Level by Covid Effect Section in Turkey

Scales	Education Level	N	Mean	Std. Dev.	F	p
Social Distancing	Primary School Grad	24	3.75	0.908893	1.783	0.136
	High School Grad	24	3.583333	1.070013		
	Bachelor's Degree	40	4.1125	0.674513		
	Master's Degree	17	3.941176	0.99816		
	PhD	23	4.021739	0.648044		
Fear of Disease	Primary School Grad	24	3.930556	0.851138	1.507	0.204
	High School Grad	24	3.541667	0.910553		
	Bachelor's Degree	40	3.708333	0.884135		
	Master's Degree	17	3.235294	1.273472		
	PhD	23	3.463768	1.108913		
Fear of Scarcity	Primary School Grad	24	3.722222	0.899096	1.609	0.176
	High School Grad	24	3.583333	0.902225		
	Bachelor's Degree	40	3.366667	0.917696		
	Master's Degree	17	3.019608	1.139387		
	PhD	23	3.565217	1.002193		

Table 24. ANOVA Analysis Results of Education Level by Covid Effect Section in Germany

Scales	Education Level	N	Mean	Std. Dev.	F	p
Social Distancing	Primary School Grad	30	4	0.694808	0.320129	0.863959
	High School Grad	21	3.904762	0.735171		
	Bachelor's Degree	24	4.041667	0.624094		
	Master's Degree	13	3.846154	0.515777		
	PhD	24	3.875	0.740887		
Fear of Disease	Primary School Grad	30	3.522222	1.023417	0.616327	0.651819
	High School Grad	21	3.793651	0.812925		
	Bachelor's Degree	24	3.597222	0.987747		
	Master's Degree	13	3.358974	1.125969		
	PhD	24	3.388889	1.010413		
Fear of Scarcity	Primary School Grad	30	3.511111	0.856498	0.972616	0.425726
	High School Grad	21	3.555556	0.83887		
	Bachelor's Degree	24	3.680556	0.965487		
	Master's Degree	13	3.076923	0.9245		
	PhD	24	3.444444	0.981307		

As shown in Table 23 and Table 24, it can be argued that the difference between the Social Distancing and Education Level means is not statistically significant. This implication can be applied to the Fear of Disease and Fear of Scarcity samples since the p-value is higher than 0.05 in those scales.

As for Germany, there is no statistically significant difference between Covid Effect category factors and education level, since the p-value is higher than 0.05 for all those factors.

Table 25. ANOVA Analysis Results of Age by Covid Effect Section in Turkey

Scales	Age	N	Mean	Std. Dev.	F	p
Social Distancing	18-25	31	3.887097	1.054433	0.533558	0.660112
	26-35	36	3.805556	0.830471		
	36-49	28	3.875	0.845741		
	50-64	33	4.060606	0.693244		
Fear of Disease	18-25	31	3.27957	1.088991	1.589345	0.195345
	26-35	36	3.722222	1.061595		
	36-49	28	3.761905	0.892848		
	50-64	33	3.676768	0.863957		
Fear of Scarcity	18-25	31	3.172043	1.111792	2.185022	0.093148
	26-35	36	3.361111	0.9706		
	36-49	28	3.595238	0.922321		
	50-64	33	3.737374	0.789504		

Table 26. ANOVA Analysis Results of Age by Covid Effect Section in Germany

Scales	Age	N	Mean	Std. Dev.	F	p
Social Distancing	18-25	21	3.809524	0.798063	0.563271	0.640396
	26-35	25	4.06	0.681909		
	36-49	29	3.913793	0.655594		
	50-64	37	3.972973	0.611759		
Fear of Disease	18-25	21	3.603175	0.91055	1.456711	0.23048
	26-35	25	3.68	0.802081		
	36-49	29	3.218391	1.088453		
	50-64	37	3.666667	1.024394		
Fear of Scarcity	18-25	21	3.47619	1.046536	0.520454	0.669105
	26-35	25	3.64	0.751049		
	36-49	29	3.333333	1.050321		
	50-64	37	3.522523	0.829772		

As shown in Table 25 and Table 26, it can be argued that the difference between the Social Distancing and Age means is not statistically significant. This implication can be applied to the Fear of Disease and Fear of Scarcity samples since the p-value is higher than 0.05 in those scales.

As for Germany, there is no statistically significant difference between Covid Effect category factors and age, since the p-value is higher than 0.05 for all those factors.

Table 27. ANOVA Analysis Results of Occupation by Covid Effect Section in Turkey

Scales	Occupation	N	Mean	Std. Dev.	F	p
Social Distancing	Student	25	3.74	1.090871	0.864187	0.523428
	Public Sector Employee	20	4.025	0.697269		
	Private Sector Employee	52	4.019231	0.79188		
	Employer	14	3.678571	0.952873		
	Housewife	8	3.6875	0.703943		
	Retired	4	4.375	0.478714		
	Unemployed	5	3.7	0.974679		
Fear of Disease	Student	25	3.36	1.06684	1.287175	0.268169
	Public Sector Employee	20	4.1	0.649786		
	Private Sector Employee	52	3.589744	1.038718		
	Employer	14	3.690476	0.851989		
	Housewife	8	3.458333	1.125992		
	Retired	4	3.583333	1.101346		
	Unemployed	5	3.2	1.145038		
Fear of Scarcity	Student	25	3.373333	1.163965	1.224913	0.298202
	Public Sector Employee	20	3.883333	0.53284		
	Private Sector Employee	52	3.333333	1.037426		
	Employer	14	3.738095	0.797202		
	Housewife	8	3.375	0.880791		
	Retired	4	3.416667	0.833333		
	Unemployed	5	3	0.942809		

Table 28. ANOVA Analysis Results of Occupation by Covid Effect Section in Germany

Scales	Occupation	N	Mean	Std. Dev.	F	p
Social Distancing	Student	17	3.823529	0.789406	0.733974	0.623334
	Public Sector Employee	23	4	0.639602		
	Private Sector Employee	52	3.951923	0.687847		
	Employer	15	3.933333	0.593617		
	Housewife	2	4.25	0.353553		
	Retired	1	3			
	Unemployed	2	4.5	0		
Fear of Disease	Student	17	3.647059	0.711713	1.059107	0.391929
	Public Sector Employee	23	3.73913	0.703214		
	Private Sector Employee	52	3.448718	1.135455		
	Employer	15	3.533333	1.029717		
	Housewife	2	4.166667	0.235702		
	Retired	1	1.666667			
	Unemployed	2	3.166667	1.178511		
Fear of Scarcity	Student	17	3.54902	1.04044	0.275264	0.947436
	Public Sector Employee	23	3.608696	0.664026		
	Private Sector Employee	52	3.416667	0.972106		
	Employer	15	3.466667	0.957841		
	Housewife	2	4	0.471405		
	Retired	1	3.666667			
	Unemployed	2	3.166667	1.649916		

As shown in Table 27 and Table 28, it can be argued that the difference between the Social Distancing and Occupation means is not statistically significant. This implication can be applied to Fear of Disease and Fear of Scarcity samples since the p-value is higher than 0.05.

As for Germany, there is no statistically significant difference between Covid Effect category factors and occupations, since the p-value is higher than 0.05 for all those factors.

Table 29. ANOVA Analysis Results of Perceived Income Level by Covid Effect Section in Turkey

Scales	Education Level	N	Mean	Std. Dev.	F	p
Social Distancing	Low Income	12	4.208333	0.541812	1.235596	0.299326
	Low-Middle Income	28	4.017857	0.775578		
	Middle Income	47	3.755319	1.020828		
	Middle-High Income	26	4.038462	0.581774		
	High Income	15	3.7	0.996422		
Fear of Disease	Low Income	12	3.75	1.016282	1.923203	0.110746
	Low-Middle Income	28	3.404762	1.019792		
	Middle Income	47	3.546099	1.068715		
	Middle-High Income	26	3.538462	0.980145		
	High Income	15	4.222222	0.348845		
Fear of Scarcity	Low Income	12	3.555556	0.998315	1.588457	0.181576
	Low-Middle Income	28	3.47619	1.108993		
	Middle Income	47	3.269504	0.861518		
	Middle-High Income	26	3.461538	1.107858		
	High Income	15	3.977778	0.541407		

Table 30. ANOVA Analysis Results of Perceived Income Level by Covid Effect Section in Germany

Scales	Education Level	N	Mean	Std. Dev.	F	p
Social Distancing	Low Income	10	4.25	0.540062	0.778818	0.541351
	Low-Middle Income	27	3.888889	0.711625		
	Middle Income	32	3.859375	0.795495		
	Middle-High Income	27	4.018519	0.562985		
	High Income	16	3.90625	0.583631		
Fear of Disease	Low Income	10	3.7	0.760929	2.564031	0.042422
	Low-Middle Income	27	3.641975	0.928771		
	Middle Income	32	3.25	1.170118		
	Middle-High Income	27	3.382716	0.932342		
	High Income	16	4.125	0.582142		
Fear of Scarcity	Low Income	10	3.633333	0.760929	1.844026	0.12574
	Low-Middle Income	27	3.679012	0.849743		
	Middle Income	32	3.239583	1.054889		
	Middle-High Income	27	3.333333	0.901091		
	High Income	16	3.854167	0.677345		

As shown in Table 29 and Table 30, it can be argued that the difference between the Social Distancing and Perceived Income Level means is not statistically significant. This implication can be applied to Fear of Disease and Fear of Scarcity samples since the p-value is higher than 0.05.

As for Germany, there is no statistically significant difference between social distancing or fear of scarcity factors and education level, since the p-value is higher than 0.05 for all those factors. However, the p-value for Fear of Disease is lower than 0.05. So, it can be argued that there is a significant difference between Income Level and Fear of Disease. Furthermore, it can be claimed that participants who believe that they earn high income have been influenced by Fear of Disease significantly more than other participants.

Table 31. Independent t-test Analysis Results of Gender by Covid Effect Section in Turkey

Scales	Gender	N	Mean	Std. Dev.	Significance (One-sided p)
Social Distancing	Female	51	3.901961	0.836777198	0.481740409
	Male	77	3.909091	0.876323333	
Fear of Disease	Female	51	3.843137	0.844203612	0.015704674
	Male	77	3.458874	1.056916735	
Fear of Scarcity	Female	51	3.627451	0.860612337	0.059643807
	Male	77	3.354978	1.02360683	

Table 32. Independent t-test Analysis Results of Gender by Covid Effect Section in Germany

Scales	Gender	N	Mean	Std. Dev.	Significance (One-sided p)
Social Distancing	Female	51	3.980392	0.670528	0.313566589
	Male	61	3.918033	0.678112	
Fear of Disease	Female	51	3.529412	1.024536	0.452284478
	Male	61	3.551913	0.954299	
Fear of Scarcity	Female	51	3.51634	0.902623	0.395052088
	Male	61	3.469945	0.927715	

As shown in Table 31 and Table 32, it can be argued that the difference between the Social Distancing and Gender means is not statistically significant. This implication can be applied to the Fear of Scarcity sample since the significance p-value is higher than 0.05. However, the significance p-value for the Fear of Disease sample is lower than 0.05. Hence, it can be argued that there is a significant

difference between Gender and Fear of Disease. Furthermore, it can be claimed that females have been influenced by Fear of Disease significantly more than males.

As for Germany, it also can be argued that the difference between all factors and gender is not statistically significant, since the significance p-value is higher than 0.05.

Table 33. Independent t-test Analysis Results of Marital Status by Covid Effect Section in Turkey

Scales	Gender	N	Mean	Std. Dev.	Significance (One-sided p)
Social Distancing	Married	63	4.031746	0.723304557	0.051644892
	Single	65	3.784615	0.960018029	
Fear of Disease	Married	63	3.698413	0.897456153	0.166970376
	Single	65	3.528205	1.07673037	
Fear of Scarcity	Married	63	3.608466	0.887062897	0.047725495
	Single	65	3.323077	1.027350338	

Table 34. Independent t-test Analysis Results of Marital Status by Covid Effect Section in Germany

Scales	Gender	N	Mean	Std. Dev.	Significance (One-sided p)
Social Distancing	Married	60	3.991667	0.600082386	0.223419196
	Single	52	3.894231	0.749748575	
Fear of Disease	Married	60	3.644444	0.95248049	0.118013345
	Single	52	3.423077	1.01216002	
Fear of Scarcity	Married	60	3.533333	0.816957748	0.300406732
	Single	52	3.442308	1.017753419	

As shown in Table 33 and Table 34, it can be argued that the difference between the Social Distancing and Marital Status means is not statistically significant, with a slight difference ( $p=0.05164$ ). This implication can be applied to the Fear of Disease sample since the significance p-value is higher than 0.05. However, the significance p-value for the Fear of Scarcity sample is lower than 0.05. Hence, it can be argued that there is a significant difference between Marital Status and Fear of Scarcity. Furthermore, it can be claimed that married participants have been influenced by Fear of Scarcity significantly more than single participants.

As for Germany, it also can be argued that the difference between all factors and marital status is not statistically significant, since the significance p-value is higher than 0.05.

#### 4.3.2 Analyses regarding the online shopping section

Table 35. ANOVA Analysis Results of Education Level by Online Shopping Section in Turkey

Scales	Education Level	N	Mean	Std. Dev.	F	p
Utilitarian Behavior	Primary School Grad	24	3.225	0.996188	0.634	0.639
	High School Grad	24	3.416667	0.866611		
	Bachelor's Degree	40	3.565	0.912464		
	Master's Degree	17	3.305882	0.93037		
	PhD	23	3.504348	0.87567		
Hedonic Behavior	Primary School Grad	24	3.857143	0.576068	5.529	<0.001
	High School Grad	24	3.255952	0.955049		
	Bachelor's Degree	40	3.171429	0.93605		
	Master's Degree	17	3.226891	1.083337		
	PhD	23	3.993789	0.480565		
Convenience	Primary School Grad	24	3.658333	0.614263	4.894	0.001
	High School Grad	24	3.733333	0.681856		
	Bachelor's Degree	40	4.25	0.565232		
	Master's Degree	17	4.070588	0.582843		
	PhD	23	3.921739	0.558371		
Sustainability	Primary School Grad	24	3.777778	1.257506	0.256	0.906
	High School Grad	24	3.444444	1.20252		
	Bachelor's Degree	40	3.616667	1.041996		
	Master's Degree	17	3.529412	1.118399		
	PhD	23	3.623188	1.379153		
Digitalism	Primary School Grad	24	3.576389	0.890068	0.824	0.512
	High School Grad	24	3.472222	0.90845		
	Bachelor's Degree	40	3.445833	0.726373		
	Master's Degree	17	3.333333	0.935414		
	PhD	23	3.152174	0.93327		
Ease of Payment	Primary School Grad	24	3.680556	1.019042	1.656	0.165
	High School Grad	24	3.916667	0.835504		
	Bachelor's Degree	40	4	0.704078		
	Master's Degree	17	4.039216	0.744259		
	PhD	23	3.507246	1.058251		
Reliability	Primary School Grad	24	3.933333	0.684402	0.553	0.697
	High School Grad	24	3.683333	0.634971		
	Bachelor's Degree	40	3.68	0.748057		
	Master's Degree	17	3.776471	0.64762		
	PhD	23	3.773913	0.798417		

Table 36. ANOVA Analysis Results of Education Level by Online Shopping Section in Germany

Scales	Education Level	N	Mean	Std. Dev.	F	p
Utilitarian Behavior	Primary School Grad	30	3.36	0.950354	0.312067	0.869368
	High School Grad	21	3.27619	1.05731		
	Bachelor's Degree	24	3.408333	0.933398		
	Master's Degree	13	3.646154	0.993827		
	PhD	24	3.425	0.936808		
Hedonic Behavior	Primary School Grad	30	3.490476	0.755634	0.496566	0.738273
	High School Grad	21	3.428571	0.902378		
	Bachelor's Degree	24	3.482143	0.975123		
	Master's Degree	13	3.395604	1.018793		
	PhD	24	3.732143	0.795186		
Convenience	Primary School Grad	30	4.046667	0.646867	0.760332	0.553361
	High School Grad	21	3.92381	0.682572		
	Bachelor's Degree	24	4.208333	0.54527		
	Master's Degree	13	3.984615	0.435596		
	PhD	24	4.066667	0.440026		
Sustainability	Primary School Grad	30	3.877778	1.182514	0.487411	0.744947
	High School Grad	21	3.904762	1.140871		
	Bachelor's Degree	24	3.694444	1.239123		
	Master's Degree	13	4.102564	1.125336		
	PhD	24	3.597222	1.303949		
Digitalism	Primary School Grad	30	3.305556	0.946948	0.31996	0.864073
	High School Grad	21	3.412698	0.860586		
	Bachelor's Degree	24	3.256944	0.995132		
	Master's Degree	13	3.282051	0.785825		
	PhD	24	3.097222	1.108723		
Ease of Payment	Primary School Grad	30	3.344444	0.95686	0.1892	0.943579
	High School Grad	21	3.492063	0.749956		
	Bachelor's Degree	24	3.430556	1.056286		
	Master's Degree	13	3.589744	0.840567		
	PhD	24	3.375	1.091524		
Reliability	Primary School Grad	30	3.54	0.726161	0.662293	0.619542
	High School Grad	21	3.628571	0.61412		
	Bachelor's Degree	24	3.325	0.82317		
	Master's Degree	13	3.323077	0.900142		
	PhD	24	3.558333	0.852575		

As shown in Table 35 and Table 36, it can be argued that there is no significant difference in utilitarian behavior, sustainability, digitalism, ease of payment, or reliability in terms of education level, since the p-value is higher than 0.05 in those scales. However, there is a significant difference in hedonic behavior

and convenience in terms of educational level. Moreover, it can be claimed that Ph.D. graduates show hedonic behavior in online shopping more than other graduation levels. Also, participants who have bachelor's degrees attach more importance to convenience than other graduation levels.

As for Germany, it can be argued that the difference between all factors and education level is not statistically significant, since the p-value is higher than 0.05.

Table 37. ANOVA Analysis Results of Age by Online Shopping Section in Turkey

Scales	Age	N	Mean	Std. Dev.	F	p
Utilitarian Behavior	18-25	31	3.406452	0.886166	0.615486	0.606226
	26-35	36	3.405556	0.939892		
	36-49	28	3.621429	0.9227		
	50-64	33	3.309091	0.90842		
Hedonic Behavior	18-25	31	3.129032	1.026423	2.96558	0.034694
	26-35	36	3.396825	0.878052		
	36-49	28	3.637755	0.944797		
	50-64	33	3.731602	0.629583		
Convenience	18-25	31	4.051613	0.661247	0.415904	0.741884
	26-35	36	3.877778	0.694925		
	36-49	28	3.971429	0.607885		
	50-64	33	3.951515	0.576694		
Sustainability	18-25	31	3.494624	1.14462	0.197341	0.898036
	26-35	36	3.62037	1.036333		
	36-49	28	3.571429	1.375438		
	50-64	33	3.717172	1.205085		
Digitalism	18-25	31	3.354839	0.816204	0.20502	0.892759
	26-35	36	3.481481	0.862608		
	36-49	28	3.446429	0.847477		
	50-64	33	3.343434	0.926968		
Ease of Payment	18-25	31	3.935484	0.674506	0.215946	0.885188
	26-35	36	3.842593	0.954475		
	36-49	28	3.833333	0.936239		
	50-64	33	3.757576	0.936426		
Reliability	18-25	31	3.56129	0.681996	1.274496	0.286125
	26-35	36	3.888889	0.668379		
	36-49	28	3.814286	0.736214		
	50-64	33	3.751515	0.741671		

Table 38. ANOVA Analysis Results of Age by Online Shopping Section in Germany

Scales	Age	N	Mean	Std. Dev.	F	p
Utilitarian Behavior	18-25	21	3.257143	1.050986	0.2202	0.882191
	26-35	25	3.464	0.838093		
	36-49	29	3.455172	1.047305		
	50-64	37	3.4	0.935711		
Hedonic Behavior	18-25	21	3.530612	1.007262	0.118545	0.949037
	26-35	25	3.594286	0.851849		
	36-49	29	3.453202	0.817153		
	50-64	37	3.509653	0.858821		
Convenience	18-25	21	4.028571	0.670181	0.400305	0.753054
	26-35	25	3.992	0.564151		
	36-49	29	4.151724	0.538928		
	50-64	37	4.037838	0.54942		
Sustainability	18-25	21	3.809524	1.167007	0.155095	0.926203
	26-35	25	3.906667	1.090871		
	36-49	29	3.689655	1.353804		
	50-64	37	3.837838	1.193143		
Digitalism	18-25	21	3.436508	0.881092	0.447283	0.719722
	26-35	25	3.286667	0.98074		
	36-49	29	3.293103	0.972494		
	50-64	37	3.13964	0.973819		
Ease of Payment	18-25	21	3.634921	0.82263	0.531244	0.661801
	26-35	25	3.293333	0.963789		
	36-49	29	3.448276	1.070068		
	50-64	37	3.378378	0.9235		
Reliability	18-25	21	3.542857	0.707511	0.111504	0.953213
	26-35	25	3.536	0.718146		
	36-49	29	3.468966	0.88685		
	50-64	37	3.443243	0.779081		

As shown in Table 37 and Table 38, it can be argued that there is no significant difference in utilitarian behavior, convenience, sustainability, digitalism, ease of payment, and reliability in terms of age, since the p-value is higher than 0.05 in those scales. However, there is a statistically significant difference between hedonic behavior and age. ( $p < 0.05$ ) Moreover, it can be claimed that participants between the ages of 50-64 show hedonic behavior in online shopping more than in other age ranges.

As for Germany, it can be argued that the difference between all factors and age is not statistically significant, since the significance p-value is higher than 0.05.

Table 39. ANOVA Analysis Results of Occupation by Online Shopping Section in Turkey

Scales	Occupation	N	Mean	Std. Dev.	F	p
Utilitarian Behavior	Student	25	3.416	0.92181	0.749045	0.611323
	Public Sector Employee	20	3.66	0.768046		
	Private Sector Employee	52	3.434615	0.969917		
	Employer	14	3.414286	0.981253		
	Housewife	8	2.975	0.864787		
	Retired	4	3.7	0.774597		
	Unemployed	5	3.04	0.792465		
Hedonic Behavior	Student	25	3.074286	1.156996	2.730987	0.015962
	Public Sector Employee	20	3.957143	0.412219		
	Private Sector Employee	52	3.453297	0.880504		
	Employer	14	3.714286	0.683972		
	Housewife	8	3.678571	0.747201		
	Retired	4	3.321429	0.663684		
	Unemployed	5	2.8	0.977293		
Convenience	Student	25	3.944	0.612427	0.641084	0.69714
	Public Sector Employee	20	3.99	0.521031		
	Private Sector Employee	52	4.034615	0.633349		
	Employer	14	3.871429	0.734249		
	Housewife	8	3.775	0.759229		
	Retired	4	4.1	0.840635		
	Unemployed	5	3.56	0.669328		
Sustainability	Student	25	3.466667	1.150684	0.606965	0.724334
	Public Sector Employee	20	4	0.991189		
	Private Sector Employee	52	3.615385	1.115126		
	Employer	14	3.547619	1.566787		
	Housewife	8	3.458333	1.602949		
	Retired	4	3.083333	0.876652		
	Unemployed	5	3.4	1.01105		
Digitalism	Student	25	3.34	0.871992	1.094983	0.369316
	Public Sector Employee	20	3.4	0.96488		
	Private Sector Employee	52	3.439103	0.853053		
	Employer	14	3.833333	0.701037		
	Housewife	8	2.979167	0.919099		
	Retired	4	3.083333	0.907785		
	Unemployed	5	3.2	0.431406		
Ease of Payment	Student	25	3.986667	0.690411	0.301654	0.934984
	Public Sector Employee	20	3.766667	0.879261		
	Private Sector Employee	52	3.846154	0.999916		
	Employer	14	3.690476	0.861962		
	Housewife	8	3.666667	1.007905		
	Retired	4	4.083333	0.787636		
	Unemployed	5	3.866667	0.380058		
Reliability	Student	25	3.592	0.712928	0.759711	0.602967
	Public Sector Employee	20	3.77	0.570411		
	Private Sector Employee	52	3.880769	0.698749		
	Employer	14	3.642857	0.773319		
	Housewife	8	3.725	0.70862		
	Retired	4	3.4	1.296148		
	Unemployed	5	3.92	0.672309		

Table 40. ANOVA Analysis Results of Occupation by Online Shopping Section in Germany

Scales	Occupation	N	Mean	Std. Dev.	F	p
Utilitarian Behavior	Student	17	3.117647	1.08411	1.153825	0.336806
	Public Sector Employee	23	3.747826	0.716602		
	Private Sector Employee	52	3.419231	0.943302		
	Employer	15	3.2	1.025392		
	Housewife	2	3.6	1.697056		
	Retired	1	2.2			
	Unemployed	2	3.3	1.555635		
Hedonic Behavior	Student	17	3.588235	0.97531	0.399825	0.877664
	Public Sector Employee	23	3.583851	0.752131		
	Private Sector Employee	52	3.461538	0.872237		
	Employer	15	3.52381	0.945554		
	Housewife	2	4.071429	0.303046		
	Retired	1	2.571429			
	Unemployed	2	3.5	1.515229		
Convenience	Student	17	4.023529	0.651469	0.167024	0.984989
	Public Sector Employee	23	4.078261	0.541846		
	Private Sector Employee	52	4.046154	0.605356		
	Employer	15	4.053333	0.462704		
	Housewife	2	4.4	0.848528		
	Retired	1	3.8			
	Unemployed	2	4.1	0.141421		
Sustainability	Student	17	3.901961	1.300452	0.596122	0.732822
	Public Sector Employee	23	4.086957	0.916831		
	Private Sector Employee	52	3.730769	1.19738		
	Employer	15	3.622222	1.424651		
	Housewife	2	2.833333	2.592725		
	Retired	1	3.666667			
	Unemployed	2	4.333333	0		
Digitalism	Student	17	3.480392	0.875758	0.943359	0.467459
	Public Sector Employee	23	3.057971	1.073803		
	Private Sector Employee	52	3.185897	0.95922		
	Employer	15	3.488889	0.862505		
	Housewife	2	4	0.471405		
	Retired	1	2.666667			
	Unemployed	2	3.916667	0.353553		
Ease of Payment	Student	17	3.764706	0.684802	1.336375	0.247616
	Public Sector Employee	23	3.478261	0.994053		
	Private Sector Employee	52	3.320513	0.98786		
	Employer	15	3.311111	0.995758		
	Housewife	2	4.166667	0.235702		
	Retired	1	1.666667			
	Unemployed	2	3.666667	0		
Reliability	Student	17	3.435294	0.65664	0.302901	0.934154
	Public Sector Employee	23	3.478261	0.781		
	Private Sector Employee	52	3.526923	0.798065		
	Employer	15	3.44	0.938692		
	Housewife	2	3.7	0.424264		
	Retired	1	2.6			
	Unemployed	2	3.7	0.141421		

As shown in Table 39 and Table 40, it can be argued that there is no significant difference in utilitarian behavior, sustainability, digitalism, ease of payment, or reliability in terms of education level, since the p-value is higher than 0.05 in those scales. However, there is a significant difference in hedonic behavior in terms of occupation. Furthermore, it can be claimed that public sector employees show hedonic behavior in online shopping more than in other occupations.

Table 41. ANOVA Analysis Results of Perceived Income Level by Online Shopping Section in Turkey

Scales	Education Level	N	Mean	Std. Dev.	F	p
Utilitarian Behavior	Low Income	12	3.833333	0.637229	1.790076	0.135059
	Low-Middle Income	28	3.264286	0.938168		
	Middle Income	47	3.519149	0.864427		
	Middle-High Income	26	3.492308	0.926466		
	High Income	15	3.013333	1.054153		
Hedonic Behavior	Low Income	12	3.238095	1.154701	1.730179	0.147565
	Low-Middle Income	28	3.510204	0.702472		
	Middle Income	47	3.291793	0.980266		
	Middle-High Income	26	3.615385	0.863566		
	High Income	15	3.895238	0.65123		
Convenience	Low Income	12	3.75	0.505425	1.935565	0.108712
	Low-Middle Income	28	4	0.581187		
	Middle Income	47	4.07234	0.708244		
	Middle-High Income	26	4.007692	0.532108		
	High Income	15	3.613333	0.656687		
Sustainability	Low Income	12	4.027778	0.989422	1.003568	0.408439
	Low-Middle Income	28	3.619048	1.24297		
	Middle Income	47	3.638298	1.074136		
	Middle-High Income	26	3.602564	1.162447		
	High Income	15	3.133333	1.473577		
Digitalism	Low Income	12	3.555556	0.959623	1.206654	0.311443
	Low-Middle Income	28	3.577381	0.852836		
	Middle Income	47	3.343972	0.823422		
	Middle-High Income	26	3.487179	0.728656		
	High Income	15	3.033333	1.056349		
Ease of Payment	Low Income	12	4.166667	0.502519	2.844224	0.02692
	Low-Middle Income	28	3.928571	0.766356		
	Middle Income	47	3.900709	0.919239		
	Middle-High Income	26	3.871795	0.843679		
	High Income	15	3.177778	1.006855		
Reliability	Low Income	12	3.95	0.822966	0.798178	0.528582
	Low-Middle Income	28	3.628571	0.709124		
	Middle Income	47	3.838298	0.682245		
	Middle-High Income	26	3.638462	0.777728		
	High Income	15	3.8	0.570714		

Table 42. ANOVA Analysis Results of Perceived Income Level by Online Shopping Section in Germany

Scales	Education Level	N	Mean	Std. Dev.	F	p
Utilitarian Behavior	Low Income	10	3.98	0.739068	1.820299	0.130223
	Low-Middle Income	27	3.340741	0.987327		
	Middle Income	32	3.2375	1.022883		
	Middle-High Income	27	3.6	0.848528		
	High Income	16	3.1375	0.962549		
Hedonic Behavior	Low Income	10	3.7	0.817745	0.608685	0.657248
	Low-Middle Income	27	3.544974	0.781494		
	Middle Income	32	3.526786	0.952069		
	Middle-High Income	27	3.31746	0.937893		
	High Income	16	3.678571	0.753224		
Convenience	Low Income	10	4.1	0.518545	1.009176	0.406119
	Low-Middle Income	27	3.918519	0.605765		
	Middle Income	32	4.15	0.576978		
	Middle-High Income	27	3.977778	0.509399		
	High Income	16	4.2	0.615359		
Sustainability	Low Income	10	4.533333	0.322031	2.242925	0.069193
	Low-Middle Income	27	3.703704	1.301982		
	Middle Income	32	3.8125	1.241278		
	Middle-High Income	27	4	1.02948		
	High Income	16	3.208333	1.327069		
Digitalism	Low Income	10	3.583333	0.850744	0.642904	0.633073
	Low-Middle Income	27	3.320988	0.893861		
	Middle Income	32	3.239583	1.037761		
	Middle-High Income	27	3.296296	0.932936		
	High Income	16	2.989583	0.993439		
Ease of Payment	Low Income	10	3.833333	0.477907	0.549009	0.700129
	Low-Middle Income	27	3.419753	0.819592		
	Middle Income	32	3.40625	1.06335		
	Middle-High Income	27	3.382716	0.9505		
	High Income	16	3.291667	1.153898		
Reliability	Low Income	10	3.52	0.626808	1.623481	0.17364
	Low-Middle Income	27	3.637037	0.817194		
	Middle Income	32	3.60625	0.795932		
	Middle-High Income	27	3.17037	0.824068		
	High Income	16	3.525	0.545894		

As shown in Table 41 and Table 42, it can be argued that there is no significant difference in utilitarian behavior, hedonic behavior, sustainability, digitalism, and reliability in terms of perceived income level, since the p-value is higher than 0.05 in those scales. However, there is a significant difference in ease of payment in terms of income. Moreover, it can be claimed that participants give more importance to ease of payment as the perceived income level decreases.

As for Germany, it also can be argued that the difference between all factors and perceived income level is not statistically significant, since the significance p-value is higher than 0.05.

Table 43. Independent Samples t-test Analysis Results of Gender by Online Shopping Section in Turkey

Scales	Gender	N	Mean	Std. Dev.	Significance(One-sided p)
Utilitarian Behavior	Female	51	3.282353	0.874689861	0.070672582
	Male	77	3.524675	0.927383961	
Hedonic Behavior	Female	51	3.722689	0.675768204	0.004623656
	Male	77	3.304267	0.986849801	
Convenience	Female	51	3.85098	0.658292503	0.058084817
	Male	77	4.031169	0.612213357	
Sustainability	Female	51	3.633987	1.23514264	0.408128857
	Male	77	3.584416	1.140887933	
Digitalism	Female	51	3.5	0.845248156	0.161391714
	Male	77	3.34632	0.865504549	
Ease of Payment	Female	51	3.69281	0.826890124	0.059986032
	Male	77	3.939394	0.901148184	
Reliability	Female	51	3.760784	0.649947208	0.484685067
	Male	77	3.755844	0.748769782	

Table 44. Independent Samples t-test Analysis Results of Gender by Online Shopping Section in Germany

Scales	Gender	N	Mean	Std. Dev.	Significance(One-sided p)
Utilitarian Behavior	Female	51	3.396078	1.005178747	0.477161337
	Male	61	3.406557	0.924458193	
Hedonic Behavior	Female	51	3.481793	0.946297095	0.344416136
	Male	61	3.548009	0.799311067	
Convenience	Female	51	4.070588	0.572466285	0.398578077
	Male	61	4.042623	0.571681443	
Sustainability	Female	51	3.784314	1.214401598	0.419787556
	Male	61	3.830601	1.191983953	
Digitalism	Female	51	3.199346	0.940460648	0.244187676
	Male	61	3.325137	0.964377668	
Ease of Payment	Female	51	3.366013	1.002784793	0.273024366
	Male	61	3.47541	0.907701649	
Reliability	Female	51	3.384314	0.804828565	0.095284251
	Male	61	3.577049	0.74215754	
Social Distancing	Female	51	3.980392	0.670528033	0.313566589
	Male	61	3.918033	0.678112133	
Fear of Disease	Female	51	3.529412	1.024535603	0.452284478
	Male	61	3.551913	0.954298746	
Fear of Scarcity	Female	51	3.51634	0.902622661	0.395052088
	Male	61	3.469945	0.927715332	

As shown in Table 43 and Table 44, it can be argued that there is not a statistically significant difference in utilitarian behavior, convenience, sustainability, digitalism, ease of payment, and reliability in terms of gender, since the significance p-value is higher than 0.05. However, the significance p-value for the hedonic behavior sample is lower than 0.05, so it can be argued that there is a significant difference between gender and hedonic behavior. Moreover, it can be argued that female participants show hedonic behavior when shopping online, more than male participants.

As for Germany, it also can be argued that the difference between all factors and gender is not statistically significant, since the significance p-value is higher than 0.05.

Table 45. Independent Samples t-test Analysis Results of Marital Status by Online Shopping Section in Turkey

Scales	Gender	N	Mean	Std. Dev.	Significance(One-sided p)
Utilitarian Behavior	Married	63	3.368254	0.896017244	0.233189942
	Single	65	3.486154	0.928688074	
Hedonic Behavior	Married	63	3.75737	0.671842661	0.000143016
	Single	65	3.193407	1.000456136	
Convenience	Married	63	3.926984	0.648871564	0.285870638
	Single	65	3.990769	0.623929853	
Sustainability	Married	63	3.613757	1.221384063	0.46399017
	Single	65	3.594872	1.137266929	
Digitalism	Married	63	3.584656	0.808153464	0.010408216
	Single	65	3.235897	0.87494658	
Ease of Payment	Married	63	3.825397	0.909640015	0.421225629
	Single	65	3.85641	0.851814303	
Reliability	Married	63	3.75873	0.676955929	0.494278113
	Single	65	3.756923	0.742876426	

As shown in Table 45 and Table 46, it can be argued that there is not a statistically significant difference in utilitarian behavior, convenience, sustainability, ease of payment, and reliability in terms of marital status, since the significance p-value is higher than 0.05. However, the significance p-value for hedonic behavior

and digitalism samples is lower than 0.05, so it can be argued that there is a significant difference between gender and both hedonic behavior and digitalism. Moreover, it can be argued that married participants show hedonic behavior when shopping online, more than single participants. Also, married participants give more importance to digitalism than single participants when shopping online.

Table 46. Independent Samples t-test Analysis Results of Marital Status by Online Shopping Section in Germany

Scales	Gender	N	Mean	Std. Dev.	Significance(One-sided p)
Utilitarian Behavior	Married	60	3.5	0.946357871	0.122712803
	Single	52	3.288462	0.96723861	
Hedonic Behavior	Married	60	3.642857	0.757072042	0.050019366
	Single	52	3.373626	0.963999375	
Convenience	Married	60	4.1	0.51617892	0.187678268
	Single	52	4.003846	0.626838172	
Sustainability	Married	60	3.822222	1.253945437	0.452327831
	Single	52	3.794872	1.139800552	
Digitalism	Married	60	3.4	0.912974073	0.057371783
	Single	52	3.115385	0.980495218	
Ease of Payment	Married	60	3.544444	0.859129912	0.077805395
	Single	52	3.288462	1.035384526	
Reliability	Married	60	3.5	0.721110255	0.437881641
	Single	52	3.476923	0.837506894	
Social Distancing	Married	60	3.991667	0.600082386	0.223419196
	Single	52	3.894231	0.749748575	
Fear of Disease	Married	60	3.644444	0.95248049	0.118013345
	Single	52	3.423077	1.01216002	
Fear of Scarcity	Married	60	3.533333	0.816957748	0.300406732
	Single	52	3.442308	1.017753419	

As for Germany, it also can be argued that the difference between all factors and gender is not statistically significant, since the significance p-value is higher than 0.05. However, the p-value for hedonic behavior is lower than 0.05, so it can be argued that there is a significant difference between gender and hedonic behavior. Moreover, it can be argued that married participants show hedonic behavior when shopping online, more than single participants. In this case, it can be seen that both German and Turkish participants have related shopping patterns in terms of hedonic behavior.

#### 4.4 Pearson correlation analysis

In this section, Pearson Correlation Analysis was carried out by using the means of the answers given to the questionnaire questions on the basis of scales. While examining the results of the analysis, data with a p-value less than 0.05 were taken into account. The criteria for this analysis are as follows (Table 47, 48, and 49):

Table 47. Pearson Correlation Criteria Table

Source: [Applied Statistics for the Behavioral Sciences, 2003]

Size of Correlation	Interpretation
.90 to 1.00 (-.90 to -1.00)	Very high positive (negative) correlation
.70 to .90 (-.70 to -.90)	High positive (negative) correlation
.50 to .70 (-.50 to -.70)	Moderate positive (negative) correlation
.30 to .50 (-.30 to -.50)	Low positive (negative) correlation
.00 to .30 (.00 to -.30)	Negligible correlation

Table 48. Pearson Correlation Analysis Results in Turkey

Scales	Score	1	2	3	4	5	6	7	8	9	10
Utilitarian Behavior	rp	1	-0.0125	.364**	.579**	-0.1236	.172*	-0.0001	.296**	-0.0128	-0.0316
	p		0.4444	0.00	0.00	0.0822	0.0258	0.4996	0.0004	0.4430	0.3617
Hedonic Behavior	rp		1	-.222**	0.1310	.194*	-.366**	0.0574	0.0615	.232**	.365**
	p			0.0059	0.0703	0.0143	0.00	0.2601	0.2452	0.0042	0.00
Convenience	rp			1	.347**	-0.0065	.180*	0.1062	.190*	-.229**	-.306**
	p				0.0000	0.4711	0.0212	0.1165	0.0160	0.0046	0.0002
Sustainability	rp				1	0.1076	0.0327	0.1394	.292**	-0.1125	-0.1021
	p					0.1134	0.3569	0.0583	0.0004	0.1030	0.1258
Digitalism	rp					1	0.1338	.185*	-0.0003	0.1431	.152*
	p						0.0660	0.0185	0.4988	0.0535	0.0437
Ease of Payment	rp						1	0.0440	0.1109	-0.1347	-0.0816
	p							0.3108	0.1064	0.0648	0.1800
Reliability	rp							1	-0.0234	0.0288	0.0571
	p								0.3965	0.3735	0.2611
Social Distancing	rp								1	0.0124	-0.0801
	p									0.4446	0.1845
Fear of Disease	rp									1	.703**
	p										0.00
Fear of Scarcity	rp										1
	p										
**. Correlation is significant at the 0.01 level (1-tailed).											
*. Correlation is significant at the 0.05 level (1-tailed).											

Table 49. Pearson Correlation Analysis Results in Germany

Scales	Score	1	2	3	4	5	6	7	8	9	10
Utilitarian Behavior	rp	1	-0.0235	0.1445	.700**	-0.1482	-0.0088	-0.1208	-0.0684	-0.1428	-0.1426
	p		0.8059	0.13	0.00	0.1189	0.9269	0.2045	0.4736	0.1332	0.1337
Hedonic Behavior	rp		1	0.1204	-0.0521	.457**	.356**	.677**	-0.0636	.425**	.415**
	p			0.2062	0.5850	0.0000	0.00	0.0000	0.5056	0.0000	0.00
Convenience	rp			1	0.1618	0.1043	0.1104	0.0402	-0.0651	-0.0347	-0.0089
	p				0.0883	0.2739	0.2465	0.6739	0.4952	0.7161	0.9261
Sustainability	rp				1	-0.0163	0.0059	-0.0761	-0.0370	-.244**	-.239*
	p					0.8644	0.9507	0.4249	0.6982	0.0094	0.0112
Digitalism	rp					1	.601**	.438**	0.0755	.410**	.445**
	p						0.0000	0.0000	0.4291	0.0000	0.0000
Ease of Payment	rp						1	.291**	0.0078	.361**	.286**
	p							0.0018	0.9348	0.0001	0.0023
Reliability	rp							1	-0.1344	.369**	.392**
	p								0.1576	0.0001	0.0000
Social Distancing	rp								1	0.0125	0.0066
	p									0.8959	0.9453
Fear of Disease	rp									1	.754**
	p										0.00
Fear of Scarcity	rp										1
	p										
**. Correlation is significant at the 0.01 level (1-tailed).											
*. Correlation is significant at the 0.05 level (1-tailed).											

When analysis results are examined, it can be argued that;

- In Turkey, a low positive correlation has been found between utilitarian behavior and convenience factors.
- In Turkey, a moderate positive correlation has been found between utilitarian behavior and sustainability factors.
- In Turkey, a low negative correlation has been found between hedonic behavior and ease of payment factors.
- In Turkey, a low negative correlation has been found between hedonic behavior and fear of scarcity factors.
- In Turkey, a low positive correlation has been found between convenience and

fear of scarcity factors.

- In Turkey, a high positive correlation has been found between fear of disease and fear of scarcity factors.
- In Germany, a high positive correlation has been found between utilitarian behavior and sustainability factors.
- In Germany, a low positive correlation has been found between hedonic behavior and digitalism factors.
- In Germany, a low positive correlation has been found between hedonic behavior and ease of payment factors.
- In Germany, a low positive correlation has been found between hedonic behavior and fear of disease factors.
- In Germany, a low positive correlation has been found between hedonic behavior and fear of scarcity factors.
- In Germany, a moderate positive correlation has been found between hedonic behavior and reliability factors.
- In Germany, a moderate positive correlation has been found between digitalism and ease of payment factors.
- In Germany, a low positive correlation has been found between digitalism and ease of payment factors.
- In Germany, a low positive correlation has been found between digitalism and reliability factors.
- In Germany, a low positive correlation has been found between digitalism and fear of disease factors.
- In Germany, a low positive correlation has been found between digitalism and fear of scarcity factors.

- In Germany, a low positive correlation has been found between ease of payment and fear of disease factors.
- In Germany, a low positive correlation has been found between reliability and fear of disease factors.
- In Germany, a low positive correlation has been found between reliability and fear of scarcity factors.
- In Germany, a high positive correlation has been found between fear of scarcity and fear of disease factors.

#### 4.5 Regression analysis

In this section, simple linear regression analysis has been conducted to evaluate the predictability of the participants in terms of the Covid Effect and Online Shopping categories.

Table 50. Effect of Ease of Payment on Convenience in Turkey

	Unstandardized Coefficients		Standardized Coefficients			F	R <sup>2</sup>
	B	Std. Error	Beta	t	p		
Constant	3.460	0.250		13.857	0.000	4.204	0.032
Ease of Payment	0.130	0.063	0.180	2.050	0.042		
*Dependent Variable: Convenience							

As can be seen in the regression analysis table above (Table 50), this model is a statistically significant regression model ( $F(1,126) = 4.204$ ,  $p < 0.05$ ). Moreover, it was found that 3.2 percent of the variance in the dependent variable was explained by the independent variable ( $R^2 = 0.032$ ). In this case, the independent variable predicts the dependent variable positively and significantly ( $\beta = 0.18$ ,  $t(126) = 2.050$ ,  $p < 0.05$ ).

Table 51. Effect of Fear of Scarcity on Fear of Disease in Turkey

	Unstandardized Coefficients		Standardized Coefficients			F	R <sup>2</sup>
	B	Std. Error	Beta	t	p		
Constant	1.113	0.233		4.771	0.000	123.458	0.495
Fear of Scarcity	0.721	0.065	0.703	11.111	0.000		
*Dependent Variable: Fear of Disease							

As can be seen in the regression analysis table above (Table 51), this model is a statistically significant regression model ( $F(1,126) = 123.458$ ,  $p < 0.05$ ). Moreover, it was found that 49.5 percent of the variance in the dependent variable was explained by the independent variable ( $R^2 = 0.495$ ). In this case, the independent variable predicts the dependent variable positively and significantly ( $\beta = 0.703$ ,  $t(126) = 2.050$ ,  $p < 0.05$ ).

Table 52. Effect of Digitalism on Ease of Payment in Germany

	Unstandardized Coefficients		Standardized Coefficients			F	R <sup>2</sup>
	B	Std. Error	Beta	t	p		
Constant	1.465	0.259		5.662	0.000	62.309	0.362
Digitalism	0.600	0.076	0.601	7.894	0.000		
*Dependent Variable: Ease of Payment							

As can be seen in the regression analysis table above (Table 52), this model is a statistically significant regression model ( $F(1,111) = 62.309$ ,  $p < 0.05$ ). Moreover, it was found that 36.2 percent of the variance in the dependent variable was explained by the independent variable ( $R^2 = 0.362$ ). In this case, the independent variable predicts the dependent variable positively and significantly ( $\beta = 0.601$ ,  $t(111) = 7.894$ ,  $p < 0.05$ ).

Table 53. Effect of Fear of Disease on Hedonic Behavior in Germany

	Unstandardized Coefficients		Standardized Coefficients			F	R <sup>2</sup>
	B	Std. Error	Beta	t	p		
Constant	2.192	0.280		7.842	0.000	24.211	0.180
Fear of Disease	0.374	0.076	0.425	4.920	0.000		
*Dependent Variable: Hedonic Behavior							

As can be seen in the regression analysis table above (Table 53), this model is a statistically significant regression model ( $F(1,111) = 24.211$ ,  $p < 0.05$ ). Moreover, it was found that 18 percent of the variance in the dependent variable was explained by the independent variable ( $R^2 = 0.18$ ). In this case, the independent variable predicts the dependent variable positively and significantly ( $\beta = 0.425$ ,  $t(111) = 4.920$ ,  $p < 0.05$ ).

#### 4.6 Post-hoc analyses

Scheffe & Tukey post hoc analyses have been used since equal variances are assumed. As can be seen in the table, there are significant differences between 1 and 3 / 2 and 3. Both tests show a significant difference in convenience between primary school graduates and Bachelor's degree graduates as well as high school graduates and Bachelor's degree graduates at the 0.05 significance level.

Table 54. Convenience on Education / Scheffe Tukey / Turkey

			Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	1)Primary School	2	-0.07500	0.17290	0.993	-0.5537	0.4037
		3	-.59167*	0.15465	0.002	-1.0198	-0.1635
		4	-0.41225	0.18987	0.198	-0.9379	0.1134
		5	-0.26341	0.17477	0.560	-0.7473	0.2205
	2)High School	1	0.07500	0.17290	0.993	-0.4037	0.5537
		3	-.51667*	0.15465	0.010	-0.9448	-0.0885
		4	-0.33725	0.18987	0.392	-0.8629	0.1884
		5	-0.18841	0.17477	0.818	-0.6723	0.2955
	3)Bachelor's Degree	1	.59167*	0.15465	0.002	0.1635	1.0198
		2	.51667*	0.15465	0.010	0.0885	0.9448
		4	0.17941	0.17341	0.839	-0.3007	0.6595
		5	0.32826	0.15674	0.229	-0.1057	0.7622
	4)Master's Degree	1	0.41225	0.18987	0.198	-0.1134	0.9379
		2	0.33725	0.18987	0.392	-0.1884	0.8629
		3	-0.17941	0.17341	0.839	-0.6595	0.3007
		5	0.14885	0.19157	0.937	-0.3816	0.6793
	5)PhD	1	0.26341	0.17477	0.560	-0.2205	0.7473
		2	0.18841	0.17477	0.818	-0.2955	0.6723
		3	-0.32826	0.15674	0.229	-0.7622	0.1057
		4	-0.14885	0.19157	0.937	-0.6793	0.3816
Scheffe	1)Primary School	2	-0.07500	0.17290	0.996	-0.6158	0.4658
		3	-.59167*	0.15465	0.007	-1.0753	-0.1080
		4	-0.41225	0.18987	0.324	-1.0061	0.1816
		5	-0.26341	0.17477	0.686	-0.8100	0.2832
	2)High School	1	0.07500	0.17290	0.996	-0.4658	0.6158
		3	-.51667*	0.15465	0.029	-1.0003	-0.0330
		4	-0.33725	0.18987	0.535	-0.9311	0.2566
		5	-0.18841	0.17477	0.884	-0.7350	0.3582
	3)Bachelor's Degree	1	.59167*	0.15465	0.007	0.1080	1.0753
		2	.51667*	0.15465	0.029	0.0330	1.0003
		4	0.17941	0.17341	0.898	-0.3629	0.7218
		5	0.32826	0.15674	0.361	-0.1619	0.8185
	4)Master's Degree	1	0.41225	0.18987	0.324	-0.1816	1.0061
		2	0.33725	0.18987	0.535	-0.2566	0.9311
		3	-0.17941	0.17341	0.898	-0.7218	0.3629
		5	0.14885	0.19157	0.962	-0.4503	0.7480
	5)PhD	1	0.26341	0.17477	0.686	-0.2832	0.8100
		2	0.18841	0.17477	0.884	-0.3582	0.7350
		3	-0.32826	0.15674	0.361	-0.8185	0.1619
		4	-0.14885	0.19157	0.962	-0.7480	0.4503

\*. The mean difference is significant at the 0.05 level.

Table 55. Ease of Payment on Income / Scheffe Tukey / Turkey

			Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	1)Low Income	2	0.23810	0.29431	0.927	-0.5767	1.0529
		3	0.26596	0.27588	0.871	-0.4979	1.0298
		4	0.29487	0.29768	0.859	-0.5293	1.1191
		5	.98889*	0.33036	0.027	0.0742	1.9035
	2)Low-Middle Income	1	-0.23810	0.29431	0.927	-1.0529	0.5767
		3	0.02786	0.20363	1.000	-0.5359	0.5916
		4	0.05678	0.23231	0.999	-0.5864	0.7000
		5	0.75079	0.27293	0.052	-0.0049	1.5064
	3)Middle Income	1	-0.26596	0.27588	0.871	-1.0298	0.4979
		2	-0.02786	0.20363	1.000	-0.5916	0.5359
		4	0.02891	0.20848	1.000	-0.5483	0.6061
		5	.72293*	0.25295	0.039	0.0226	1.4233
	4)Middle-High Income	1	-0.29487	0.29768	0.859	-1.1191	0.5293
		2	-0.05678	0.23231	0.999	-0.7000	0.5864
		3	-0.02891	0.20848	1.000	-0.6061	0.5483
		5	0.69402	0.27657	0.095	-0.0717	1.4597
	5)High Income	1	-.98889*	0.33036	0.027	-1.9035	-0.0742
		2	-0.75079	0.27293	0.052	-1.5064	0.0049
		3	-.72293*	0.25295	0.039	-1.4233	-0.0226
		4	-0.69402	0.27657	0.095	-1.4597	0.0717
Scheffe	1)Low Income	2	0.23810	0.29431	0.956	-0.6824	1.1586
		3	0.26596	0.27588	0.920	-0.5969	1.1288
		4	0.29487	0.29768	0.912	-0.6361	1.2259
		5	0.98889	0.33036	0.069	-0.0443	2.0221
	2)Low-Middle Income	1	-0.23810	0.29431	0.956	-1.1586	0.6824
		3	0.02786	0.20363	1.000	-0.6090	0.6647
		4	0.05678	0.23231	1.000	-0.6698	0.7833
		5	0.75079	0.27293	0.116	-0.1028	1.6044
	3)Middle Income	1	-0.26596	0.27588	0.920	-1.1288	0.5969
		2	-0.02786	0.20363	1.000	-0.6647	0.6090
		4	0.02891	0.20848	1.000	-0.6231	0.6809
		5	0.72293	0.25295	0.093	-0.0682	1.5141
	4)Middle-High Income	1	-0.29487	0.29768	0.912	-1.2259	0.6361
		2	-0.05678	0.23231	1.000	-0.7833	0.6698
		3	-0.02891	0.20848	1.000	-0.6809	0.6231
		5	0.69402	0.27657	0.185	-0.1710	1.5590
	5)High Income	1	-0.98889	0.33036	0.069	-2.0221	0.0443
		2	-0.75079	0.27293	0.116	-1.6044	0.1028
		3	-0.72293	0.25295	0.093	-1.5141	0.0682
		4	-0.69402	0.27657	0.185	-1.5590	0.1710

\*. The mean difference is significant at the 0.05 level.

Scheffe & Tukey's post hoc analyses for differences in ease of payment show where the differences exist. Turkey test shows a significant difference between low-income / high-income and middle-income / high-income groups at the 0.05 level of significance, whereas the Scheffe test shows a significant difference between the same groups at the 0.10 level of significance (Table 54 and 55).

Table 56. Fear of Disease on Income / Games-Howell Test / Germany

		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower	Upper
1)Low Income	2	0.05802	0.29975	1.000	-0.8406	0.9567
	3	0.45000	0.31731	0.623	-0.4864	1.3864
	4	0.31728	0.30016	0.826	-0.5823	1.2168
	5	-0.42500	0.28121	0.571	-1.2896	0.4396
2)Low-Middle Income	1	-0.05802	0.29975	1.000	-0.9567	0.8406
	3	0.39198	0.27338	0.609	-0.3782	1.1622
	4	0.25926	0.25327	0.843	-0.4564	0.9749
	5	-0.48302	0.23050	0.242	-1.1407	0.1747
3)Middle Income	1	-0.45000	0.31731	0.623	-1.3864	0.4864
	2	-0.39198	0.27338	0.609	-1.1622	0.3782
	4	-0.13272	0.27383	0.988	-0.9042	0.6387
	5	-.87500*	0.25292	0.010	-1.5930	-0.1570
4)Middle-High income	1	-0.31728	0.30016	0.826	-1.2168	0.5823
	2	-0.25926	0.25327	0.843	-0.9749	0.4564
	3	0.13272	0.27383	0.988	-0.6387	0.9042
	5	-.74228*	0.23103	0.020	-1.4015	-0.0831
5)High income	1	0.42500	0.28121	0.571	-0.4396	1.2896
	2	0.48302	0.23050	0.242	-0.1747	1.1407
	3	.87500*	0.25292	0.010	0.1570	1.5930
	4	.74228*	0.23103	0.020	0.0831	1.4015

\*. The mean difference is significant at the 0.05 level.

Games-Howell post-hoc analysis has been used since equal variances are not assumed. As can be seen in the table, there are significant differences between 3 and 5 / 4 and 5. This shows a significant difference in fear of disease between middle-income / high-income and upper-middle-income / high-income groups at the 0.05 level of significance (Table 56).

Table 57. Hedonist Behavior on Age / Games-Howell Test / Turkey

		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1)18-25	2	-0.26779	0.23537	0.668	-0.8899	0.3543
	3	-0.50872	0.25664	0.207	-1.1879	0.1705
	4	-.60257*	0.21447	0.035	-1.1729	-0.0323
2)26-35	1	0.26779	0.23537	0.668	-0.3543	0.8899
	3	-0.24093	0.23086	0.725	-0.8522	0.3704
	4	-0.33478	0.18283	0.269	-0.8172	0.1476
3)36-49	1	0.50872	0.25664	0.207	-0.1705	1.1879
	2	0.24093	0.23086	0.725	-0.3704	0.8522
	4	-0.09385	0.20950	0.970	-0.6524	0.4647
4)50-64	1	.60257*	0.21447	0.035	0.0323	1.1729
	2	0.33478	0.18283	0.269	-0.1476	0.8172
	3	0.09385	0.20950	0.970	-0.4647	0.6524

\*. The mean difference is significant at the 0.05 level.

Games-Howell post-hoc analysis shows only one significant difference at the 0.05 level of significance - age group 18-25 significantly differs from age group 50-64 based on hedonistic behavior (Table 57).

Table 58. Hedonism on Education / Games-Howell / Turkey

		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1)Primary School	2	0.60119	0.22767	0.083	-0.0508	1.2532
	3	.68571*	0.18903	0.005	0.1546	1.2168
	4	0.63025	0.28786	0.220	-0.2224	1.4830
	5	-0.13665	0.15449	0.901	-0.5760	0.3027
2)High School	1	-0.60119	0.22767	0.083	-1.2532	0.0508
	3	0.08452	0.24476	0.997	-0.6093	0.7783
	4	0.02906	0.32717	1.000	-0.9167	0.9748
	5	-.73784*	0.21919	0.015	-1.3688	-0.1069
3)Bachelor's Degree	1	-.68571*	0.18903	0.005	-1.2168	-0.1546
	2	-0.08452	0.24476	0.997	-0.7783	0.6093
	4	-0.05546	0.30156	1.000	-0.9370	0.8261
	5	-.82236*	0.17873	0.000	-1.3249	-0.3198
4)Master's Degree	1	-0.63025	0.28786	0.220	-1.4830	0.2224
	2	-0.02906	0.32717	1.000	-0.9748	0.9167
	3	0.05546	0.30156	1.000	-0.8261	0.9370
	5	-0.76690	0.28121	0.084	-1.6058	0.0720
5)PhD	1	0.13665	0.15449	0.901	-0.3027	0.5760
	2	.73784*	0.21919	0.015	0.1069	1.3688
	3	.82236*	0.17873	0.000	0.3198	1.3249
	4	0.76690	0.28121	0.084	-0.0720	1.6058

\*. The mean difference is significant at the 0.05 level.

Games-Howell post-hoc analysis has been used since equal variances are not assumed. As can be seen in the table, there are significant differences between 1 and 3 / 2 and 5 / 3 and 5. When considering hedonism, primary school graduates significantly differ from Bachelor's degree graduates, high school graduates significantly differ from Ph.D. graduates, and Bachelor's degree graduates significantly differ from Ph.D. graduates. All differences are at the 0.05 level (Table 58).

Table 59. Hedonism on Occupation / Games-Howell / Turkey

		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1)Student	2	-.88286*	0.24908	0.019	-1.6670	-0.0987
	3	-0.37901	0.26164	0.772	-1.1933	0.4353
	4	-0.64000	0.29489	0.336	-1.5591	0.2791
	5	-0.60429	0.35119	0.612	-1.7601	0.5515
	6	-0.24714	0.40455	0.994	-1.8936	1.3994
	7	0.27429	0.49454	0.996	-1.7348	2.2834
2)Public sector employee	1	.88286*	0.24908	0.019	0.0987	1.6670
	3	.50385*	0.15299	0.025	0.0388	0.9689
	4	0.24286	0.20472	0.891	-0.4274	0.9131
	5	0.27857	0.27979	0.942	-0.7656	1.3228
	6	0.63571	0.34441	0.591	-1.2293	2.5007
	7	1.15714	0.44667	0.308	-0.9722	3.2865
3)Private sector employee	1	0.37901	0.26164	0.772	-0.4353	1.1933
	2	-.50385*	0.15299	0.025	-0.9689	-0.0388
	4	-0.26099	0.21983	0.893	-0.9625	0.4406
	5	-0.22527	0.29103	0.983	-1.2745	0.8240
	6	0.13187	0.35359	0.999	-1.6659	1.9296
	7	0.65330	0.45379	0.767	-1.4454	2.7520
4)Employer	1	0.64000	0.29489	0.336	-0.2791	1.5591
	2	-0.24286	0.20472	0.891	-0.9131	0.4274
	3	0.26099	0.21983	0.893	-0.4406	0.9625
	5	0.03571	0.32125	1.000	-1.0657	1.1371
	6	0.39286	0.37886	0.924	-1.3042	2.0899
	7	0.91429	0.47375	0.531	-1.1296	2.9582
5)Housewife	1	0.60429	0.35119	0.612	-0.5515	1.7601
	2	-0.27857	0.27979	0.942	-1.3228	0.7656
	3	0.22527	0.29103	0.983	-0.8240	1.2745
	4	-0.03571	0.32125	1.000	-1.1371	1.0657
	6	0.35714	0.42416	0.971	-1.3367	2.0510
	7	0.87857	0.51069	0.626	-1.1521	2.9092
6)Retired	1	0.24714	0.40455	0.994	-1.3994	1.8936
	2	-0.63571	0.34441	0.591	-2.5007	1.2293
	3	-0.13187	0.35359	0.999	-1.9296	1.6659
	4	-0.39286	0.37886	0.924	-2.0899	1.3042
	5	-0.35714	0.42416	0.971	-2.0510	1.3367
	7	0.52143	0.54876	0.951	-1.6644	2.7072
7)Unemployed	1	-0.27429	0.49454	0.996	-2.2834	1.7348
	2	-1.15714	0.44667	0.308	-3.2865	0.9722
	3	-0.65330	0.45379	0.767	-2.7520	1.4454
	4	-0.91429	0.47375	0.531	-2.9582	1.1296
	5	-0.87857	0.51069	0.626	-2.9092	1.1521
	6	-0.52143	0.54876	0.951	-2.7072	1.6644

\*. The mean difference is significant at the 0.05 level.

Games-Howell post-hoc analysis shows that there are significant differences between students and public sector employees as well as between private sector employees and public sector employees. Both differences are observed at the 0.05 significance level (Table 59).

Table 60. Sustainability on Residence / Independent Samples t-Test

		Levene's Test for Equality of Variances					t-test for Equality of Means					
		N	Mean	Std. Dev.	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
Sustainability on Residence (Equal variances assumed)	1(Turkey)	128	3.6042	1.17479	3.472	0.064	2.415	238	0.016	0.33631	0.13927	
	2(Germany)	112	3.2679	0.95136								

As can be seen in Table 60, equal variances are assumed due to Levene's Test Sig. Value is bigger than 0.05. According to the t-test, it can be assumed that there is a significant difference between participants in terms of residence (Turkey and Germany).

## CHAPTER 5

### CONCLUSION

#### 5.1 Overview of the study

The information in the literature created the impression that online shopping users in Turkey, and Germany, which are developing and developed countries respectively, may have quite different consumption habits when analyzed both at cultural and socio-economic levels. However, although there are some differences between them, it has been observed that individuals residing in both countries have largely similar concerns and instinctive consumption behaviors in the event of a global crisis such as a pandemic. When examined on the basis of leading product categories in online shopping, especially in terms of both basic and secondary needs, it has been determined that individuals residing in both countries have similar preferences, and the fact that the concept of online shopping is independent of time and place due to its virtuality aspect, turns out to have a significant meaning in capturing common behaviors in different cultures. On the other hand, when the hypotheses were compared with the results, it was seen that concepts such as digitalism, ease of payment, and convenience were more related to each other in Germany compared to Turkey. This supports the studies showing that German society attaches more importance to convenience than Turkey in terms of cultural orientation. The fact that there is a high correlation between the subjects of fear of disease and fear of scarcity in both countries shows that people in both countries are engaged in stocking behavior. When this situation is associated with hedonic shopping behavior, it is seen that Germany is ahead of Turkey, although it is not as high as expected. This can be evaluated in terms of socio-economic and purchasing power. Because compared to

Germany, which is a developed country, Turkey has a lower purchasing power and therefore people in Turkey can be expected to spend more money on basic necessities such as flour and oil. When factors were compared in accordance with the post-hoc analyses, it was seen that there were also significant differences in terms of demographic and socio-economic aspects. On the other hand, when the online shopping categories are compared with the data in the literature and the results of this study, they show full compatibility. While the highest increase was in the food and beverage category, online shopping decreased in the clothing category. The biggest decrease was in the tourism and travel category, as expected.

In a conclusion, this study aimed to reveal the effects of the pandemic on online shopping behaviors with many factors and hypotheses via intense statistical data and literature research. From the multidimensional and comparative approach towards online shopping and offline shopping to the interpretation of consumer behavior in a pandemic-specific manner by using academic infrastructure, and to the comprehensive comparison of the changing consumption behavior of individuals residing in Turkey and Germany during the pandemic process, this study has been conducted to provide significant output for both the academic world and the business world. Hopefully, this study will be a valuable academic source for future academic studies thanks to its results.

## 5.2 Contribution to the academy

- Since there are not many studies comparing online shopping behavior between countries, this is a study that enriches the literature in this field.
- Since there are not many studies comparing different countries on online shopping behavior during the pandemic, this is a study that enriches the

literature in this field.

- Although there are studies focused on Turkey and Germany on online shopping behavior during the pandemic, this is the first study to directly compare the two countries in a comprehensive approach.

### 5.3 Contribution to the private sector and international trade

- In the event of a crisis such as a pandemic, this study provides data that can provide e-commerce businesses with the opportunity to take action on the online shopping behavior of the consumer.
- This study offers a perspective on consumer behavior in crises for companies that export and / or e-export from Turkey to Germany and / or plan to do so.

### 5.4 Limitations and future studies

In future studies, the following academic approaches can be considered as a point of focus:

- More comprehensive data can be obtained by having more participants for the survey.
- Specific demographic groups can be targeted in the survey to obtain more to-the-point data.
- More baseline data could be presented comparing the socio-economic status of people residing in Turkey and Germany.
- Since Turkey and Germany are compared, comparisons can be made on the macro and microeconomic data of developing and developed countries, and online shopping behaviors of consumers can be based on this basis.

## APPENDIX A

### SURVEY QUESTIONS IN TURKISH

Lütfen ankete başlamadan önce ikamet ettiğiniz ülkeyi seçiniz.

(Bitte wählen Sie Ihr Wohnsitzland aus, bevor Sie mit der Umfrage beginnen.)

Türkiye

Deutschland

Bu anket, Boğaziçi Üniversitesi - Sosyal Bilimler Enstitüsü'ne bağlı Uluslararası Ticaret Yönetimi Yüksek Lisans Programı mezuniyeti için Batuhan Demirel tarafından tez danışmanı Doç. Dr. Mehtap Işık danışmanlığında yürütülen tez çalışmasının bir parçası olarak hazırlanmıştır. Anketin amacı COVID-19 Pandemisi süresince Türkiye ve Almanya'da ikamet eden insanların online alışveriş davranışlarının karşılaştırmalı bir biçimde incelenip analiz edilmesidir. Ankette hiçbir sorunun doğru ya da yanlış yanıtı yoktur. Tüm yanıtlarınız yalnızca bilimsel amaç doğrultusunda kullanılacak olup üçüncü şahıslarla kesinlikle paylaşılmayacaktır. Tez çalışmasının mümkün olan en bilimsel sonuçları vermesi için soruları dikkatlice okuyup sizin için en uygun olduğunu düşündüğünüz yanıtı vermenizi rica ederiz. Fazla vaktinizi almayacak olan bu anketi tamamlayıp vereceğiniz emekten ötürü şimdiden çok teşekkür ederiz.

Eğer online alışveriş yapmıyorsanız lütfen sebep ya da sebeplerini seçiniz. (Online alışveriş yapıyorsanız bu kısmı es geçebilirsiniz.)

- Gerekli altyapıya sahip değilim.
- Online alışveriş sitelerine güvenmiyorum.
- Ödeme sistemlerine güvenmiyorum.
- Yakın çevrem online alışveriş yapmaz.
- Online alışverişe ihtiyaç duymuyorum, geleneksel alışveriş yöntemleri yeterli imkanları sunuyor.
- Diğer

Lütfen aşağıdaki ifadeleri size uygunluk derecelerine göre işaretleyiniz. (1: Kesinlikle Katılmıyorum. 2: Katılmıyorum. 3: Ne Katılıyorum Ne Katılmıyorum. 4: Katılıyorum. 5: Kesinlikle Katılıyorum)					
	1	2	3	4	5
Yalnızca ihtiyaçlarım için alışveriş yaparım.					
Sıkıldığımda alışveriş yaparak kendimi daha iyi hissederim.					
Yalnızlık duygusu beni alışveriş yapmaya yönlendirir.					
Stresli veya kaygılı hissettiğimde aslında ihtiyacım olmayan ürünleri daha çok tüketirim.					
Kaynaklar kısıtlı iken kendi ihtiyaçlarım yerine ailem ve yakın çevrem için alışveriş yapmayı tercih ederim.					
Çevre konusundaki duyarlılığım alışveriş davranışımı etkiler.					

Lütfen aşağıdaki ifadeleri online alışveriş deneyimlerinizi göz önünde bulundurarak ve geleneksel alışveriş deneyimleriniz ile kıyaslayarak size uygunluk derecelerine göre işaretleyiniz. (1: Kesinlikle Katılmıyorum. 2:Katılmıyorum. 3:Ne Katılıyorum Ne Katılmıyorum. 4:Katılıyorum. 5:Kesinlikle Katılıyorum)					
	1	2	3	4	5
Online alışveriş yaparken aradığım ürünü daha kolay bulurum.					
Online alışveriş yapmak daha kolay ve hızlıdır.					
Online alışverişteki ürün çeşitliliği aradığım ürünü bulmamı kolaylaştırır.					
Online alışveriş yaparken fiyat ve içerikleri daha kolay karşılaştırabildiğimi düşünüyorum.					
Online alışverişte ürün iadesi almak daha kolay ve hızlıdır.					
Online alışveriş daha sürdürülebilir bir üretim-tüketim döngüsünü teşvik eder.					
Dijital pazarlama ve online alışveriş çevre için daha az atık yaratır.					
Online alışverişisi daha çok temel ihtiyaçlarımı karşılamak için kullanırım.					
Online alışverişisi ihtiyacım olmasa da beni mutlu edecek ürünleri almak için kullanırım.					
Online alışverişlerimi akıllı telefonum üzerinden yapmayı tercih ederim.					
Online alışverişlerimi akıllı telefon dışındaki cihazlardan yapmayı tercih ederim.					
Dijital pazarlama kanalları ve reklamlar beni online alışverişe yönlendirir.					
Sosyal medya platformlarındaki içerik ve reklamlar online alışveriş yapmamı teşvik ediyor.					
Karşılaştığım uygulamaların kullanıcı dostu olması beni online alışveriş yapmaya motive eder.					
Başka sebeplerle çeşitli online platformları kullanırken kendimi online alışveriş yaparken bulurum.					
Online ödeme yöntemlerinin varlığı online alışveriş yapma kararımda tercih sebebidir.					
Online alışverişlerimde kredi kartı ya da banka kartı kullanmayı tercih ederim.					
Online alışverişlerimde kapıda peşin ödemeyi tercih ederim.					
Gelişen dijital bankacılık altyapısı online alışverişe olan güvenimi arttırdı.					
Yakın sosyal çevrem online alışveriş yapıyor olması beni online alışverişe teşvik eder.					
Online alışveriş platformlarındaki ürün puanları ve yorumları satın alma kararlarımda etkili olur.					
Piyasalarda fiyatların hızlı değişmesi beni online alışverişe yönlendiriyor.					
Online alışveriş hizmetinin firmaların maliyetlerini düşürüp daha uygun fiyatlarla ürün satmalarını sağladığını düşünüyorum.					

Lütfen aşağıdaki ifadeleri pandemi sırasındaki online alışveriş deneyimlerinizi göz önünde bulundurarak size uygunluk derecelerine göre işaretleyiniz. (1: Kesinlikle Katılmıyorum. 2:Katılmıyorum. 3:Ne Katılıyorum Ne Katılmıyorum. 4:Katılıyorum. 5:Kesinlikle Katılıyorum)					
	1	2	3	4	5
Pandemi sürecindeki sosyal kısıtlamalar beni online alışveriş yapmaya yönlendirdi.					
Pandemi sürecindeki kısıtlamalar olmasa online alışverişi tercih etmezdim.					
Pandemi döneminde hastalık korkusu fiziksel mağazalardan alışveriş yerine online alışveriş yapmama sebep oldu.					
Pandemi dönemi kapanmalarından sonra kalıcı online alışveriş alışkanlıklarım oldu.					
Pandemi döneminde kapanmalar nedeni ile ulaşamadığım ailem ve yakın çevrem için online alışveriş yaptım.					
Pandeminin yarattığı belirsizlik duygusu online alışverişlerimi artırdı.					
Pandemi sürecinde tedarik zincirinde yaşanabilecek aksaklıklar beklentisiyle temel ihtiyaçlarıma yönelik ürünleri uzun süre yetebilecek şekilde satın aldım.					
Pandemi sürecinde zorunlu ihtiyaçlarım için online alışverişi daha fazla tercih ettim.					
Pandemi sürecinde online alışverişlerimde yiyecek ve içecek ürünlerini daha fazla tercih ettim.					
Pandemi sürecinde online alışverişlerimde hijyen ürünlerini daha fazla tercih ettim.					
Pandemi sürecinde alışveriş eğlenceli bir aktivite haline geldi.					
Pandemi sürecinde online alışverişlerimde daha ziyade mutlu olmamı sağlayacak ürünleri tercih ettim.					
Pandemi sürecinde alışverişlerimde daha ani satın alma kararları verdim.					

Aşağıdaki kategorilerde pandemi sürecinde alışveriş tercihlerinizin değişim düzeyini göre 1 ile 5 arasındaki sayılardan birini seçerek işaretleyiniz lütfen.  
(1=Çok Azaldı, 2= Azaldı, 3= Ne Arttı Ne Azaldı, 4 = Arttı, 5=Çok Arttı)

	1	2	3	4	5
Yiyecek & İçecek					
Sağlık & Hijyen					
Giyim & Ayakkabı					
Elektronik Ürünler					
Ev Araç Gereçleri					
Beyaz Eşya & Mobilya					
Film, Müzik					
Kitap, Dergi					
Hediyelik Eşya & Takı					
Ofis ekipmanları					
Kişisel Bakım & Kozmetik					
Spor ve Hobi					
Turizm & Seyahat					

Cinsiyet

Kadın

Erkek

Cevap vermemeyi tercih ediyorum.

Yaş

18-25

26-35

36-49

50-64

65+

Eđitim Durumu (Lütfen güncel mezuniyet durumunuza göre işaretleyniz.)

İlköđretim mezunu

Lise mezunu

Lisans mezunu

Lisansüstü mezunu

Doktora mezunu

Meslek

Öđrenci

Kamu sektörü çalışanı

Özel sektör çalışanı

İşveren

Ev hanımı

Emekli

Çalışmıyor

Kendinizi hangi gelir düzeyine sahip olarak görüyorsunuz?

Alt seviye

Alt-orta seviye

Orta seviye

Orta-üst seviye

Üst seviye

Medeni Hal

Evli

Bekar

## APPENDIX B

### SURVEY QUESTIONS IN GERMAN

Lütfen ankete başlamadan önce ikamet ettiğiniz ülkeyi seçiniz.

(Bitte wählen Sie Ihr Wohnsitzland aus, bevor Sie mit der Umfrage beginnen.)

Türkiye

Deutschland

Dieser Fragebogen wurde von Batuhan Demirel für den Abschluss des Masterprogramms „International Trade Management“ an der Boğaziçi Universität – Institut für Sozialwissenschaften erstellt. Es wurde im Rahmen der Abschlussarbeit unter der Betreuung der Diplomarbeitbetreuerin Assist erstellt. Prof. Dr. Mehtap Işık. Der Zweck dieses Fragebogens ist es, das Online-Einkaufsverhalten von Menschen mit Wohnsitz in der Türkei und in Deutschland während der COVID-19-Pandemie vergleichend zu untersuchen und zu analysieren. Es gibt keine richtige oder falsche Antwort auf eine Frage in der Umfrage. Alle Ihre Antworten werden nur für wissenschaftliche Zwecke verwendet und nicht an Dritte weitergegeben. Damit die Diplomarbeit möglichst wissenschaftliche Ergebnisse liefert, bitten wir Sie, die Fragen sorgfältig zu lesen und die Antwort zu geben, die Ihrer Meinung nach am besten für Sie geeignet ist. Vielen Dank im Voraus für Ihre Bemühungen, diesen Fragebogen ausfüllen, was nicht viel Zeit in Anspruch nehmen wird.

Wählen Sie die Gründe aus, warum Sie nicht online einkaufen. (Sie können diesen Teil überspringen, wenn Sie online einkaufen.)

- Mir fehlt die nötige Infrastruktur.
- Ich vertraue Online-Shopping-Sites nicht.
- Ich vertraue Zahlungssystemen nicht.
- Mein engster Freundeskreis kauft nicht online ein.
- Online-Shopping brauche ich nicht, traditionelle Einkaufswege bieten ausreichend Möglichkeiten.
- Andere

Bitte kreuzen Sie die folgenden Aussagen entsprechend ihrer Relevanz für Sie an. (1: Stimme überhaupt nicht zu. 2: Stimme nicht zu. 3: Stimme weder zu noch nicht zu. 4: Stimme zu. 5: Stimme voll und ganz zu.)					
	1	2	3	4	5
Ich kaufe nur für meinen Bedarf ein.					
Ich fühle mich besser, wenn ich einkaufen gehe, wenn mir langweilig ist.					
Das Gefühl der Einsamkeit treibt mich zum Shoppen.					
Wenn ich mich gestresst oder ängstlich fühle, konsumiere ich mehr Produkte, die ich eigentlich nicht brauche.					
Wenn die Ressourcen begrenzt sind, kaufe ich lieber für meine Familie und enge Freunde ein als für meinen eigenen Bedarf.					
Mein Umweltbewusstsein beeinflusst mein Einkaufsverhalten.					

Bitte kreuzen Sie die folgenden Aussagen entsprechend ihrer Relevanz für Sie an, indem Sie Ihre Online-Einkaufserfahrungen betrachten und sie mit Ihren traditionellen Einkaufserfahrungen vergleichen. (1: Stimme überhaupt nicht zu. 2: Stimme nicht zu. 3: Stimme weder zu noch nicht zu. 4: Stimme zu. 5: Stimme voll und ganz zu.)					
	1	2	3	4	5
Beim Online-Shopping finde ich das gesuchte Produkt leichter.					
Online-Shopping ist einfacher und schneller.					
Die Produktvielfalt beim Online-Shopping erleichtert es mir, das gesuchte Produkt zu finden.					
Ich denke, dass ich beim Online-Shopping Preise und Inhalte leichter vergleichen kann.					
Es ist einfacher und schneller, Produktrückgaben beim Online-Shopping zu erhalten.					
Online-Shopping fördert einen nachhaltigeren Produktions-Konsum-Kreislauf.					
Digitales Marketing und Online-Shopping verursachen weniger Abfall für die Umwelt.					
Ich benutze Online-Shopping hauptsächlich, um meine Grundbedürfnisse zu decken.					
Ich benutze Online-Shopping, um Produkte zu kaufen, die mich glücklich machen, obwohl ich sie nicht brauche.					
Meine Online-Einkäufe erledige ich am liebsten über mein Smartphone.					
Ich bevorzuge es, meine Online-Einkäufe von anderen Geräten als Smartphones aus zu tätigen.					
Digitale Marketingkanäle und Werbung führen mich zum Online-Shopping.					
Inhalte und Anzeigen auf Social-Media-Plattformen ermutigen mich, online einzukaufen.					
Die Benutzerfreundlichkeit der Anwendungen, auf die ich stoße, motiviert mich, online einzukaufen.					
Während ich aus anderen Gründen verschiedene Online-Plattformen nutze, kaufe ich online ein.					
Die Existenz von Online-Zahlungsmethoden ist der Grund für meine Entscheidung, online einzukaufen.					
Ich bevorzuge es, eine Kredit- oder Debitkarte für meine Online-Einkäufe zu verwenden.					
Meine Online-Einkäufe bezahle ich von Einziehung.					
Die sich entwickelnde digitale Banking-Infrastruktur hat mein Vertrauen in den Online-Einkauf gestärkt.					
Die Tatsache, dass mein enges soziales Umfeld online einkauft, ermutigt mich, online einzukaufen.					
Produktbewertungen und Rezensionen auf Online-Shopping-Plattformen beeinflussen meine Kaufentscheidungen.					
Die schnelle Preisänderung auf den Märkten führt mich zum Online-Shopping.					
Ich denke, dass der Online-Shopping-Service es Unternehmen ermöglicht, ihre Kosten zu senken und Produkte zu günstigeren Preisen zu verkaufen.					

Bitte kreuzen Sie die folgenden Aussagen entsprechend ihrer Eignung für Sie unter Berücksichtigung Ihrer Online-Shopping-Erfahrungen während der COVID-19-Pandemie an. (1: Stimme überhaupt nicht zu. 2: Stimme nicht zu. 3: Stimme weder zu noch nicht zu. 4: Stimme zu. 5: Stimme voll und ganz zu.)					
	1	2	3	4	5
Soziale Einschränkungen während der Pandemie haben mich dazu gebracht, online einzukaufen.					
Wenn es während der Pandemie keine Einschränkungen gäbe, würde ich Online-Shopping nicht bevorzugen.					
Während der Pandemie veranlasste mich die Angst vor Krankheiten online einzukaufen, anstatt in physischen Geschäften einzukaufen.					
Nach dem Ende der Pandemiebeschränkungen hatte ich dauerhafte Online-Einkaufsgewohnheiten.					
Ich habe online für meine Familie und meinen inneren Kreis eingekauft, die ich aufgrund der Schließungen während der Pandemiezeit nicht erreichen konnte.					
Das durch die Pandemie verursachte Gefühl der Unsicherheit hat mein Online-Shopping verstärkt.					
In Erwartung von Unterbrechungen in der Lieferkette während der Pandemie kaufte ich Produkte für meine Grundbedürfnisse in einer Weise ein, die für lange Zeit ausreichen würde.					
Während der Pandemie habe ich Online-Shopping für meine Grundbedürfnisse bevorzugt.					
Während der Pandemie habe ich bei meinen Online-Einkäufen Lebensmittel und Getränke bevorzugt.					
Während der Pandemie habe ich bei meinen Online-Einkäufen eher Hygieneprodukte bevorzugt.					
Einkaufen ist während der Pandemie zu einer unterhaltsamen Aktivität geworden.					
Während der Pandemie bevorzugte ich die Produkte, die mich beim Online-Shopping glücklicher machen würden.					
Während der Pandemie habe ich bei meinen Einkäufen unmittelbarere Kaufentscheidungen getroffen.					

Bitte kreuzen Sie eine der Zahlen zwischen 1 und 5 an, basierend auf den unten stehenden Kategorien und entsprechend dem Änderungsgrad Ihrer Einkaufspräferenzen während der Pandemie. (1=stark verringert, 2=verringert, 3=weder erhöht noch verringert, 4=erhöht, 5=stark erhöht)					
	1	2	3	4	5
Essen & Getränke					
Gesundheit & Hygiene					
Kleidung & Schuhe					
Elektronische Produkte					
Haushaltsgeräte					
Weißes Ware & Möbel					
Film, Musik					
Buch, Zeitschrift					
Andenken & Juwelier					
Büroausstattung					
Körperpflege & Kosmetik					
Sport & Freizeit					
Tourismus & Reisen					

Geschlecht

Weiblich

Männlich

Ich möchte lieber nicht antworten

Wie alt sind sie?

18-25

26-35

36-49

50-64

65+

Bildungsstatus (Bitte kreuzen Sie entsprechend Ihrem aktuellen Abschlussstatus an.)

- Grundschule
- Gymnasium
- Bachelorabschluss
- Masterabschluss
- Doktorwürde

Beruf

- Student
- Angestellter im öffentlichen Dienst
- Angestellter in der Privatwirtschaft
- Arbeitgeber
- Hausfrau
- Im Ruhestand
- Arbeitslos

Welches Einkommen schätzen Sie selbst ein?

- Niedrigeres Einkommen
- Unteres mittleres Einkommen
- Mittleres Einkommen
- Oberes mittleres Einkommen
- Hohes Einkommen

Familienstand

- Verheiratet
- Ledig

## APPENDIX C

### SURVEY QUESTIONS IN ENGLISH

Please select your country of residence before starting the survey.

Turkey

Germany

This questionnaire was prepared by Batuhan Demirel for the graduation of the International Trade Management Master's Program at Boğaziçi University - Social Sciences Institute. It was prepared as a part of the thesis study conducted under the supervision of thesis advisor Assist. Prof. Dr. Mehtap Işık. The purpose of this questionnaire is to comparatively examine and analyze the online shopping behavior of people residing in Turkey and Germany during the COVID-19 Pandemic. There is no right or wrong answer to any question in the survey. All your answers will only be used for scientific purposes and will not be shared with third parties. In order for the thesis study to yield the most scientific results possible, we kindly ask you to read the questions carefully and give the answer you think is most appropriate for you. Thank you very much in advance for your effort in completing this questionnaire, which will not take much of your time.

If you do not shop online, please select the reason or reasons. (If you are shopping online, you can skip this part.)

- I do not have the necessary infrastructure
- I do not trust online shopping sites.
- I do not trust payment systems.
- My neighbors do not shop online.
- I do not need online shopping, traditional shopping methods offer sufficient opportunities.
- Other

Please tick the following statements according to their degree of relevance to you. (1: Strongly Disagree. 2: Disagree. 3: Neither Agree nor Disagree. 4: Agree. 5: Strongly Agree)					
	1	2	3	4	5
I only shop for my needs.					
I feel better by shopping when I am bored.					
The feeling of loneliness drives me to shop.					
When I feel stressed or anxious, I consume products that I don't actually need more often.					
When resources are limited, I prefer to shop for my family and close friends rather than my own needs.					
My environmental awareness influences my shopping behavior.					

Please tick the following statements according to their relevance to you by considering your online shopping experiences and comparing them with your traditional shopping experiences. (1: Strongly Disagree. 2:Disagree. 3:Neither Agree nor Disagree. 4:Agree. 5:Strongly Agree)					
	1	2	3	4	5
When shopping online, I find the product I'm looking for more easily.					
Online shopping is easier and faster.					
The variety of products in online shopping makes it easier for me to find the product I am looking for.					
I think I can compare prices and contents more easily when shopping online.					
It is easier and faster to get product returns in online shopping.					
Online shopping promotes a more sustainable production-consumption cycle.					
Digital marketing and online shopping create less waste for the environment.					
I mostly use online shopping to meet my basic needs.					
I use online shopping to buy products that will make me happy even though I do not need them.					
I prefer to shop online with my smartphone.					
I prefer to do online shopping from devices other than smartphones.					
Digital marketing channels and advertisements lead me to online shopping.					
Content and advertisements on social media platforms encourage me to shop online.					
The user-friendliness of the applications I come across motivates me to shop online.					
While using various online platforms for other reasons, I find myself shopping online.					
The existence of online payment methods is the reason for my choice to shop online.					
I prefer to use a credit or debit card for online shopping.					
I prefer cash on delivery for online shopping.					
The developing digital banking infrastructure has increased my confidence in online shopping.					
The fact that my close social circle is shopping online encourages me to shop online.					
Product ratings and reviews on online shopping platforms influence my purchasing decisions.					
The rapid change in prices in the markets leads me to online shopping.					
I think that online shopping service allows companies to reduce their costs and sell products at more affordable prices.					

Please tick the following statements according to their suitability for you, taking into account your online shopping experiences during the pandemic. (1: Strongly Disagree. 2:Disagree. 3:Neither Agree nor Disagree. 4:Agree. 5:Strongly Agree)					
	1	2	3	4	5
Social restrictions during the pandemic process led me to shop online.					
If there were no restrictions during the pandemic process, I would not prefer online shopping.					
During the pandemic period, the fear of disease caused me to shop online instead of shopping in physical stores.					
After the lockdowns during the pandemic period, I acquired permanent online shopping habits.					
I did online shopping for my family and close social circle that I could not reach due to the lockdowns during the pandemic.					
The sense of uncertainty created by the pandemic has increased my online shopping.					
In anticipation of disruptions in the supply chain during the pandemic, I purchased products for my basic needs in a way that would be sufficient for a long time.					
During the pandemic, I preferred online shopping more for my essential needs.					
During the pandemic, I preferred food and beverage products more in online shopping.					
During the pandemic, I preferred hygiene products more in online shopping.					
Shopping has become a fun activity during the pandemic.					
During the pandemic, I preferred the products that would make me happier in online shopping.					
During the pandemic process, I made more immediate purchasing decisions in online shopping.					

Please tick one of the numbers between 1 and 5 according to the change level of your shopping preferences during the pandemic process in the following categories. (1=Decreased a lot, 2=Decreased a lot, 3=Neither increased nor decreased, 4=Increased, 5=Increased a lot)					
	1	2	3	4	5
Food & Beverage					
Health & Hygiene					
Clothing & Shoes					
Electronic Products					
Home Gadgets					
White Goods & Furniture					
Movie, Music					
Book, Magazine					
Souvenirs & Jewelry					
Office equipment					
Personal Care & Cosmetics					
Sports and Hobby					
Tourism & Travel					

Gender

Female

Male

I prefer not to answer.

Age

18-25

26-35

36-49

50-64

65+

Educational Status (Please tick according to your current graduation status.)

Primary School

High School

Bachelor's Degree

Master's Degree

PhD

Occupation

Student

Public sector employee

Private sector employee

Employer

Housewife

Retired

Unemployed

What income level do you consider yourself to have?

Low Income

Low-Middle Income

Middle Income

Middle-High Income

High Income

Marital Status

Married

Single

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