

Original Article

# Redefining the Rules of Conducting E-Commerce by Generation Z

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**Abstract:** The purpose of this work is to point out the changes in the consumer behavior of Generation Z (Gen Z) during the last two years of the COVID-19 pandemic. It presents the results of a primary quantitative survey, in an attempt to identify the factors that have determined the new consumption habits, contributing in this way to the identification of trends and consumption patterns in e-commerce. The results of the research showed major changes in consumer behavior during the last two years since the COVID-19 outbreak. One of the most important findings is that Gen Z is looking for an additional social aspect to the online shopping process. The results of the research also highlighted the need for electronic sellers/retailers to redesign the content and function of their websites, as well as to increase their ability to be more dynamic and react faster and more effectively to the rapidly changing trends of the "new" market conditions, as they have been created during the COVID-19 pandemic.

**Keywords:** COVID-19, e-commerce, Gen Z.

## I. INTRODUCTION

Generation Z (Gen Z) refers to people who were born in the late 1990s or the early 21st century [1]. The consumption behavior of this generation differs significantly from previous generations [2]. In fact, many researchers consider that it was this generation that designed the rules of online markets (e-commerce) right from the beginning [3]. The driving forces of Gen Z's consumer behavior include the exclusive use of the mobile phone in making online purchases, as well as making payments with it [4]; also, the widespread use of social networks at certain stages when making an online purchase [5]. Gen Z consumers are more influenced by specific people and websites [6] and their language of choice is mainly visual [7], while the time needed by them to complete a purchase should be the shortest possible, as should also be the response time of the electronic seller/retailer (e-retailer), i.e., the time needed to complete the order [8]. The digital transformation of companies has also contributed to this, due to an increase in e-commerce transactions and the need to adapt their operations to the new requirements during the various phases of the COVID-19 pandemic [9].

Since its outbreak in 2020, the COVID-19 pandemic has changed our social habits and interactions, drastically affecting work, education, leisure-time activities, and of course the shopping process [10]. Perhaps the biggest impact of the COVID-19 pandemic is that it accelerated the shift from conventional shopping in physical stores towards shopping via the Internet at online stores, which had in fact already started before COVID [3]. Moreover, new patterns of behavior related to the pandemic have been recorded, which affect customers' purchasing behavior.

This work concerns the recording of the changes in the behavior of the examined consumer group – Gen Z – over the last two years during the period of the COVID-19 pandemic. It presents the results of a primary quantitative study, in an attempt to identify the factors that determined the new consumption habits, so as to contribute to the identification of trends and consumption patterns in e-commerce. Consumers from various Greek cities (all belonging to Gen Z) were asked to fill in an online questionnaire in the first two months of 2022 (January and February). The researchers tried to construct a random representative sample to avoid bias due to the selected group. This work is an attempt to record the changes in the behavior of Gen Z consumers in Greece, for which there is no extensive literature.

The main research questions that the paper aims to answer are the following:

1. What are the factors that have determined the new consumption habits of the consumers who belong to Gen Z? (i.e., is it just the pandemic that has affected the markets or are there other factors as well?)
2. In which business sectors are the most significant changes observed?
3. What are the main forms of payment and delivery practices? And which kind of advertising channel(s) influenced online purchases during the pandemic?
4. Will e-commerce continue as it has developed today, even after the COVID-19 pandemic?



The paper is structured as follows: the next section presents a brief literature review concerning the main features of the behavior of Gen Z in terms of their e-commerce practices, as well as a brief description of their behavior during the pandemic. The following section presents the main parameters of the research methodology. After that, the results of the statistical analysis are given. In the final section, the answers to the research questions are presented and the main conclusions are summarized, together with suggestions for actions on the part of e-commerce companies and proposals for future research.

## II. LITERATURE REVIEW

Consumer behavior is influenced by personal, economic and social factors, such as product/service uniqueness, consumers' culture and ethnicity, as well as technology and innovation [11].

Concerning the last factor in particular, the generation under study has a very close relationship with technology. This generation is generally defined as a "native" of the digital world, heavily influenced by online interaction and being connected to the Internet from a very young age [12]. Muller and Perreault claim that 95% of this generation own a smartphone, and of this percentage, over 55% use their phone for more than five hours a day [13]. According to a Google report [14], most of today's teenagers owned their first mobile phone by the age of 12, and 2 out of 3 teenagers shop online, with around half of them shopping via mobile phones. This generation is the leader in the use of digitalized means, as well as in the use of the Internet for study, work and socializing [15, 16]. Another Google report [17] claims that Gen Z also has a high level of connectivity to e-commerce, with 68% shopping online, and the most used device for this purpose is also a mobile device. Therefore, Gen Z's purchasing behavior depends on the quality of the online website, the richness of the content and the way it is organized, and its ability to provide information and services via mobile phones [18].

Gen Z always expects to get great value from a product and is more interested in the experience [19], which is why Gen Z consumers are known as "communaholics" as defined by Muller and Perreault [13]. It is noteworthy to consider that Gen Z consumers may be "nocturnal". Indeed, 65% reported using their phones after midnight several days a week, while 29% claimed that they used it every night [13].

Gen Z corresponds to people that have recently begun to enter the labor market and may be self-employed. Several studies have demonstrated their influence on current markets in all retail categories; thus, they have a dominant weight on consumer trends [20]. This generation is expected to influence marketing and retail practices given their size and purchasing power, as they comprise the drivers of innovation and have high expectations for products and brands [21].

Therefore, companies operating in e-commerce must face their consumers' expectations with great ease and a speedy rate in the transaction time, at the same time providing comprehensive information [21, 22]. This comprises a critical success factor, especially during the COVID-19 pandemic, when consumers of all generations - not just Gen Z - were more likely to purchase goods and services digitally [3]. Overall, there has been a significant shift towards spending through e-commerce. The frequency of shopping also increased [23]. Factors driving online consumer behavior during the COVID-19 pandemic include strong sustained growth in the number of Internet users and increased awareness related to online shopping, increasingly more active online product launches, low prices, etc. [24].

## III. RESEARCH METHODOLOGY

The purpose of the research is to exhibit the changes in the consumer behavior of Gen Z over the last two years during the COVID-19 pandemic. For this purpose, primary quantitative research was carried out, with the goal of identifying the factors that determined the new consumption habits, in order to identify trends and consumption patterns in e-commerce. Consumers belonging to Gen Z from various Greek cities were invited to fill out an online questionnaire (using Google Forms) in January and February of 2022.

To begin with, using the method of convenience (opportunity) sampling, emails were sent to lists of addresses of students and their acquaintances; in order to apply the method of snowball sampling, the respondents from the first phase were then asked to find and suggest other suitable participants for the survey. The final sample included 371 people from Gen Z. The questionnaire used in the primary study was the closed type, containing qualitative variables of the ordinal (Likert) type. It consisted of five parts (the questionnaire is included in the Annex). The first four parts contained the research questions, while the fifth part pertained to the demographic information of the respondents. The questions are described below:

- Research question 1: "What are the factors that have determined the new consumption habits of consumers who belong to Generation Z? (i.e., is it just the pandemic that affected the markets or were there other factors as well?)". Specifically, there were two questions: the first examined whether the pandemic affected online purchases, while the second asked about the reasons why people were shopping online during the pandemic.

- Research question 2: "In which business sectors are the most important changes observed?" This part included two questions: which products the respondents bought before, and during the pandemic.
- Research question 3: "What are the main methods of payment and delivery practices, and which advertising channel(s) influenced online shopping during the pandemic?" This investigates the payment method and delivery practices used by consumers, and which advertising channel(s) influenced online shopping for the time period under consideration.
- Research question 4: "Will e-commerce continue as it has evolved today, even after the COVID-19 pandemic?" This part also consisted of two questions. The first considered the possibility that the respondents will continue to exhibit the same habits in the future as they had during the COVID-19 pandemic, while the second was concerned with assessing the current state of e-commerce.
- The purpose of the fifth and final part of the questionnaire was to collect the demographic data of the sample, e.g., gender, educational level and place of residence.

After collecting the primary data, statistical analyses were performed using the SPSS/IBM software (v.24). The demographic data of the sample are presented in Table 1.

**Table 1: Profile of the sample (N/%)**

|                    |                                              |           |
|--------------------|----------------------------------------------|-----------|
| Gender             | Male                                         | 170 (46%) |
|                    | Female                                       | 201 (54%) |
| Educational level  | Secondary education                          | 60 (16%)  |
|                    | Vocational training                          | 6 (1%)    |
|                    | University                                   | 240 (65%) |
|                    | Masters/PhD                                  | 65 (17%)  |
| Place of residence | Big city (population > 500,000)              | 91 (24%)  |
|                    | Small city (population 50,000-500,000)       | 120 (32%) |
|                    | Region with a population of less than 50,000 | 160 (44%) |

According to the responses given to the questionnaire, most consumers were female, between the ages of 16-24, with a university degree, and they lived in areas with a population of less than 50,000. The following section presents the results of the descriptive and inductive statistical analysis of the research.

#### IV. RESULTS OF THE SURVEY

The presentation of the results of the descriptive statistics was carried out on the basis of the structure of the questionnaire (i.e., the research questions).

Research question 1: "What are the factors that have determined the new consumption habits of consumers who belong to Generation Z (i.e., is it just the pandemic that affected the markets or were there other factors as well)?" The results revealed that the pandemic significantly affected (about 70% of respondents) and even increased (by up to 65%) their online purchases. For the question: "Why did I shop online during the pandemic?" the results (Table 2) showed that it was mainly to do with health reasons, since this factor presented the highest average. Expected reasons were, of course, the advantages that e-commerce offered, such as the ability to be updated about discounts and prices, the wide variety of products available, the possibility of round-the-clock shopping, and the ease of shopping in general.

An important finding of the research is that Gen Z consumers read product reviews, placing special trust in their friends' reviews.

**Table 2: Reasons for online shopping (\*, \*\*)**

|                                                                                           | Aver. | 1 | 2 | 3 | 4 | 5 |
|-------------------------------------------------------------------------------------------|-------|---|---|---|---|---|
| <b>Health fears</b>                                                                       |       |   |   |   |   |   |
| By shopping online, I avoid congestion in the stores                                      | 4.26  |   |   |   |   |   |
| By shopping online, I avoid congestion on means of transport                              | 4.23  |   |   |   |   |   |
| By shopping online, I can choose the delivery point                                       | 4.39  |   |   |   |   |   |
| <b>Convenience/ease of shopping</b>                                                       |       |   |   |   |   |   |
| I shop online because it is easier to see discounts and prices                            | 4.03  |   |   |   |   |   |
| I shop online because there is a greater variety of goods available                       | 3.96  |   |   |   |   |   |
| I shop online because it is a good way for me to buy things when time is lacking          | 4.03  |   |   |   |   |   |
| I shop online because it may save me time from visiting many shops                        | 3.78  |   |   |   |   |   |
| I shop online because I can gather more information                                       | 3.72  |   |   |   |   |   |
| I shop online because I appreciate the ease of having the possibility of 24-hour shopping | 4.09  |   |   |   |   |   |
| I shop online because I can remain anonymous                                              | 2.55  |   |   |   |   |   |

|                                                                            |      |  |  |  |  |  |
|----------------------------------------------------------------------------|------|--|--|--|--|--|
| I shop online because the quality of my decision-making improves           | 3.18 |  |  |  |  |  |
| <b>Need for being social</b>                                               |      |  |  |  |  |  |
| In my online purchases, I trust my friends' reviews                        | 3.35 |  |  |  |  |  |
| In my online purchases, I trust the reviews of people on the Internet      | 2.88 |  |  |  |  |  |
| In my online purchases, I trust the reviews I read on social media         | 3.00 |  |  |  |  |  |
| In my online purchases, I trust the reviews I read from previous customers | 3.68 |  |  |  |  |  |
| I share my online purchases with my friends                                | 2.36 |  |  |  |  |  |

(\* 1: I disagree entirely, 2: I disagree, 3: Neither agree or disagree, 4: I agree, 5: I agree entirely)

(\*\* Red shows the choice with the largest percentage, and yellow the choice with the smallest.)

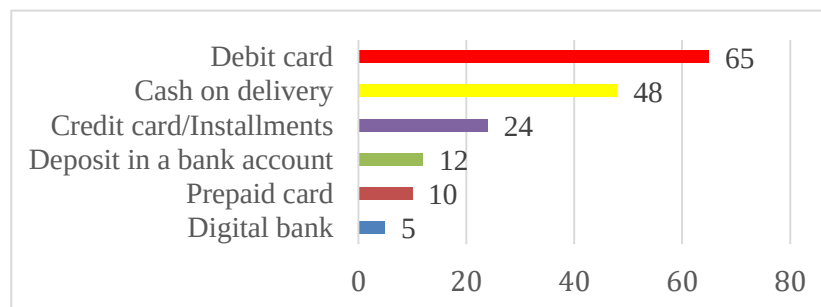
Research question 2: "In which business sectors are the most important changes observed?" This part included two questions: which products the respondents bought before, and during the pandemic. The results are presented in Table 3.

**Table 3: Types of online shopping (B)efore and (D)uring the pandemic (%)**

| Products                                      | I didn't buy any % |      | 1 time per year % |             | 1 time per month % |             | 1 time a week % |      |
|-----------------------------------------------|--------------------|------|-------------------|-------------|--------------------|-------------|-----------------|------|
|                                               | B                  | D    | B                 | D           | B                  | D           | B               | D    |
| Clothing/Footwear                             | 31.1               | 18.9 | <b>36.5</b>       | 31.1        | 31.1               | <b>47.3</b> | 1.4             | 2.7  |
| Pharmacy items/Dietary supplements            | 54.1               | 50   | <b>23</b>         | 18.9        | 20.3               | <b>23</b>   | 2.7             | 6.1  |
| Personal care/Cosmetics/Fragrances            | 47.3               | 44.6 | <b>28.4</b>       | 23          | 23                 | <b>29.7</b> | 1.4             | 2.7  |
| Homeware/Furniture/Household products         | 60.8               | 62.2 | <b>28.4</b>       | <b>25.7</b> | 9.5                | 9.5         | 1.4             | 2.7  |
| Electronic appliances (televisions, etc.)     | 50                 | 52.7 | <b>41.9</b>       | <b>40.5</b> | 5.4                | 5.4         | 2.7             | 1.4  |
| Electronic devices (cellphones, gaming, etc.) | 29.7               | 37.8 | <b>60.8</b>       | <b>51.4</b> | 6.8                | 9.5         | 2.7             | 1.4  |
| Tools, Gardening, DIY                         | 82.4               | 79.7 | <b>13.5</b>       | <b>12.2</b> | 1.4                | 5.4         | 2.7             | 2.7  |
| Books/Stationery/Music                        | 37.8               | 41.9 | <b>35.1</b>       | <b>25.7</b> | 20.3               | <b>25.7</b> | 6.8             | 6.8  |
| Entertainment (cinema, concerts, games, etc.) | 44.6               | 52.7 | <b>23</b>         | <b>23</b>   | 20.3               | 21.6        | 12.2            | 2.7  |
| Food, grocery goods/supermarket               | 67.6               | 55.4 | <b>6.8</b>        | <b>12.2</b> | 4.1                | 10.8        | 21.6            | 21.6 |
| Insurance (vehicle, health, pension)          | 70.3               | 73   | <b>17.6</b>       | <b>18.9</b> | 5.4                | 5.4         | 6.8             | 2.7  |
| Luxury products                               | 90.5               | 85.1 | <b>6.8</b>        | <b>9.5</b>  | 1.4                | 4.1         | 1.4             | 1.4  |
| Travel/Accommodation                          | 35.1               | 44.6 | <b>52.7</b>       | <b>45.9</b> | 6.8                | 6.8         | 5.4             | 2.7  |
| Education and online courses                  | 56.8               | 52.7 | <b>21.6</b>       | <b>17.6</b> | 12.2               | 10.8        | 9.5             | 18.9 |
| Pet care                                      | 86.5               | 86.5 | 4.1               | 4.1         | <b>8.1</b>         | <b>6.8</b>  | 1.4             | 2.7  |

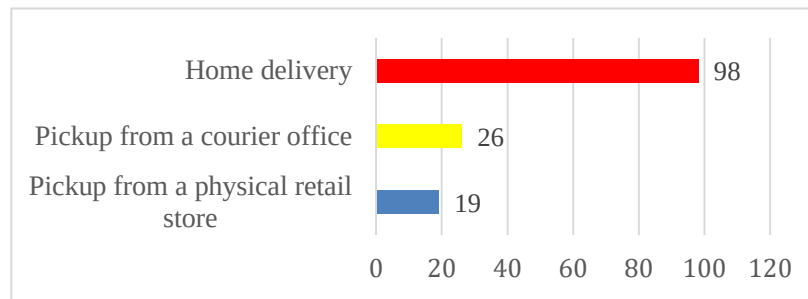
The research was not concerned with the comparison between the 15 examined product categories (due to their different nature and features); it focused instead on the comparison of the purchases made of these products, before and during the pandemic. The statistical paired t-test of the mean values showed no significant differences (Difference of Means=-0.038, df=14, p=0.351>0.05), which shows that both the kinds of products and their purchase frequency did not differ much from what consumers bought during the pandemic, and during the last 12 months in particular. Before the pandemic, across all product sectors – with the exception of pet care items – the highest percentage frequency (%) of purchases was that of once a year. Of special interest are the results for the following categories: Clothing/Footwear, Pharmaceutical items/Dietary supplements and Personal care / Cosmetics / Fragrances. Purchases made for these goods during the pandemic increased in the sense that, during the pandemic, they were being made one time per month instead of one time a year (the frequency of their purchase increased).

Research question 3: "What are the main methods of payment and delivery practices, and which advertising channel(s) influenced online shopping during the pandemic?" Regarding the method of payment for online purchases, payment by debit card and cash on delivery constituted the main payment methods (65% and 48%, respectively) (Figure 1).



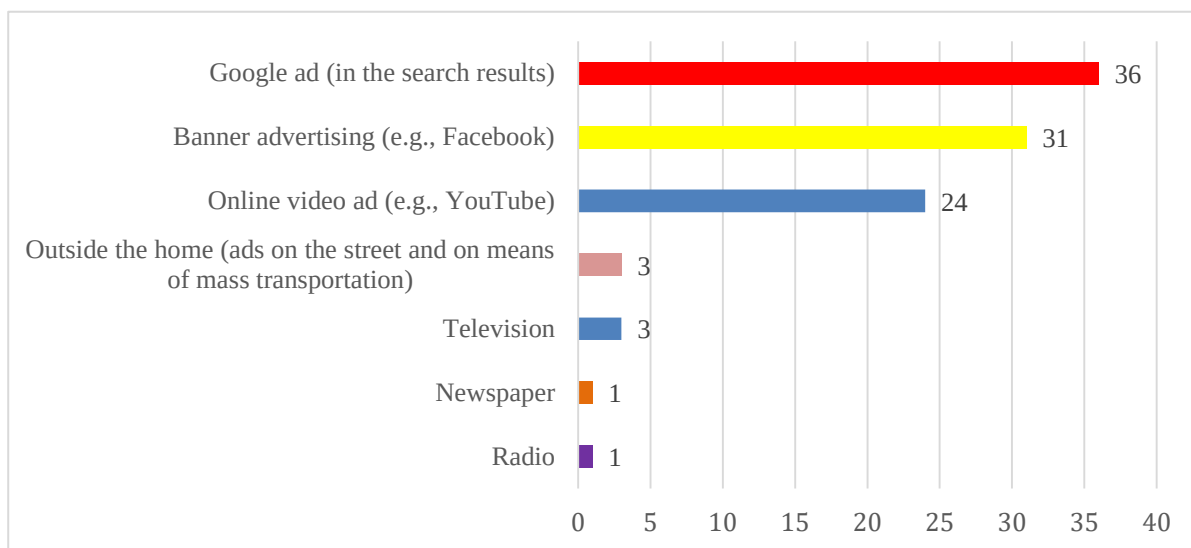
**Fig. 1 Methods of payment during the pandemic (% , multiple answers possible)**

Home delivery constituted the main method of delivering products to the consumers (98%), as shown in Figure 2.



**Fig. 2 Methods of product delivery during the pandemic (% , multiple answers possible)**

Google ads and advertising banners on social networks comprised the main channels that supported online purchases (36% and 31%, respectively). A significant percentage was also taken up with online advertising in the form of video presentations (24%).



**Fig. 3 Preferred advertising channels during the pandemic (% , multiple answers possible)**

Research question 4: "Will e-commerce continue as it has evolved today, even after the COVID-19 pandemic?" The responses for this question converge to the main conclusion that the Internet, and by extension e-commerce, will remain the main means of shopping in the future:

1. For the statement: "I will shop more on the Internet", a relatively positive view is identified, that the Internet will be the main means of shopping for the generation in question (where two out of five respondents agree or strongly agree).
2. On the opposite end of the spectrum to the previous statement, i.e., "I will shop less on the Internet", the same percentage of consumers (about one in two) expressed a positive opinion about how they will shop in the future.
3. Respondents gave similar answers to the statement: "I will shop in the same way". According to the responses (which were as expected according to the literature review and the results of the previous statements), this kind of consumer behavior will stay in the future (at a rate of about 70%).
4. On the opposite end of the spectrum to the previous statement, i.e. "I will not shop on the Internet", only one consumer stated that they had no intention to shop via the Internet in the future.

Finally, the consumer sample was asked to express their opinion on the degree of preparedness of businesses to the ever-increasing trend of ordering products/services online. Less than half (four out of ten) the respondents believed that local businesses are sufficiently equipped with the necessary digital capabilities, such as online stores, online payments, etc. for shopping online. The same applies for courier companies, while 7 out of 10 respondents agreed that today there are a multitude of applications that can support online shopping.

## V. CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The purpose of the study was to record the changes in the consumer behavior of Generation Z over the last two years during the COVID-19 pandemic. Four research questions were investigated in this paper.

Regarding the first research question: "What are the factors that have determined the new consumption habits of those who belong to Generation Z (i.e., is it just the pandemic that affected the markets or are there other factors as well)?", the results showed that the pandemic significantly increased their frequency of online shopping, and they confirmed that health reasons contributed to this to a great extent, in addition to the general benefits of using the Internet for online shopping. The results are in agreement with the studies of Winarsih and Fuad [9] and Barbu et al. [24].

For the second research question: "In which business sectors are the most important changes observed?", the findings of the research showed a change in consumers' behavior before and during the pandemic, but only for the product categories of Clothing/Footwear and Pharmaceutical items/Dietary supplements, as well for Personal Care/Cosmetics/Fragrances. Particularly concerning clothing, the results are the same with those of the study of Rossolov, Alosynskyi and Lobashov [25].

For the third research question: "What are the main methods of payment and delivery practices, and which advertising channel(s) influenced online shopping during the pandemic?", the results were as expected. Debit card payments and cash on delivery proved to be the most popular payment methods, door-to-door delivery is the main method of product delivery, while social networks were the main advertising channels that supported online shopping via the Internet.

Finally, for the fourth research question: "Will e-commerce continue as it has evolved today, even after the COVID-19 pandemic?", according to the responses (and as expected, according to the literature review), this kind of consumer behavior will remain in later years too. One of the more general findings that came out of the study was that Generation Z is looking for an additional social aspect to the online shopping process. The research findings also highlighted the need for e-retailers to redesign the content and function of their websites, as well as the need to increase their ability to be more dynamic and react faster and more effectively to the rapidly changing trends of the "new" market conditions, as they were created during the COVID-19 pandemic. Businesses operating in the e-commerce sector must focus on the digital capabilities of their consumers and clearly identify where they should earn their trust [26, 27]. Each of the above trends has accelerated significantly since the outbreak of the pandemic. As the research results showed, the impact of the pandemic on consumers' behavior has significant implications for businesses. Companies can no longer defend their pricing policies with factors that no longer have any benefits, and are not of critical importance for the consumer in the new reality [28].

The limitations of the research which are worth mentioning were the small sample size and the place of residence (in specific regions of Northern Greece), which both generally due to the short time were allocated to the data collection. The research could be extended by comparing the behavior of Generation Z with other generations.

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## ANNEX

### Questionnaire

#### Research question 1.

"What are the factors that have determined the new consumption habits of consumers who belong to Generation Z (i.e., is it just the pandemic that affected the markets or were there other factors as well)?"

|                                                                                                                                                        |   |   |   |   |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| <b>Agree or disagree</b> with the following:<br>(1: I entirely disagree, 2: I disagree, 3: Neither agree or disagree, 4: I agree, 5: I entirely agree) | 1 | 2 | 3 | 4 | 5 |
| During the pandemic, I shop <b>more</b> on the Internet                                                                                                |   |   |   |   |   |
| During the pandemic, I shop <b>less</b> on the Internet                                                                                                |   |   |   |   |   |
| The pandemic <b>did not affect</b> my purchases from the Internet                                                                                      |   |   |   |   |   |
| <b>I don't shop</b> from the Internet                                                                                                                  |   |   |   |   |   |

#### Why did I shop online during the pandemic?

|                                                                                                                                                        |   |   |   |   |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| <b>Agree or disagree</b> with the following:<br>(1: I disagree entirely, 2: I disagree, 3: Neither agree or disagree, 4: I agree, 5: I agree entirely) | 1 | 2 | 3 | 4 | 5 |
| <b>Health fears</b>                                                                                                                                    |   |   |   |   |   |
| By shopping online, I avoid congestion in the stores                                                                                                   |   |   |   |   |   |
| By shopping online, I avoid congestion on means of transport                                                                                           |   |   |   |   |   |
| By shopping online, I can choose the delivery point                                                                                                    |   |   |   |   |   |
| <b>Convenience/ease of shopping</b>                                                                                                                    |   |   |   |   |   |
| I shop online because it is easier to see discounts and prices                                                                                         |   |   |   |   |   |
| I shop online because I have a greater variety of goods available                                                                                      |   |   |   |   |   |
| I shop online because it is a good way for me to buy things when time is lacking                                                                       |   |   |   |   |   |
| I shop online because it may save me time from visiting many shops                                                                                     |   |   |   |   |   |
| I shop online because I can gather more information                                                                                                    |   |   |   |   |   |
| I shop online because I appreciate the ease of having the possibility of 24-hour shopping                                                              |   |   |   |   |   |
| I shop online because I can remain anonymous                                                                                                           |   |   |   |   |   |

|                                                                            |  |  |  |  |  |
|----------------------------------------------------------------------------|--|--|--|--|--|
| I shop online because the quality of my decision-making improves           |  |  |  |  |  |
| <b>Need for being social</b>                                               |  |  |  |  |  |
| In my online purchases, I trust my friends' reviews                        |  |  |  |  |  |
| In my online purchases, I trust the reviews of people on the Internet      |  |  |  |  |  |
| In my online purchases, I trust the reviews I read on social media         |  |  |  |  |  |
| In my online purchases, I trust the reviews I read from previous customers |  |  |  |  |  |
| I share my online purchases with my friends                                |  |  |  |  |  |

### **Research question 2.**

**"In which business sectors are the most important changes observed?"**

**Before the pandemic**, how often did you buy the following goods via the Internet?

| <b>Products</b>                                        | <b>I didn't purchase</b> | <b>1 time a week</b> | <b>1 time a month</b> | <b>1 time a year</b> |
|--------------------------------------------------------|--------------------------|----------------------|-----------------------|----------------------|
| Clothing/Footwear                                      |                          |                      |                       |                      |
| Pharmacy items/Dietary supplements                     |                          |                      |                       |                      |
| Personal care/Cosmetics/Fragrances                     |                          |                      |                       |                      |
| Homeware/Furniture/Household products                  |                          |                      |                       |                      |
| Electronic appliances (televisions, white goods, etc.) |                          |                      |                       |                      |
| Electronic devices (cellphones, gaming, etc.)          |                          |                      |                       |                      |
| Tools, Gardening, DIY                                  |                          |                      |                       |                      |
| Books/Stationery/Music                                 |                          |                      |                       |                      |
| Entertainment (cinema, concerts, games, etc.)          |                          |                      |                       |                      |
| Food, grocery goods/supermarket                        |                          |                      |                       |                      |
| Insurance (vehicle, health, pension)                   |                          |                      |                       |                      |
| Luxury products                                        |                          |                      |                       |                      |
| Travel/Accommodation                                   |                          |                      |                       |                      |
| Education and online courses                           |                          |                      |                       |                      |
| Pet care                                               |                          |                      |                       |                      |

In the last 12 months, **during the pandemic**, how often did you buy the following goods via the Internet?

| <b>Products</b>                                        | <b>I didn't purchase</b> | <b>1 time a week</b> | <b>1 time a month</b> | <b>1 time a year</b> |
|--------------------------------------------------------|--------------------------|----------------------|-----------------------|----------------------|
| Clothing/Footwear                                      |                          |                      |                       |                      |
| Pharmacy items/Dietary supplements                     |                          |                      |                       |                      |
| Personal care/Cosmetics/Fragrances                     |                          |                      |                       |                      |
| Homeware/Furniture/Household products                  |                          |                      |                       |                      |
| Electronic appliances (televisions, white goods, etc.) |                          |                      |                       |                      |
| Electronic devices (cellphones, gaming, etc.)          |                          |                      |                       |                      |
| Tools, Gardening, DIY                                  |                          |                      |                       |                      |
| Books/Stationery/Music                                 |                          |                      |                       |                      |
| Entertainment (cinema, concerts, games, etc.)          |                          |                      |                       |                      |
| Food, grocery goods/supermarket                        |                          |                      |                       |                      |
| Insurance (vehicle, health, pension)                   |                          |                      |                       |                      |
| Luxury products                                        |                          |                      |                       |                      |
| Travel/Accommodation                                   |                          |                      |                       |                      |
| Education and online courses                           |                          |                      |                       |                      |
| Pet care                                               |                          |                      |                       |                      |

### **Research question 3.**

**"What are the main methods of payment and delivery practices, and which advertising channel(s) influenced online shopping during the pandemic?"**

Which **payment method** did you use for your online purchases during the pandemic?

- Cash on delivery
- Debit card
- Credit card/Installments
- Prepaid card



- Deposit into a bank account
- Digital bank

What **delivery options** did you usually prefer for your online purchases?

- Home delivery
- Pickup from a retail store
- Pickup from a courier office

Which of the following **advertising channels** has had the most impact on your overall online shopping?

- Television
- Radio
- Newspaper
- Outside the home (advertising on the street and on public transport)
- Banner advertising (e.g. Facebook)
- Google advertising (in search results)
- Online video advertising (eg YouTube)

#### **Research question 4.**

“Will e-commerce continue as it has evolved today, even after the COVID-19 pandemic?”

How likely are you to continue to use the shopping practices that were adopted during the COVID-19 pandemic in the future?

| <b>Agree or disagree</b> with the following:<br>(1: I disagree entirely, 2: I disagree, 3: Neither agree or disagree, 4: I agree, 5: I agree entirely) | 1 | 2 | 3 | 4 | 5 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| I will shop <b>more</b> on the Internet                                                                                                                |   |   |   |   |   |
| I will shop <b>less</b> on the Internet                                                                                                                |   |   |   |   |   |
| I will shop in the <b>same</b> way                                                                                                                     |   |   |   |   |   |
| <b>I will not shop</b> on the Internet                                                                                                                 |   |   |   |   |   |

| <b>Agree or disagree</b> with the following:<br>(1: I disagree entirely, 2: I disagree, 3: Neither agree or disagree, 4: I agree, 5: I agree entirely) | 1 | 2 | 3 | 4 | 5 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| Local businesses are adequately equipped with the necessary digital capabilities, such as online stores and online payments                            |   |   |   |   |   |
| Courier companies are adequately equipped with the necessary digital capabilities                                                                      |   |   |   |   |   |
| Today there are many applications that support online shopping                                                                                         |   |   |   |   |   |

#### **Demographic information**

Gender

- Male
- Female

Educational level

- Secondary education
- Vocational training
- University
- Masters/PhD

Place of residence

- Big city (population > 500,000)
- Small city (population 50,000-500,000)
- Region with a population of less than 50,000