

# Analysis of the use of e-commerce platforms by students during the sars-cov-2 pandemic crisis

~ Ph. D. Lecturer **Mihaela Cornelia Sandu** (University of Bucharest, Bucharest, Romania)

E-mail: [mihaela.sandu@faa.unibuc.ro](mailto:mihaela.sandu@faa.unibuc.ro)

~ Ph. D. Lecturer MBA **Valentin Mihai Leoveanu** (University of Bucharest, Bucharest, Romania)

E-mail: [valentin.leoveanu@faa.unibuc.ro](mailto:valentin.leoveanu@faa.unibuc.ro)

**Abstract:** The objective considered in the research undertaken by the authors is the investigation of students from the Faculty of Public Administration and Business at the University of Bucharest on how to use e-commerce platforms during the SARS-CoV-2 pandemic crisis in 2020 from Romania. The analytical approaches focused on the frequency of use of e-commerce platforms during this period, but also compared to previous periods, the ways of accessing these platforms, the categories of products and services purchased, the typology of problems encountered in accessing and using, as well as methods of payment and delivery most frequently used.

The analysis was based on a research methodology, both quantitative and qualitative, on the conditions and factors that determined the developments regarding the use of e-commerce platforms by students. The quantitative research was based on the analysis of a questionnaire containing 19 questions on the characteristics and determinants of the use of e-commerce platforms in 2020 by students. Qualitative research explores how the determinants of e-commerce use are placed in the context of the SARS-COV-2 pandemic crisis in Romania.

The results of the present study highlight the leading factors that influence students' purchases based on accessing e-commerce platforms, as well as the elements that could determine the increase in traffic within them.

**Keywords:** E-commerce, SARS-COV-2 pandemic, Social Media, security of payments, delivery methods

**JEL:** C15, C51, D91, F14, M2

## 1. Introduction

The e-commerce services offered through dedicated platforms have experienced a really significant increase in Romania in 2020, a fact noted by some studies and market research. This growth has been based on the increasing access of users to Internet services, the diversification and improvement of these services, as well as technological developments in terms of facilities offered through these e-commerce platforms and the increasing use of online payments. In this sense, among the reports regarding the evolutions on this market is the study prepared by iSense Solutions for GpeC: "The number of online shoppers increased by 8% in 2020 compared to 2019, and the number of people who pay online with the card increased by 14% this year compared to 2019" (GpeC, 2020a). Also, the Romanian Association of Online Stores (ARMO) shows that "the Romanian e-commerce sector will reach EUR 5.5 billion in 2020, an increase of 30% over the previous year. The COVID-19 pandemic has accelerated the development of e-commerce on the local market, which is expected to grow by 30% compared to 2019" (GpeC, 2020b).

According to GPeC in 2019 online shopping exceeded 4.3 billion lei with 20% more than 2018. It seems that Romanian citizens spend around 12 million euro per day. Only 23% of citizens made online shopping in 2019. 71.9% of online shopping were made using a smartphone and 29.1% using a desktop. In 2019, 56% of internet users made online shopping at least once a month. The reason people choose to buy online are low prices and quick delivery. It seems that in 2019 the most visited online market was emag.ro. About the payment mode, 80% people prefer to pay cash at the delivery and only 20% to pay using a credit card (GPeC, 2020c).

In this respect, both authors find as an important subject of research the evolution of e-commerce services in Romania. The objective considered in this research undertaken by the authors is the investigation of students from the Faculty of Public Administration and Business at the University of Bucharest on how to use e-commerce platforms during the SARS-CoV-2 pandemic crisis in 2020 from Romania. The analytical approaches focused on the frequency of use of e-commerce platforms during this period, but also compared to previous periods, the ways of accessing these platforms, the categories of products and services purchased, the typology of problems encountered in accessing and using, as well as methods of payment and delivery most frequently used.

The analysis was based on a research methodology, both quantitative and qualitative, on the conditions and factors that determined the developments regarding the use of e-commerce platforms by students.

## 2. Literature review

A paper of Popescu et al. shows "the advantages and disadvantages of e-commerce, the electronic commerce versus traditional commerce as well as the electronic commerce in Romania" (Popescu, et al., 2015) underlying as advantages the following: "the availability of virtual stores: program almost non-stop, every day of the year; the possibility of free decision; the possibility of purchasing products even outside the borders of the country the buyer; communication, particularly internationally, low cost" (Popescu et al., 2015).

Veith and Dogaru express in their research that “the crisis caused by the COVID-19 virus has affected both the economic environment and the daily lives of all citizens” but also that “digitization has been accelerated in all environments and areas of activity”. As a result, “the change was not only related to the use of new technology and remote work, but also to the transition in a time of crisis, dominated by panic and concern for citizens for their own safety and health” (Veith and Dogaru, 2020).

Leoveanu analyze in his work how “tendencies of using mobile banking and mobile payments applications by consumers” in e-commerce led to a substantial development of e-commerce businesses “from the point of view of the increase of sales and profit, also showing an increase in the number of mobile payments companies in the conditions of diversification of their services” (Leoveanu, 2019).

Another investigation undertaken by Singh & Rishi reveals that “the Internet is changing the method of selling and purchasing items. Nowadays online trading replaces offline trading” and that “the items offered by the online system can influence the nature of buying customers” (Singh and Rishi, 2020).

According to Rizan, Febrilia and Wibowo “in the e-commerce industry, good quality and perception could positively influence customers but not necessarily form loyalty. For that, e-commerce players should pay a lot of attention on customer satisfaction” (Rizan, et al., 2020).

The research of Li, Zeng and Ye “reveal how e-commerce affects the income gap between urban and rural areas in the context of developing world” and that “the government should create more favorable conditions for the popularization of rural e-commerce and advance the turning point” (Li, Zeng and Ye, 2020).

Goldman et al. scrutinize in their paper “the impact of strategic orientations on the use of digital marketing tactics and [...] on the international business performance of small electronic retailers (e-retailers) in cross-border electronic commerce (e-commerce)”. In this regard, they acknowledge that “growth orientation only has a positive effect on e-retailers from developed e-commerce markets, while customer orientation negatively affects e-retailers from emerging e-commerce markets. The differences between e-retailers from developed and emerging e-commerce markets are prominent and show that markets should not be considered as either uniform or generalizable” (Goldman et al., 2020).

The paper of Shirazi et al. “finds a mediating effect of trust in developing satisfaction. Social media activities facilitate a positive level of trust that in turn creates a satisfying environment for customers in social commerce” (Shirazi et al., 2020).

Liu, Fei and Yan shows in their analyze “the growing importance of sellers’ response to online customer reviews, especially to negative reviews, has a significant positive effect on its sales” underlying that “e-commerce platform companies should provide the necessary technical support to accelerate the formation of online communities” (Liu, Fei and Yan, 2020).

In this respect, linked to the previous research appears to be the paper of Liu, Wang and Jia that endeavor “to make good use of the massive amount of online user comment data to explore and analyze the dimensions of customer-perceived value and the importance of each dimension” (Liu, Wang and Jia, 2020).

### 3. Research methodology

The analysis was based on a research methodology, both quantitative and qualitative, on the conditions and factors that determined the developments regarding the use of e-commerce platforms by students. The quantitative research was based on the analysis of a questionnaire containing 19 questions on the characteristics and determinants of the use of e-commerce platforms in 2020 by students. The questionnaire was divided in two parts – a part with demographic questions and a part with questions about using e-commerce.

In order to perform the statistical analysis, a series of working hypotheses were taken into account.

H1: More people will prefer online shopping after COVID-19 than before

H2: There is a significant difference between people that use a smartphone and people that use other devices for online shopping

H3: There is a direct influence of delivery method on use of e-commerce

H4: There is a direct influence of payment method on use of e-commerce

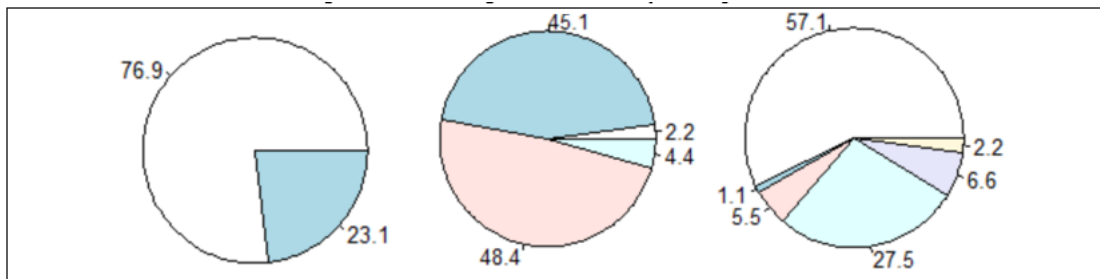
Qualitative research explores how the determinants of e-commerce use are placed in the context of the SARS-COV-2 pandemic crisis in Romania.

### 4. Results and discussions

#### Subjects

The sample is formed by 150 respondents, students at Faculty of Business and Administration, University of Bucharest. 76.9% of respondents were female and 23.1% were male.

Figure 1: Gender, age and residence of the respondents

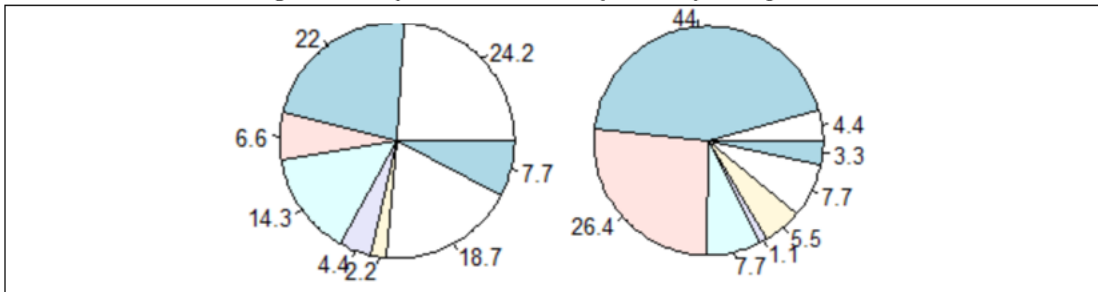


Source: authors' analysis and calculations

From all respondents, 45.1% were 18-20 years old, 48.4% were 21-24 years old, 4.4% were 25-30 years old and 2.2% were more than 30 years old.

A percentage of 57.1% has the residence in Bucharest, 40.7% in the rest of the country (Crisana, Moldova, Muntenia, Oltenia) and 2.2% are from Moldavia.

Figure 2: Size of income and sources of income of the respondents



Source: authors' analysis and calculations

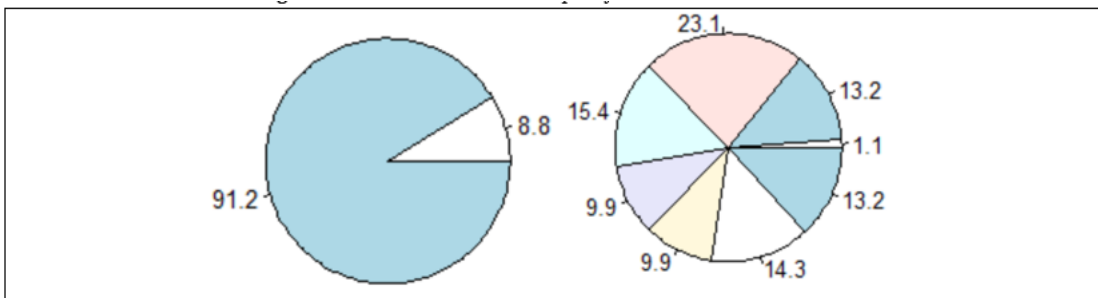
Most respondents have an income situated between 0 and 500 lei (24.2% from total) and between 1001 and 1500 lei (22% from total); 18.7% have an income between 501 and 1000 lei, 14.3% between 2001 and 2500 lei, 7.7% more than 3500 lei, 6.6% between 1501 and 2000 lei, 4.4% between 2501 and 3000 lei and 2.2% between 3001 and 3500 lei. About the source of income, 44% said parents give them money, 26.4% have them own salary, 8.8% said salary and parents, 7.7% scholarship and parents, 5.5% scholarship, 3.3% scholarship and salary and 4.4% have other sources of income.

Most students have a smartphone, 97.8%. All of them use social media networks.

Findings

Descriptive statistics

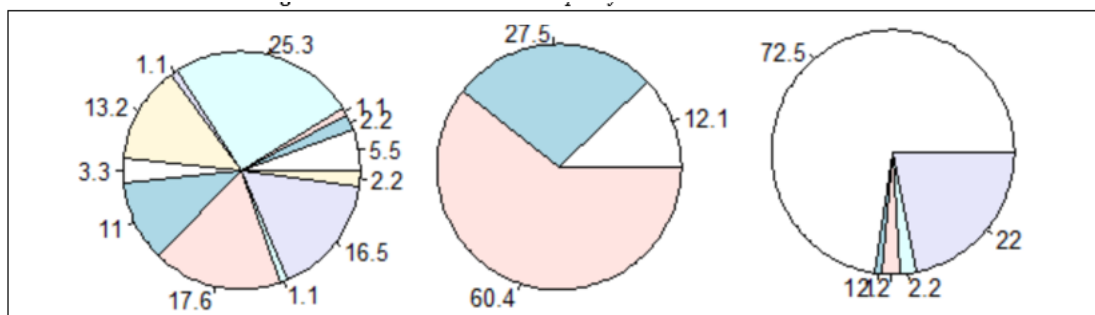
Figure 3: E-commerce use and impact factors on e-commerce use



Source: authors' analysis and calculations

A percentage of 91.2% from respondents use e-commerce. About the factors that determine them to use e-commerce, 23.1% said saving time, 15.4% said lack of congestion (queues), 14.3% said is ease to compare products and prices, 13.2% said the variety of products or the multitude of choices, 13.2% said because is available 24/7, 9.9% said it has better prices than in traditional trade, 9.9% said the transaction is very fast and 1.1% said the procurement is confidential.

Figure 4: E-commerce use and impact factors on e-commerce use



Source: authors' analysis and calculations

About the frequencies of buying using e-commerce, 25.3% said they use it once a month, 17.6% once a few months, 16.5% twice a month, 13.2% once a week, 11% once at 2-3 days, 5.5% daily, 3.3% once a year, 2.2% daily or once a few months and 2.2% twice or once a month.

60.4% of respondents said they use e-commerce more after than before COVID-19, 27.5% said they don't use more e-commerce and 12.1% said they don't know if they use e-commerce more or not than before COVID-19.

About the money they spend on buying using e-commerce platforms, 72.5% said they spend between 0 and 500 lei, 22% said they spend between 501 and 1000 lei, 2.2% said they spend between 1501 and 2000 lei, 2.2% said they spend between 1001 and 1500 lei and 1.1% said they spend between 0 and 500 lei or between 501 and 1000 lei.

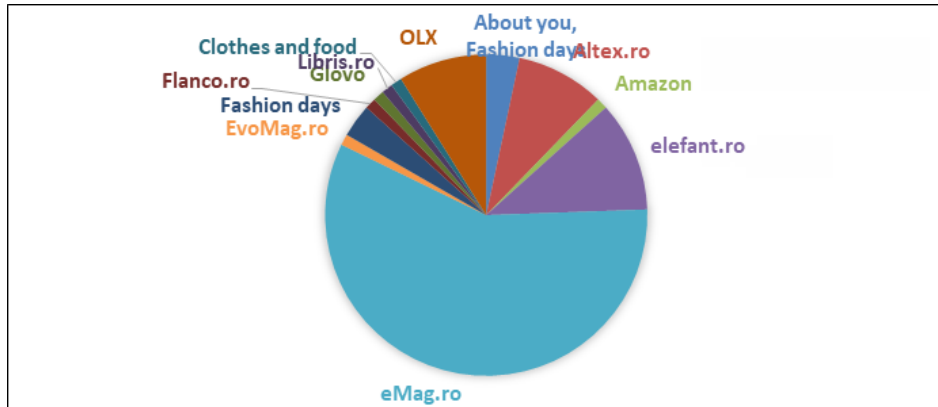
The majority, 59.3%, said they use a smartphone to make an online order, 16.5% said they used the laptop or notebook, 15.4% said they used them tablet/ iPad or iPhone and 8.8% used them desktop.

Online platform most visited by respondents was emag.ro (57.1%), followed by elephant.ro (11%), Altex.ro (8.8%), OLX (8.8%), Fashion days (3.3%), About you (3.3%) and next Amazon, EvoMag.ro, Flanco.ro, Glovo, Libris and clothes store (1.1% each).

About the payment mode, 44% used a credit card, 41.8% paid at delivery, 14.3% credit card and payment at delivery.

The delivery method preferred by the respondents is courier delivery with a percent of 93.4%; the rest of 6.6% prefer to pick the products from showroom.

Figure 5: Use of E-commerce platforms



Source: authors' analysis and calculations

Most respondents (50.5%) buy clothes and accessories using e-commerce, followed by electronics (14.3%), products for beauty and personal care (9.9%), books (8.8%), food (8.8%), cars (3.3%) and IT products (3.3%).

A percentage of 62.6% of respondents said they didn't face with any problem; the rest of 37.4% said the products don't correspond with the description (17.6%), product and money return (11%), delivery (5.5%), credit card fraud (1.1%), payment problems (1.1%), technical problems with the demand (1.1%).

About the security problems, 48.4% said they are afraid of fraud, 20.9% named privacy risk, 6.6% named the difficulty of protecting intellectual property rights and 24.2% said they don't see any problems.

### Hypothesis testing

H1: More people will prefer online shopping after COVID-19 than before

From all respondents that didn't use e-commerce before COVID-19, 62.5% declared that they use e-commerce now. From all respondents that used e-commerce before COVID-19, 76% declared they use more often e-commerce now. We can say that COVID-19 had a positive impact on growing of e-commerce. The hypothesis is confirmed.

H2: There is a significant difference between people that use a smartphone and people that use other devices for online shopping

From all smartphone owners, 91.2% use e-commerce and from all owners of other devices, 91.3% use e-commerce. In our case we can say that young people use e-commerce regardless of device used. This hypothesis is not confirmed.

H3: There is a direct influence of delivery method on use of e-commerce

From all respondents that use e-commerce, 91.8% prefer courier delivery and 83.3% to pick up from showroom. This hypothesis is confirmed and we can say the variety of delivery methods

has a positive impact on using e-commerce.

H4: There is a direct influence of payment method on use of e-commerce

From all respondents that use e-commerce, 86.8% prefer paying using a credit card and 92.1% paying cash at delivery. We can say in this case the variety of payment methods have a positive influence on using e-commerce, so the hypothesis is confirmed.

## 5. Conclusions

The results of the present study highlight the leading factors that influence students' purchases based on accessing e-commerce platforms, as well as the elements that could determine the increase in traffic within them.

The questionnaire developed in our study allowed us to see that young people use e-commerce. The variety of methods of payment and delivery, the variety of products, the possibility to see reviews of the products and to compare prices determine people to use this kind of commerce. Even people are afraid of fraud, the variety of advantages of using e-commerce determine them to use in more and more often.

Pandemic COVID-19 kept us in the houses, stores have a special program, people are working from home and school is also online. In this context, more and more people prefer to buy online. The contact with other people is reduced so the risk of infection with COVID-19 is lower. In this context, as we can see in our study, young people also buy online. Even if the study developed by GPeC said that people prefer using smartphone to buy online, we can see in our study that the device used does not influence using e-commerce.

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