# Impact of the covid-19 Pandemic on the Shopping Behavior of University Students

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Abstract: The covid-19 pandemic has evolved e-commerce and accelerated the existing trends in the adoption of e-commerce by a significant portion of consumers. The governments, in their effort to limit the spread of the virus, imposed quarantine and restrictive measures on the movements of citizens. Thus, consumers turned to online shopping to satisfy their purchasing needs.

This paper examines the behavior of Greek university students towards online and mobile shopping.

The paper mentions the new trends created by the pandemic in ecommerce globally and nationally.

The purpose of this work was to study the effect of the covid-19 pandemic on the purchasing behavior of university students in the island of Crete, Greece. For this reason, a Google Forms questionnaire was created.

The results of the survey showed that Greek university students increased their purchases through e-shopping and male students continued to purchase more than female students in the current era.

Keywords: e-commerce, shopping habits, mobile shopping, online shopping, university students

# I. INTRODUCTION

It is a common finding among scholars that the COVID-19 pandemic has led to a remarkable increase in online shopping around the world. Consumers show an increasing tendency to use electronic shopping through smart mobile phones (mobile shopping), thus making this environment more competitive compared to the environment of electronic shopping through a computer (online shopping) (JungLee, 2017). Many point out that this trend will continue, at a more even pace, in the post-covid-19 era (Zwanka & Buff, 2020).

The covid-19 pandemic is characterized as turning point in human history and the world's consumer habits (Keane & Neal, 2021), shaping a new generation (Zwanka & Buff, 2020). This generation will be more aware of environmental protection and ecology in general. Consequently, new products and services will emerge as a result of the needs of the new generation of consumers (Mehta et al., 2020).

Di Crosta et al. (2021) focused on the psychological consequences of the covid-19 pandemic in relation to people's consumption habits. They point out that many consumers, trying to find a way out of the psychological pressure due to the pandemic and the restrictive measures, were led to online purchases of necessary but and unnecessary goods.

The daily use of social media by billions of users around the world has made it an important means of information, information and communication. The dissemination of news and information, but also the circulation of rumors, conspiracy scenarios and misinformation during the covid-19 pandemic, sometimes created a climate of panic among the public (Naeem, 2021). In addition, the government policies and choices of each country such as bans on the movement of citizens and the closing of shops (lockdown) created conditions of panic resulting in the mass supply of basic necessities (Keane & Neal, 2021).

As eMarketer reports ecommerce sales will exceed \$5 trillion in 2022 while the retail ecommerce sales will increase up to \$7.391 (in trillions) in 2025. Fig. 1 illustrates what retail ecommerce spending is expected by 2025.

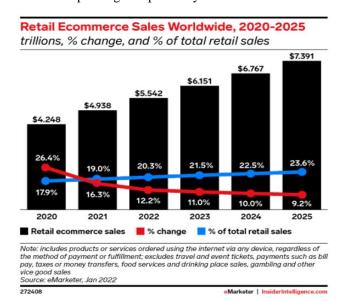


Fig. 1 Ecommerce spending is expected by 2025

The purpose of this work is to study the effect of the Covid-19 pandemic on the purchasing behavior of university students in the island of Crete, Greece, towards electronic commerce (online shopping) and commerce through smart portable devices (smart phones, tablets, etc.) (Mobile shopping). In particular, this research will examine the changes that took place in online shopping and in mobile shopping.

The research question was, how much the covid-19 pandemic affected Greek students' e-shopping habits. The methodological approach of the research is quantitative with

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the questionnaire as a tool. The work will provide information on the post-covid19 purchasing behavior of Greek students, adding another stone to the edifice of consumption and purchasing behavior.

# II. METHODOLOGY

The methodological approach of the research is quantitative with the questionnaire as a tool. They responded 122 university students through google forms. The reliability of the questionnaire was checked using the Cronbach's Alpha coefficient with a value of 0.795, quite acceptable.

### III. RESULTS

Question 1: What is your gender?

Findings of this research, with an overall sample of 122 responses from university students, of whom 77 (63.1%) were women and 45 (36.9%) were men, is shown in Fig. 1.

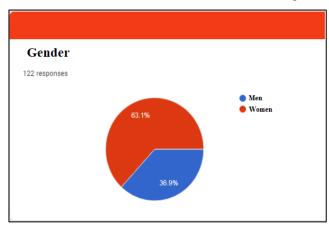


Fig. 2 Students' Gender

Question 2: What is your age?

The age distribution of the responding students was, age group 18 to 19: 39 (32%), 19 to 20: 17 (13.9%), 20-21: 16 (13.1%), 21-22: 29 (23.8%), 22-23: 19 (15.6%) and over 23, 2 (1.6%). Fig. 2 shows the age groups of the responding students to the research shows the age groups of the responding students to the research.

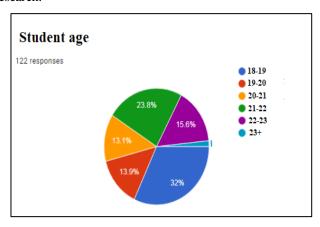


Fig. 3 Age groups of the responding students

Question 3: What device do you use to connect to the internet?

Students responses were as follows: 18 students (14.8%) connect to internet using desktop computer, 14 (11.5%) students connect using laptops, 2 (1.6%) connect using tablets, while 88 (72.1%) students connect using mobile phones. Fig. 3 shows the percentage of the responses.

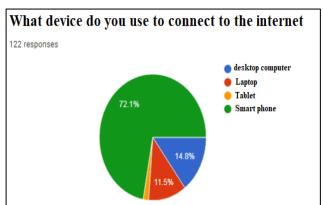


Fig. 4 Students' responses to the type of device for the internet use

Question 4: How online shopping habits have changed

Students' responses of how their online shopping habits have changed today compared to the pre-covid era, as shown in Fig. 4, 121 out of 122 responded that 35 (28.9%) shop less online, 44 (36.4%) responded they carry out the same online transactions, while 42 (34.7%) responded they carry out more online transactions. findings show equal distribution between the three choices given.

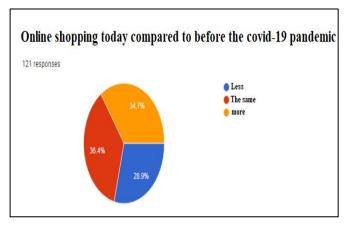


Fig. 5 How online shopping habits have changed today compared to the precovid era

Statement 1: I prefer mobile shopping because I always have the device with them

Regarding students' preference for mobile shopping because they always have it with them, as shown in Fig. 5, 33 (27.3%) students disagree with this statement, 36 (29.8%) responses were neutral, neither agreeing nor disagreeing, while 52 (43%) students agree with this point of view.

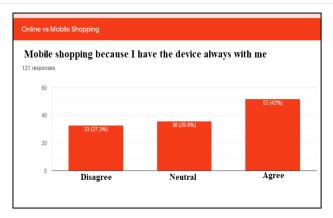


Fig. 6 Mobile shopping because they always have it with them

Statement 2: I prefer online shopping because the device has a large screen

Fig. 6 shows students' responses to the statement "I prefer online shopping because the device has a large screen". Out of 120 respondents 41(34.2%) students disagree with the statement, 43 (35.8 %) responses were neutral (they neither agree nor disagree with the statement), while 36 (30 %) students agree with this point of view.

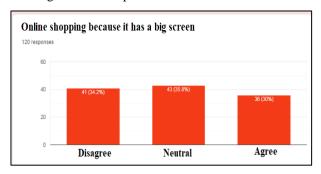


Fig. 7 I prefer online shopping because the device has a large screen

Statement 3: I prefer mobile shopping because it is "faster"

Fig. 7 illustrates how students' responses split between Disagree, Neutral and Agree. Almost 50% agree with the statement. Specifically, 53 (43.8%) students prefer mobile shopping because it is "faster", 33 (27.3%) students neither agree nor disagree with the statement and 35 (28.9%) students disagree.

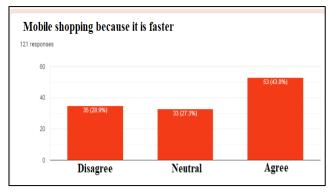


Fig. 8 I prefer mobile shopping because it is "faster"

Statement 4: I prefer mobile shopping because the transactions are more secure

Fig. 8 illustrates students' responses to the statement regarding their preference for online shopping because the transactions are more secure split almost equally between disagree, neutral and agree. Of 119 students who responded, 39 (32.8%) students disagree with the statement, 40 (33.6%) responses were neutral, while 4 0(33.6%) students agree with the statement.

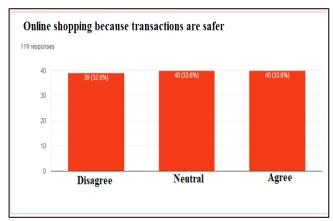


Fig. 9 I prefer mobile shopping because the transactions are more secure

Statement 5: I prefer mobile shopping because it has many different applications for shopping

A total of 120 students (out of 122) responded to the statement regarding their preference to mobile shopping because it has many different applications for shopping. As shown in Fig. 9, 44 (36.7%) students disagree with this statement, 36(30%) students of the responded were neutral, while 40 (33.3%) students agree with this statement.

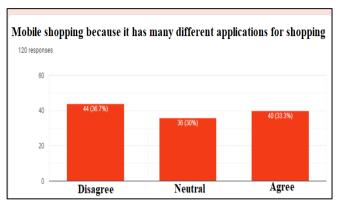


Fig. 10 I prefer mobile shopping because it has many different applications for shopping

The following responses were obtained regarding students' preferences for online shopping because it has many possibilities to process and manage the user's choices. As shown in Fig. 10. 121 students responded as follows: 34 (28.1%) students disagreed with the statement, 43 (35.5%) students' responded neutral, while 44 (36.4%) students agreed with the statement.

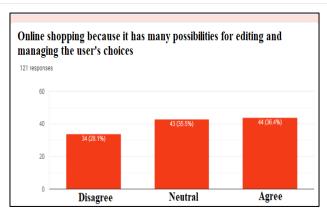


Fig. 11 I prefer online shopping because it has many possibilities to process and manage the user's choices

Then the existence of statistical significance between the statement-variables (dependent) and the independent gender, age and how online shopping habits have changed was investigated with statistical tests. Statistical significance appeared in the chi square examination of the variables "Gender" and "How online shopping habits have changed".

A Chi-Square Test of Independence was performed to assess the relationship between the change of online shopping habits and gender. There was a significant relationship between the two variables,  $x^2(2, N=122) = 113,799$ , p = .00. Female students were less likely to buy more products compared to male students.

# IV. CONCLUSION

The conclusions based on findings are: The use of the smart mobile phone is a dominant trend of the respondents for both the place and the method of connecting to the internet, with percentages from 54% to 72%.

Regarding students' preference for online or mobile shopping, the results show that:

- They prefer mobile shopping because they always have it with them.
- They maintain a neutral attitude and do not choose online shopping for the larger screen.

- They prefer mobile shopping because it is faster and more direct.
- Regarding transaction security, students feel that they are making secure online purchases regardless of the device used.
- Students do not share the opinion that mobile shopping has many different applications for their purchases.
- They support the view that online shopping provides more possibilities to process and manage their choices.

The research shows that in the era of the "new normality", students trust e-commerce while male students buy more nowadays.

In this study some limitations should be considered by future research. This research was done only in one university in Greece. Moreover, e-shopping didn't based on product categories so a future research could examine the specific shopping preferences of products.

## REFERENCES

- [1] Di Crosta, A., Ceccato, I., Marchetti, D., La Malva, P., Maiella, R., Cannito, L., et al. (2021). Psychological factors and consumer behavior during the COVID-19 pandemic. PLoS ONE, 16 (8): e0256095. https://doi.org/10.1371/journal.pone.0256095
- [2] eMarketer(2022).https://www.insiderintelligence.com/content/glob al-ecommerce-forecast-2022
- [3] Keane, M.P., & Neal, T. (2020). Consumer panic in the COVID-19 pandemic. Journal of Econometrics, 220, 86 - 105.
- [4] JungLee, H. (2017). The Differential Factors Influencing Online & Mobile Shopping Behavior. Journal of Distribution Science, 15, 27-36.
- [5] Mehta, S., Saxena, T., & Purohit, N. (2020). The New Consumer Behaviour Paradigm amid COVID-19: Permanent or Transient? Journal of Health Management, 22(2), 291-301. doi: 10.1177/0972063420940834.
- [6] Naeem, M. (2021). Do social media platforms develop consumer panic buying during the fear of Covid-19 pandemic? Journal of Retailing and Consumer Services, 58, 102226. https://doi.org/10.1016/j.jretconser.2020.102226
- [7] Zwanka, J. R. & Buff, C. (2020). COVID-19 Generation: A conceptual framework of the consumer behavioral shifts to be caused by the COVID-19 pandemic. Journal of International Consumer Marketing, 33(1), 58-67. doi: 10.1080/08961530.2020.1771646.