ORIGINAL SCIENTIFIC PAPER

The Role of Online Shopping in the Republic of Serbia During COVID-19

Đina Ivanović[1]* | **Marija Antonijević[1]**

[1] Institute of Economic Sciences, Belgrade, Serbia

ABSTRACT

This paper investigates the role of online shopping during severe COVID-19. The main aim is to see whether this virus and implemented measures of reducing the spread of contagion brought by the Government of the Republic of Serbia, resulted with changes in consumer behaviour. The data was collected from 408 respondents from the Republic of Serbia using an online questionnaire. The questionnaire lasted from 07th April until 04th May. Data were analysed using the Chi-Square test. Results of this study revealed that there is a significant association between purchasing online before and after the appearance of the COVID-19. Also, the authors conclude that there is no significant association between gender and the decision to purchase after the appearance of the COVID-19. The main three motives for online shopping in the period during COVID-19 were that too many stores are working only online, reducing health risk, and saving time. The most frequently online bought products by the respondents, were food (groceries), medicines and books (magazines, newspapers). The contribution of this paper, even though the analysed sample is not national representative, lays in the fact that there is almost none research of this topic in our country.

Key words: *online shopping, online purchasing, Republic of Serbia, COVID-19, consumer behaviour*

JEL Classification: D81, D91

INTRODUCTION

Contagious diseases COVID-19 is caused by a virus (SARS-CoV-2), i.e. severe acute respiratory syndrome. The name COVID-19 was given because it was discovered by the end of 2019 in Wuhan, China. This virus represents a new strain of coronavirus that has not been previously identified in humans. (European Centre for Disease Prevention and Control, 31st March 2020). Until 05th April 2020, this pneumonia caused 1,093,349 confirmed cases and 58,620 deaths in 209 territories (World Health Organization, 2020). One of the countries where this virus is registered in the Republic of Serbia. Serbia confirmed the first case of coronavirus (COVID-19) on 06th March 2020. In response to the detection of the COVID-19, the president of the Republic of Serbia announced a state of emergency in this country on 15th March (The Government of the Republic of Serbia, 2020). The first coronavirus death in Serbia was confirmed on 20th March. On 01st May 2020, the total number of infected cases was 9,205. Also, the total number of tested people was 9,205, and the mortality rate was 2.01%. In Table 1, the statistics of COVID-19 deaths is presented.

* Corresponding author, e-mail: djina.ivanovic@ien.bg.ac.rs

Table **1.** The statistical data of COVID-19 deaths in the Republic of Serbia

Gender	Number of deaths	Average age
Male	113	
Female	72	67.85
Total	185	

Source: Ministry of Health of the Republic of Serbia COVID-19, 1st May 2020.

As we can see from the table above, the male seems harder hit by the virus than women. The average age is 67.85.

The trend of coronavirus daily cases is presented in Figure 1.
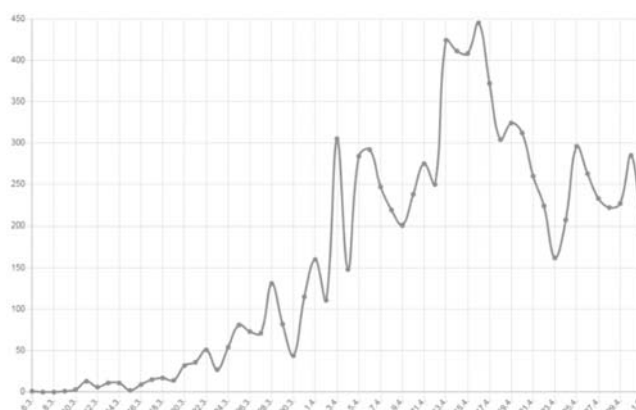
Figure 1. The trend of coronavirus daily cases
Source: Statistics of COVID-19 in the Republic of Serbia

The cities most affected by the virus in Serbia were Belgrade and Niš (the third-largest city in Serbia). Table 2 shows cities/municipalities in Serbia with the most significant participation in total positive cases of coronavirus.

Table 2. Percentage of positive cases of coronavirus in cities/municipalities in total cases in Serbia

City/municipality	%
Belgrade	26.77
Niš	13.76
Ćuprija	2.80
Leskovac	2.76
Kruševac	2.49

Source: Ministry of Health of the Republic of Serbia COVID-19, 1st May 2020.

Because of the high mortality rate of the population and the people identified as belonging to the at-risk group, the Government of the Republic of Serbia brought measures to reduce the spread of COVID-19. Some of the measures were: forbidding movement of the population in a certain period, closing malls, bars, restaurants, beauty salons and other places which are more visited. The first mentioned measure, and the most important measure, is presented on the timeline below (Figure 2).

Legend

Curfew from 8 p.m. to 5 a.m. next day
Curfew from 5 p.m. to 5 a.m. next day
Curfew from 1 p.m. to 5 a.m. next day
Curfew for several consecutive days (on the graph is presented when started and finished)
Curfew from 6 p.m. to 5 a.m. next day
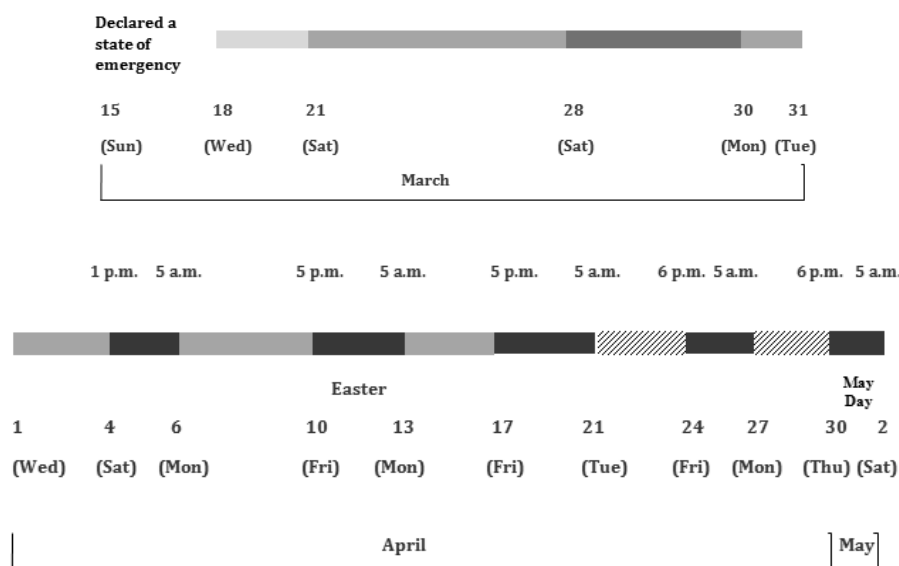
Figure 2. Measures during March, April, and May in the Republic of Serbia

Source: Authors research

This measure of forbidding movement of the population during March, April, and May affected on grocery opening hours. Most grocery stores were open until 2 hours before curfew. Also, the delivery of some stores was working during curfew with the permission of the authorities. As seen above on the timeline, the total number of hours people can not move several consecutive days was 278.

LITERATURE REVIEW

Considering that COVID-19 has hit many countries in the world and changed people's buying behaviour, in this part, the two studies are presented as an overview on online shopping during severe epidemics such as SARS and MERS. The first study refers to the SARS in Hong Kong during early 2003, which significantly changed consumer behaviour. In February 2003, only 1.5% of Hong Kong companies sold goods or services online. Over 63% of the population had internet access, but only 3.2% of Internet users purchased online. Forster & Tang (2005) found that demand for online shopping grew during SARS in response to the growing fear of contagion. They collected data for this investigation from Hong Kong's largest online supermarket - Park'N Shop. The questionnaire covered the period 16th February 2003 - 15th June 2003. The results showed that the products which consumers mostly bought were rice, cooking oil, canned goods, consumable foods, frozen foods, cleaning products and toiletries. The most important conclusion of this research was that the demand for online shopping had been closely related to the spread of contagion.

The second study refers to the MERS-CoV (Middle East respiratory syndrome coronavirus), which was identified in South Korea in 2015. Jung et al. (2016) found, based on debit and credit card transaction information, that consumer behaviour was changing because of the spread of

the contagion. The data was collected using a mobile app developed by a Korean company, which automatically registers transactions that consumers received from the bank via SMS. Information for each transaction included consumer identifiers, date, time, the amount paid and the retail store name. The complete transaction data collected during 2014 and 2015 included only 1,521 consumers out of 11,225. Consumers between the ages of 20 and 30 made up about 70% of the sample. The average consumer had 12.3 transactions per month. Grocery expenditures had the largest share of total expenditures. The researchers found that there was a significant decline in transaction volume during the period of May and June 2015, but buyers increased e-commerce expenditures by 5.25% because of fear of contagion. Because one of the aims of this study is to identify the factors that influence the purchase decisions during COVID-19, the analyse of motives for shopping will be presented in the following text of the paper.

The core motives for purchasing products and services can be explained by consumers level of needs and trust. Hennig-Thurau et al. (2003) conducted an empirical study on 2,900 people in Germany. The experiment resulted with the conclusion that people quickly buy products and services when they have more information about that product (previous experience of buying it or previous experience of others) and also when their privacy is secured. According to Singh & Sirdeshmukh (2000), highly technical competence can be a factor to influence the trustworthiness. The online trustworthiness (trust) is the basic and essential element for building a relationship with consumers (Kumar & Dange, 2012). The example in which we can see the relation of trust and rise of sale is a company like Dell. Dell has reached 18 million dollars in sales through the internet during the first quarter of 1999 (US Department of Commerce, 1999), even before the experiment done in Germany.

Li & Zhang (2002) made Figure 3 based on 35 studies which were directed to online shopping attitude.
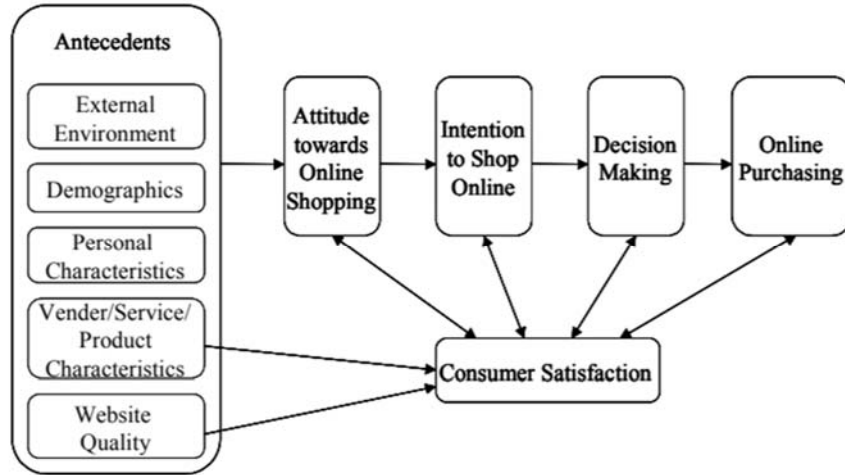
Figure 3. Research Model of Consumers' Online Shopping Attitudes and Behavior
Source: Li and Zhang (2002)

Figure 3 shows us five factors (antecedents) which automatically combined gives us "Attitude towards Online Shopping", which is cored in our minds and represent the first step in the process of buying a product online. Next step is the intention to shop online, which is defined as the need for buying. Third step "Decision Making" is defining as the period of time in which consumer needs to decide whether he/she will buy something or not. In the end, we purchased as a result. These four steps caused consumer satisfaction. Antecedents, in this case, are independent variables, and the steps in this figure are dependent variables. That means that

attitude, intention, decision making and online purchasing as steps, depends on the external environment, demographics, personal characteristics, vender (service) product characteristics and website quality.

Many models allow us to find factors that influence purchasing decisions. Lohse & Spiller (1998) made an integrative model of consumer trust in internet shopping (Figure 4)
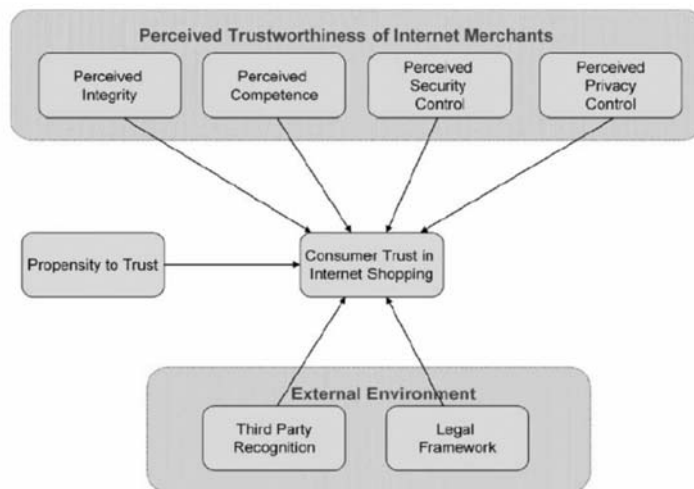

Figure 4. An Integrative Model of Consumer Trust in Internet Shopping
Source: Kumar & Dange (2012)

As we can see from Figure 4, two key factors affect consumer trust in internet shopping. The first one is perceived trustworthiness of internet merchants, which are mainly directed to the integrity of consumer, and the second one is the external environment which is directed to external factors: third party recognition (seller) and legal framework.

Vasić et al. (2019) made a model which has six factors that affect consumer satisfaction of buying a product online. In Figure 5, we can see those factors.
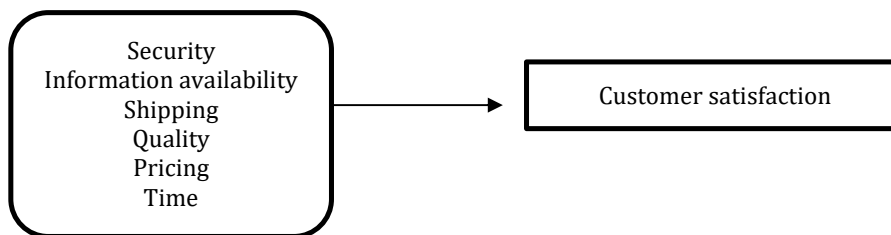

Figure 5. A conceptual model of consumer satisfaction
Source: Vasić et al. (2019)

The definition of privacy according to Anderson (2001) cited by Norjihan and Zailani (2009) is "the ability and/or right to protect our secrets, the ability and/or right to prevent the attempt to our personal space. Information availability means how much is the information about the product or service accessible. It is very important because it gives us a clear opinion about the item which we have searched for. Shipping, as the third factor, is a link in the supply chain that directly affects the consumer and triggers their satisfaction (Hedin et al., 2006) cited by Vasić et al. (2019) Quality is defined as the consumer's judgment about a product's overall excellence or superiority (Chen & Dubinsky, 2003). Price is the cost at which something is obtained (Merriam-

Webster, --). Moreover, the last one, time, is defined as a duration which is needed for purchasing. These factors, when they are fulfilled, result in consumer satisfaction.

The third group of authors made a model named "Factors, filtering elements and filtered buying behaviour (FFF Model)" which is the combination of internal and external factors. Internal factors depend on individual construction of a person. Other external factors are that influence a consumer shopping decision from the outside (see Figure 6).
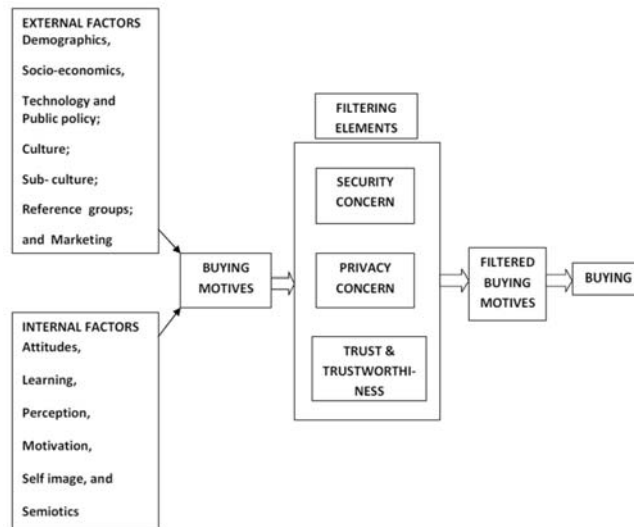
Figure 6. Online consumer buying behaviour motive model, Factors (F), Filtering elements (F) and Filtered buying motive (F); (FFF Model)

Source: Kumar & Dange (2012)

The core of this model comes from the distribution of external factors from the author Warner and internal from the author Malcolm (Kumar & Dange, 2012). As we can see, the combination of these factors gives buying motives. The filtering elements of the product and/or service are security, privacy and trust concern. Definition of those three is, how much is safe to buy something, how much our data is safe and how much are we familiar with the product and/or service, retrospectively. After filtering, we have filtered buying motives which help us to buy, which is a final step in the process.

ONLINE SHOPPING IN THE REPUBLIC OF SERBIA

Table 3 shows us the frequency of online purchases of individuals in the period 2009-2019 in Serbia measured in percentage

Table 3. Frequency of online purchases of individuals (%) in period 2009-2019 in Serbia

Frequency of online purchases	Year										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
In the last 3 months	6.5	6.1	9.3	16.6	19.3	21.6	22.7	26.3	28.3	30.9	34.2
Over 3 months ago (less than a year ago)	4	4.5	5.1	5.4	9.2	10.2	10.6	12	13	14.6	9.7
Over a year ago	2.1	2.4	3.7	4.7	7	8.8	9	7.1	8.8	9.1	13.1
I have never used	87.4	87	81.9	73.3	64.5	59.5	57.7	54.6	49.9	45.4	43

Source: Statistical Office of the Republic of Serbia

As you can see from the Table 3, the share of those who have been shopping online in the last three months has increased from 6.5% in 2009 to 34.2% in 2019%.

The participation of those who have never bought is noticeable decreasing through this period.

Table 4 shows the category of goods which individuals bought or ordered over the internet for private use in the previous 12 months.

Table 4. Category of goods or services which individuals in Serbia bought or ordered over the internet for private use in the previous 12 months (percetage of individuals)

Category	2018	2019
Clothes, sports goods	55.5	63
Household goods (furniture, toys...)	22.6	37.9
Travel, holiday accommodation	6.4	25.3
Electronic equipment	18.3	17.7
Tickets for events	5.3	17
Books/magazines/newspapers	12.2	15.6
Telecommunication services	2.6	14.6
Medicines	8	10.7
Video games software and upgrade	4.6	10.7
Films, music	3.2	8.3
Hardware	4.8	7.9
Food or groceries	4.4	6.3

Source: Statistical Office of the Republic of Serbia

Most people bought clothing and sports equipment online, as well as household goods and reservation of Accommodation (Table 4). If we compared this data with the countries in the EU-28 in 2019, we could see roughly the same trends. In the first place was category clothes, sports goods (about 65%), in the second place was travel, holiday accommodation (about 55%), and in the third place was household goods (about 47%) (Eurostat, 2020).

Table 5. Number of times people in Serbia shopped for private use in the previous 3 months (percentage of individuals)

Frequency of online shopping in the previous three months	2017	2018	2019
1-2 times	57.7	57	53.2
3-5 times	31.6	27.2	30.6
6-10 times	5.6	10.2	9.4
More than 10 times	5.1	5.6	6.8

Source: Statistical Office of the Republic of Serbia

Most individuals purchased online 1-2 times in the last three months (Table 5). Also, there was an increase in those who bought over ten times. Comparing with the data of EU-28 countries we can see that about 34% of respondents bought 3-5 times, about 32% 1-2 times, 17% 6-10 times, and 10% more than ten times in the previous three months.

The highest percentage of respondents in the Republic of Serbia spend less than EUR 50 on online shopping.

Table 6. Money spent by individual on online shopping in the previous three months in the Republic of Serbia (percentage of individuals)

Money spent on online shopping	2017	2018	2019
Less than EUR 50	47.7	55.4	59.7
50 to less than EUR 100	25.3	23.4	24.8
100 to less than EUR 500	17.2	17.3	12.6
500 to less than EUR 1 000	3.2	2.1	0.9
EUR 1 000 and more	2.6	0.7	1
I don't know	4	1.2	1

Source: Statistical Office of the Republic of Serbia

Therefore, according to the latest available data, about 85% of respondents spend less than EUR 100 on online shopping.

RESEARCH METHODOLOGY

Data and methods

The main aim of this paper is to give an overview of the consumer behaviour on online buying platforms after the appearance of the COVID-19 in the Republic of Serbia. The authors examine the association between purchasing online before and after the appearance of the COVID-19, and also the association between gender and purchasing online after the appearance of the COVID-19 using Chi-square test with significance level of 5%. For the purpose of this study, the authors made an online questionnaire and shared with people on social networks: Facebook, LinkedIn, Instagram as main methods, and WhatsApp and Viber as secondary. The Facebook profiles (7 profiles) used for sharing this questionnaire, had more than 100 friends and less than 1,000 friends in their network. On the other hand, we also used one Facebook group for sharing (precisely "*Nauka bez cenzure*") which had 2,100 members. The authors used one LinkedIn profile with precisely 938 people in its network. Instagram social media has a different strategy for sharing. The basic profiles can not share links through stories or another way, but business profiles and the ones with more than 50,000 followers can. The Instagram profile which had been used for sharing the link of the questionnaire (method was through the story with option swipe up) had more than the required number of followers. On the story of this profile, swipe up lasted for 24 hours (maximum time of one Instagram story posted). The time chosen for publishing posts was the time which the authors estimated (based on some research) as the most frequently at the day of publishing.

The questionnaire consisted of 14 questions. Approximate time for filling it up was less than 5 minutes. The questionnaire lasted from 7th April until 4th May. The authors wanted to cover almost beginning of the appearance of the COVID-19 in our country, the critical period (peak period) and the ending of it (tail). The questionnaire questions were divided into two sections, i.e. purchasing behaviour before and after the appearance of the COVID-19. The first section included three general questions (gender, years and location during COVID-19). The section which refers to the period before the appearance of the COVID-19 had only three questions (did they buy online before the appearance of the COVID-19, how often, and which method of payment they used). In the second section which refers to the period after the appearance of the COVID-19, had seven questions (three precisely like in the previous section but with the difference of time – directed after the appearance of the COVID-19; and other questions - motives for buying online, category of goods or services people bought, how many times people bought, and how much money they spent on online shopping). The only one question (the

reasons for not buying) is directed to ones who did not ever buy online. The questionnaire had as a result of 490 responses.

About results

In the first stage, the authors checked the responses and validated them. After validation, the number of valid responses was 408. That means 82 responses (16.73%) of the total number were not included in analysis. The rejected responses were mostly from the female who was under 25-34 years. The reasons for the rejections were different. The most common reason was that respondents checked that they did not buy anything in the period after the appearance of the COVID-19, but anyhow they answered on the questions directed to only those who bought. The sample consisted of 17.89% male and 82.11% female. The most common location of the respondent was Belgrade (67.65%), Novi Sad (6.62%), Niš (2.94%), Užice (1.47%), Kraljevo, Šabac and Sremska Mitrovica with 1.23%. Other cities were below 1%. The authors can conclude that this results which will be shown in the following text, are not nationally representative. The structure of the respondents by age category was shown in Figure 7.
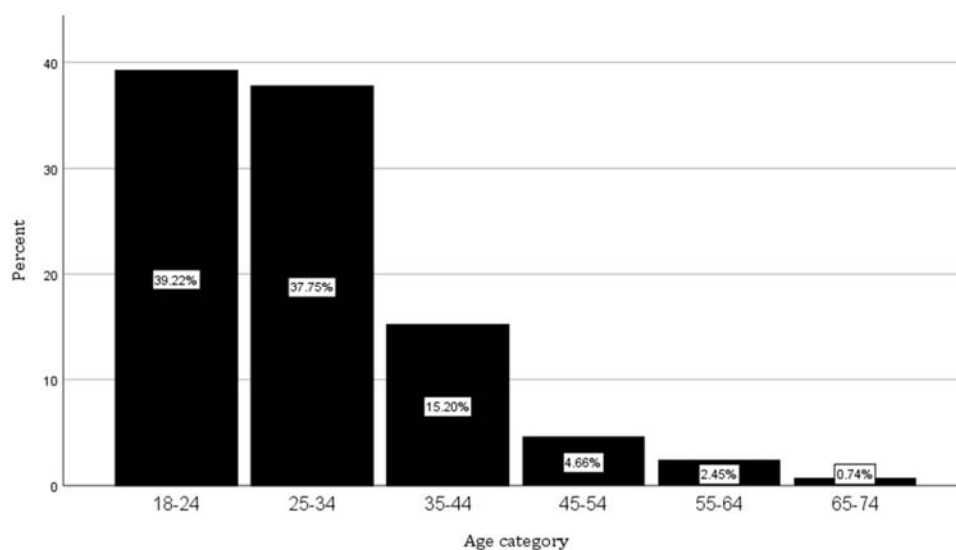
Figure 7. The structure of the respondents by age category
Source: Authors

As we can see from Figure 7, the highest percentage of respondents belong to the 18-24 age category (39.22%), even though by the results of the Hootsuite website in January 2019 in the Republic of Serbia, mainly social media audience was in the age category of 25-34 (30%). The lowest percentage shown on the Figure 7, is in the 65-74 age category (0.74%).

Table 7. Category of goods or services which respondents in Serbia bought or ordered over the internet for private use in the period after the appearance of the COVID-19 (percentage of respondents)

Category	%
Clothes, sports goods	49.4
Household goods (furniture, toys…)	17.2
Travel, holiday accommodation	1.3
Electronic equipment	15.3

Category	%
Tickets for events	0.3
Books/magazines/newspapers	25.6
Telecommunication services	2.9
Medicines*	24.4
Video games software and upgrade	1.9
Films, music	1.9
Hardware	1.9
Food or groceries	26.9

pharmaceuticals and hygiene products

Source: Authors' calculation

Comparing the Table 7 with the Table 4, the authors can conclude that respondents from the not national representative sample, bought in the higher amount the categories of food (groceries), medicines and books (magazines, newspapers). On the other side, travel, holiday accommodation, and tickets for events had purchasing reduction by respondents.

In Table 8, the authors represent the main five motives of the respondents for purchasing online after the appearance of the COVID-19.

Table 8. General motives for online purchasing after the appearance of the COVID-19 (percentage of the respondents)

Motives	%
Too many stores are working only online	48.66
Reducing health risk	36.09
Saving time	31.46
Obligation (curfew)	27.82
Lower costs	20.86

Source: Authors' calculation

The measures of the Government of the Republic of Serbia had effects on consumer behaviour, so one of the main reasons for purchasing online is that many stores which had been closed (obligation after the Government measures) offer their products or services online.

Table 9 represents motives for only those respondents who did not purchase before the appearance of the COVID-19 but purchased after.

Table 9. Top 3 motives of the respondents who did not purchase before the appearance of the COVID-19 but purchased after the appearance of the COVID-19 (percentage of the respondents)

Motives	%
Reducing health risk	46.15
Too many stores are working only online	46.15
Lower costs	15.38

Source: Authors' calculation

Comparing Table 9 with Table 8, obligation (curfew), as a measure of the Government of the Republic of Serbia did not have so much impact on the purchasing behaviour of the respondents who did not purchase before the appearance of the COVID-19 but purchased after it. The authors

can conclude that based on both tables, mainly cause for online purchasing is that too many stores are working only online. Hence, the percentage is the highest in both tables.

For the analysis of the hypothesis, the authors used software SPSS Statistics 25. The Chi-Square was used for testing the hypothesis as it was previously mentioned. The definitions of them are as follows:

H1: It is assumed that there is a significant association between purchasing online before and after the appearance of the COVID-19

H2: It is assumed that there is a significant association between the gender and the purchasing online after the appearance of the COVID-19

In the following text, the authors explained the results of testing H1 and H2, respectively.

H1: It is assumed that there is a significant association between purchasing online before and after the appearance of the COVID-19

Figure 8 shows us the consumer behaviour (whether they purchased online or not) after the appearance of the COVID-19.

Figure 8. The consumer behaviour before and after the appearance of COVID-19

Source: Authors

As we can see from Figure 8, 74.1% of the respondents who not purchased before continued with that habit after the appearance of the COVID-19.

The results of the Chi-Square test, which tested the association between purchasing online before and after the appearance of the COVID-19 is shown in Table 10.

Table 10. Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	55.257[a]	1	.000		
Continuity Correction[b]	52.927	1	.000		
Likelihood Ratio	50.730	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	55.122	1	.000		
N of Valid Cases	408				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.54.
b. Computed only for a 2x2 table

Source: Authors' calculation

The p-value (p=0.000) is lower than the alpha (α=0.05), so the authors reject the null hypothesis - *there is a significant association between the purchasing before and the purchasing after the appearance of the COVID-19.*

H2: It is assumed that there is a significant association between the gender and the purchasing online after the appearance of the COVID-19

Figure 9 shows us consumer behaviour (by gender) before and after the appearance of the COVID-19.

Figure 9. The consumer behaviour (by gender) before and after the appearance of COVID-19

Source: Authors

As we can see from Figure 9, 68.5% male respondents and 69.6% female respondents, purchased after the appearance of the COVID-19.

The results of the Chi-Square test, which tested the association between gender and purchasing online after the appearance of the COVID-19 is shown in Table 11.

Table 11. Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.032[a]	1	.859		
Continuity Correction[b]	.001	1	.970		
Likelihood Ratio	.032	1	.859		
Fisher's Exact Test				.889	.480
Linear-by-Linear Association	.032	1	.859		
N of Valid Cases	408				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 22.37

b. Computed only for a 2x2 table

Source: Authors' calculation

The p-value (p=0.859) is higher than the alpha (α=0.05), so the authors remain null hypothesis - *there is no significant association between the gender and the purchasing after the appearance of the COVID-19.*

CONCLUSION

Results of this study revealed that there is a significant association between the purchasing online before and after the appearance of the COVID-19. The percentage of respondents in the Republic of Serbia, who did not purchase online before the appearance of the COVID-19, but purchased after, was 24%. The percentage of respondents who purchased online before and after the appearance of the COVID-19 was 76%. Also, the authors conclude that there is no significant association between gender and the decision to purchase after the appearance of the COVID-19. Precisely, 68.5% of male respondents and 69.6% of female respondents were purchasing online after the appearance of the COVID-19. The three main motives for online shopping were that too many stores are working only online, reducing health risk and saving time. For those who did not purchase online before the appearance of the COVID-19, but purchased after, the first two motives for purchasing online, are the same as previously mentioned. The difference is the third, which were lower costs. Most respondents purchased online the following category: food (groceries), medicines and books (magazines, newspapers). The respondents who did not purchase online before the appearance of the COVID-19, but purchased after, bought mostly clothing and sports goods and household goods, secondly food and books, magazines, newspapers.

In further research papers, the authors will analyse whether the customer behaviour change in the meantime and will mitigation measures have a significant impact on the population. One of the main factors in the future analysis will be consequences of the mitigation measures of the Government of the Republic of Serbia - precisely, 100 EUR to each adult who signs for it.

ACKNOWLEDGEMENTS

REFERENCES

Chen, Z. and Dubinsky, A. (2003). "A Conceptual Model of Perceived Customer Value in E-Commerce: A Preliminary Investigation" *Psychology & Marketing*. 20 pp. 323 – 347.

European Centre for Disease Prevention and Control (2020). https://www.ecdc.europa.eu/en

Eurostat (2020). https://ec.europa.eu/eurostat/home

Forster, P. and Tang, Y. (2005). "The Role of Online Shopping and Fulfillment in the Hong Kong SARS Crisis" *Proceedings of the Annual Hawaii International Conference on System Sciences*, p. 271

Government of the Republic of Serbia (2020). https://www.srbija.gov.rs/

Hedin, J., Jonsson, M. and Ljunggren, J. (2006). "Delivery performance : How to define & measure delivery performance in a triadic relationship". Master thesis School of Management and Economics

Hennig-Thurau, T., Gwinner, K., Walsh, G. and Gremler, D. (2003). "Electronic Word of Mouth: Motives for and Consequences of Reading Customer Articulations on the Internet". *International Journal of Electronic Commerce*. 4. pp. 51-74.

Hootsuite (2019). Social Media Audience. https://hootsuite.com/

Jung, H., Park, M., Hong, K. and Hyun, E. (2016). "The Impact of an Epidemic Outbreak on Consumer Expenditures: An Empirical Assessment for MERS Korea". *Sustainability*. 8. p. 454.

Kumar, V. & Dange, U. (2012). "A Study of Factors Affecting Online Buying Behavior: A Conceptual Model". *SSRN Electronic Journal*.

Li, N. and Zhang, P. (2002). "Consumer Online Shopping Attitudes and Behavior: An Assessment of Research". *Electronic Commerce Customer Relationship Management. pp.* 508-517

Lohse, G.L. and Spiller, P. (1998) "Electronic Shopping". *Communications of the ACM*. 41. pp. 81-87.

Merriam Webster. (2020). https://www.merriam-webster.com/

Ministry of Health of the Republic of Serbia COVID-19. https://covid19.rs/homepage-english/

Norjihan A.G. and Zailani M. S. (2009). "Personal Information Privacy Protection in E-Commerce". *WSEAS Transactions on Information Science and Applications.* 3. pp. 407-416.

Singh, J., Sirdeshmukh, D. (2000). "Agency and trust mechanisms in consumer satisfaction and loyalty judgments". *Journal of the Academy of Marketing Science.* 28**.** pp. 150–167.

Statistical Office of the Republic of Serbia (2020). https://www.stat.gov.rs/en-US/

Statistics of COVID-19 in the Republic of Serbia (2020) https://covid19.data.gov.rs

US Department of Commerce (1999). https://www.commerce.gov/

Vasic N., Kilibarda M. and Kaurin T. (2019) "The Influence of Online Shopping Determinants on Customer Satisfaction in the Serbian Market". *Journal of theoretical and applied electronic commerce research.* 14(2). pp. 70-89

World Health Organization (2020). https://www.who.int/