

# HOW BEING AT HOME CHANGED US: AN EMPIRICAL STUDY ON CONSUMER BEHAVIOR CHANGES DURING THE COVID-19 PANDEMIC

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## ABSTRACT.

**Background:** Worldwide COVID-19 pandemic created unprecedented challenges for societies significantly altering the lives of all people. The consequences resulted in changes in habits including those related to shopping. Information on how consumers reacted to the pandemic and restrictions imposed by governments is limited and lacks detailed implications based on the opinions of consumers. **Aims:** This research aims to fill this gap by exploring major changes in consumer behavior that occurred during the pandemic. **Methods:** A nation-wide survey was conducted in Slovakia in 2022 to collect data. The sample file consisted of 347 consumers. **Findings:** The findings include information on how the consumers perceived the pandemic. The frequency of visiting shops drastically decreased, however, the majority of consumers stayed loyal to familiar brands of products. Older consumers were more likely to decrease the amount of products bought during a pandemic. Slovak consumers increased the use of delivery services, however less drastically than was expected based on a major increase in home office type of work. **Implications:** Organizations providing products can expect further changes in consumer behavior, which they can stimulate since the influence of media increased during the pandemic.

**Keywords:** COVID-19 pandemic, consumer behavior, home office, delivery, consumption

**JEL Classification:** D12, D14, E21

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## Introduction

Consumption has become a major phenomenon since the conclusion of the Second World War. Since then, consumer behavior has developed its trends and major factors influencing it. Moreover, consumers have experienced some significant disruptions related to major incidents affecting them as individuals and also societies as a whole. The COVID-19 pandemic, whose influence European countries began to feel in 2020, has affected global and national economies and individual consumers. National and regional governments addressed the effects of the pandemic by introducing various measures to stop the spread of the virus, such as lockdowns and later to support those who were negatively affected by both the pandemic and those measures. The major changes brought about by the pandemic have resulted in an economic crisis. Both of these factors have significantly influenced consumer shopping behavior and altered their general patterns due to new factors of influence that had not been previously experienced by the majority of people.

This research study examines how the COVID-19 pandemic has affected consumers' behavior related to lockdowns. Many people were forced to stay at home to study, work or care for their loved ones. This novelty was a significant lifestyle change for many of them, resulting in altering their habits, even those related to shopping. Since there is not yet much information on how these changes related to societies as a whole, the main aim of this study is to find out how the COVID-19 pandemic changed consumer behavior based on various socio-economic characteristics of consumers.

## Theoretical background

Consumer behavior, as an essential marketing variable, is characterized as people's behavior related to the acquisition, use and disposal of consumer products (Solomon et al., 2016). Consumer behavior is mainly individual and hidden. It is influenced by a number of factors, which are generally not directly measurable, thus influencing behavior only in the consumer's mind. We can examine consumer behavior e.g. through the stimulus-organism-response model (S-O-R framework), which is based on the general psychological model of behavior Stimulus - Reaction. The essence of this model is the influence of external stimuli on the consumer, who processes the stimuli based on his own internal characteristics, and the result is a reaction in the form of a specific purchase (Han et al, 2022).

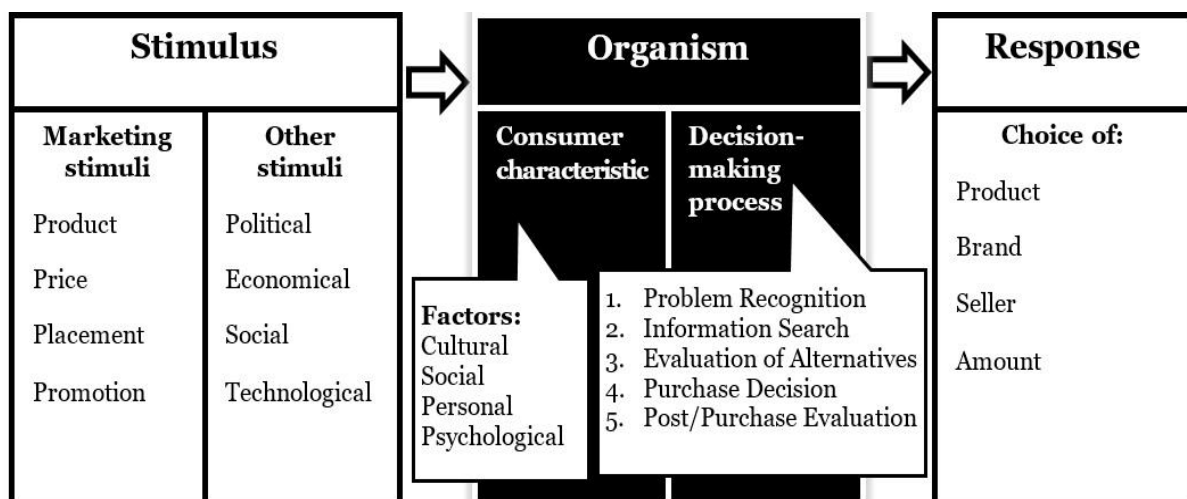


Figure 1 Stimulus-organism-response model of consumer behavior

Source: *own data*

Individuals' consumption behavior is influenced by marketing stimuli (Djafarova & Bowes, 2021). Among the basic marketing stimuli, we can include the offer of individual products on the market, the price at which the products are sold, distribution, i.e. in which ways and in which places the products are available, and the marketing communication of individual companies, i.e. the way in which companies inform consumers about their offer.

Among the other stimuli, we can include the factors of the external environment, while the basic ones are political, economic, social and technological factors (Blythe & Megicks, 2010). The life of the inhabitants of individual countries is strongly influenced by developments in the political and legal environment. Government creates the climate in which a country finds itself and in which businesses and individuals make their decisions. Changes in the government are important, or government stability and the electoral cycle. These factors affect the amount of taxes, the amount of the minimum wage, the social policy of the state, employment opportunities, etc.

The economic environment is made up of factors that affect the purchasing power of the population. These are the main factors that affect the overall economic situation of the country and thus also the economic situation of individual consumers. The social environment affects the purchasing power of consumers through people's tastes and preferences. Social environment factors influence consumer behavior and can generally be divided into cultural, social and demographic. One of the most significant forces of the external environment is the technological environment, the changes of which are the source of technological progress, which makes it possible to achieve a higher standard of living for the country's inhabitants.

In the case of a pandemic caused by the new coronavirus, we can consider the disease COVID-19 itself as an external factor. The disease COVID-19 is a respiratory disease caused by the virus SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2) originally discovered in December 2019 (Zhu et al, 2020). The first case of infection caused by the new coronavirus was discovered in the city of Wuhan, Hubei Province, China (Liet al, 2020). The virus is primarily spread from person to person through droplets from infected people coughing, sneezing or during a conversation (Chukwuma et al, 2022).

In connection with the effort to slow down the spread of the disease, various restrictive measures have been introduced worldwide. Slovakia adopted the first measures in this regard already on January 27, 2020. At that time, the disease was not yet found in Slovakia, but in Europe, France already began to report the first cases of infection (Ministry of Health SR, 2020a). On March 6, the first case of COVID-19 was confirmed in the Slovak Republic in a 52-year-old man from the Bratislava Region. It was a secondary transmission of the disease, as he lived in the same household with a person who had stayed in an area with the occurrence of the new coronavirus a few weeks before (Ministry of Health SR, 2020b).

Each consumer reacts to the situation differently based on their own personality traits and predispositions (Pandita et al, 2021). Among the basic characteristics of consumers, we include cultural, social, personal and psychological factors of consumer behavior (Kotler & Keller, 2014).

Culture is a fundamental factor influencing the wishes and behavior of a certain person. It is a set of values, perceptions, preferences and behavior that a person acquires through family and institutions throughout his life. People learn the culture, it is not innate. They also learn consumer culture, consumers gradually adopt cultural expressions of consumer behavior. Each culture consists of smaller subcultures that provide a more specific identification and socialization of its members. Cultural factors also include social or social classes or layers. These are relatively homogeneous and hierarchically dividing groups in society when members of classes share similar values, interests and ways of behaving. Social class influences product and brand preference, social classes show different preferences in product selection in many areas including clothing, furniture, entertainment, automobiles, electronics, etc.

Another group of determinants of consumer behavior consists of social factors, i.e. how other people influence people and their behavior. Every person needs other people for their successful development. It is characterized by a tendency to associate, to live in a social environment that is made up of people and their mutual relationships, their joint activities, or the products of these activities and relationships.

Consumer behavior is often influenced by an individual's personal characteristics. By personality, we understand a set of different psychological traits that lead to relatively consistent and permanent reactions to environmental stimuli. Basic personal factors include the buyer's age, employment and economic circumstances, lifestyle and values.

Marketing stimuli and environmental stimuli enter the consciousness of consumers. A set of psychological processes is associated with the characteristic features of a person and leads to decision-making processes and purchasing decisions (Tuncer, 2021). Consumer responses to various marketing stimuli are substantially influenced by four key psychological processes: motivation, perception, learning, and memory.

In connection with the COVID-19 disease, unprecedented changes have occurred in society. People stayed at home overnight. Some groups of the population were more at risk, therefore they required special measures. In connection with that, for example, established special opening hours in establishments intended for seniors over 65, who are considered the most vulnerable group.

In connection with the closure of establishments and the ordered lockdown, there have been dramatic changes in the labor market. Working from home was the most common measure chosen by employers in Slovakia at the beginning of 2020 (Profesia.sk, 2020a). In addition to the possibility to work from home, as part of other measures, companies have stopped business trips or modified the rules for the performance of work at the workplace. Reducing or canceling working hours were the last options. Some companies also adopted other, specific measures, such as testing employees for COVID-19 as a benefit, transferring employees to other projects, and increasing the level of management communication and employee awareness. Despite the fact that for many employers the corona crisis brought a reduction in sales, companies tried to do everything so that they did not have to reduce salaries, rewards or benefits. However, several were ready to proceed with reducing salaries or rewards at the management level, or for people who earn above a certain level. A frequent measure that also concerned ordinary employees was the recommendation or order to take a vacation (Profesia.sk, 2020b). Thus, employment and economic conditions were one of the main factors that ultimately influenced consumer behavior in Slovakia.

In addition to operations, schools were also closed at the beginning of 2020. They began to open only gradually, and strict anti-pandemic measures meant that entire classes were often closed again and children had to learn from home. Parents of school-age children under the age of 11 had to stay at home with them, which they could solve by the home office or by receiving the pandemic OCR. In these cases, it became necessary to furnish the household with the necessary information technologies, as work and teaching moved to the online space, which necessitated adapting the equipment of the household with several computers, headphones with microphones, cameras and a sufficient Internet connection. Such a purchase can be very burdensome for the household budget, therefore the income and financial situation of consumers was an important factor influencing consumer behavior in general, not only when purchasing IT.

How consumer reactions have changed within their behavior still remains unclear. Few research studies tried to provide some clarity on specific issues. Naeem (2021) proved that customers have become more aware and take their time to make the best possible decision. On the other hand Higashi *et al.* (2022) argued that the pandemic lead to more isolationist behavior, which often resulted in selfishness. Navickas *et al.* (2021) and Jin and Ryu (2022) focused on the positive impacts of the pandemic believing that it has brought out the best in out in people resulting in an increase in community involvement, helping others and even altruism. The subject of this research paper aims to add more light on changes in consumer behavior in the Slovak republic.

## Methodology

The main aim of the research was to characterize how the COVID-19 pandemic changed consumer behavior based on various socio-economic characteristics of consumers. The methodological approach selected for this study was empirical research. A survey was conducted in January – September 2022 in order to analyze changes in consumer behavior related to the pandemic of COVID-19 disease. The questionnaire was created and distributed among consumers for this purpose which consisted of 14 closed and semi-closed questions that collected data on consumer behavior changes and 5 closed questions aimed to provide consumers' socio-economic characteristics such as age, gender, level of education household structure, and level of income. Empirical research was selected as the main research method to collect primary data since the data needed to sufficiently describe the changes in consumer behavior needed to include opinions of consumers on specific matters that are not yet available in any public databases of statistical bureaus. Therefore, a national survey was conducted on a sample of people in the Slovak republic. This allowed a comparison of findings as applied by other researchers in similar surveys (Golob *et al.*, 2018; Kucharska & Kowalczyk, 2018; Osvaldová & Vrabcová, 2021). During the survey, the data was collected electronically using a questionnaire in the Slovak language. The potential respondents were approached through selected partner consumer organizations, university students and senior university organizations in order to achieve the largest data collection. The survio.com online platform was used to collect raw data in electronic form. All collected questionnaires were checked by members of the research team. Incomplete or inconsistent ones were discarded and not used further. In total 14 questionnaires were discarded and were not incorporated into the second sample file. Table 1 presents the final structure of the sample file and information on how it related to a base file which consisted of all Slovak citizens older than 18 years.

Table 1. Base file and sample file

Age	Base file		Sample file	
	Female	Male	Female	Male
18 – 25	231,761.00	243,391.00	17	19
26 – 45	828,505.00	871,910.50	66	68
46 – 65	736,705.00	705,587.00	59	54
over 66	499,118.50	321,201.50	38	26
<b>Total</b>	<b>2,296,089.50</b>	<b>2,142,090.00</b>	<b>180</b>	<b>167</b>
18 – 25	5.22%	5.48%	4.90%	5.48%
26 – 45	18.67%	19.65%	19.02%	19.60%
46 – 65	16.60%	15.90%	17.00%	15.56%
over 66	11.25%	7.24%	10.95%	7.49%
<b>Total</b>	<b>51.73%</b>	<b>48.27%</b>	<b>51.87%</b>	<b>48.13%</b>

Source: *own data*

The representativeness of the sample file was verified and confirmed using Pearson’s chi-squared test ( $\chi^2$  - test). The age of consumers was used as the criterion. The null hypothesis was set with the assumption that the sample is representative. The alternative hypothesis is an assumption of non-representativeness of the sample. From the mathematic point of view, the hypotheses are formulated as:  $H_0 = F(x) = G(x)$ ;  $H_1 = F(x) \neq G(x)$ . Statistic testing in SPSS software is based on the following formula (1):

$$X^2 = \sum_{j=1}^r \frac{(n_j - m_j)^2}{m_j} \approx X_{(r-1)}^2 \quad (1)$$

where:  $X^2$  - is Pearson statistics;  $r$  - is a line;  $n$  - is the overall frequency in the base file and  $m$  - is the measured frequency.

Consequently, we find the critical value of  $X^2$  distribution for  $(r-1)$  degrees of freedom and selected level of significance  $\alpha$  from tables of critical values of chi-square. The test in this research was performed at a significance level of 95 %. If the critical value is lower than the value of tested statistics, the null hypothesis is rejected and an alternative hypothesis  $H_1$  is accepted. The calculated Chi-square value for this sample was at level 0.844. This result can be interpreted as the confirmation of the null hypothesis. Therefore, it can be concluded that the research sample file is a representative sample of the base file (Veselovská et al, 2022). The Pearson Chi-square was also used to analyze the correlation between ordinal and nominal variables and complemented by Cramer’s V to identify the intensity of correlation. We also used Spearman’s Rho to analyze the correlation between ordinal variables especially the correlation between various factors. Spearman’s Rho is a non-parametric test based on the Pearson correlation coefficient and is used to measure the strength of correlation. It acquires the values between -1 (perfect negative correlation) and 1 (perfect positive correlation). Statistic testing in SPSS software is based on the following formula (2):

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2-1)} \quad (2)$$

where:  $n$  - is the number of data points of the two variables;  $d_i$  - is a difference in ranks of the “ith” element. Before we analyzed the intensity of correlation we needed to find out if the correlation between variables exists. We set the null hypothesis  $H_0$  (variables are independent) and alternative hypothesis  $H_1$  (variables are not independent). The evaluation was carried out on the basis of the p-value. If the p-value is lower than the alpha value (in our testing 99.95% significance or confidence) null hypothesis is rejected and an alternative hypothesis  $H_1$  is accepted (Hudáková, 2013). Microsoft Excel and the SPSS software were used to analyze data and to test potential relationships between variables.

## Results

It is already a well-known fact that the COVID-19 pandemic significantly altered living conditions in modern societies, not just because of the disease itself, but also by introducing new phenomena that people had no prior experience with. This research aims to help bring an understanding of these conditions, therefore a survey was conducted to collect data on consumers' opinions. It was discovered that consumers drastically changed their shopping habits during the pandemic. Figure 2 provides the data on how the frequency of visiting shops changed. Only 5.3 % of Slovak consumers

reported that they visited shops more often during the pandemic than before the outbreak. Interestingly, the majority of them were men in age group 26 – 45 years old.

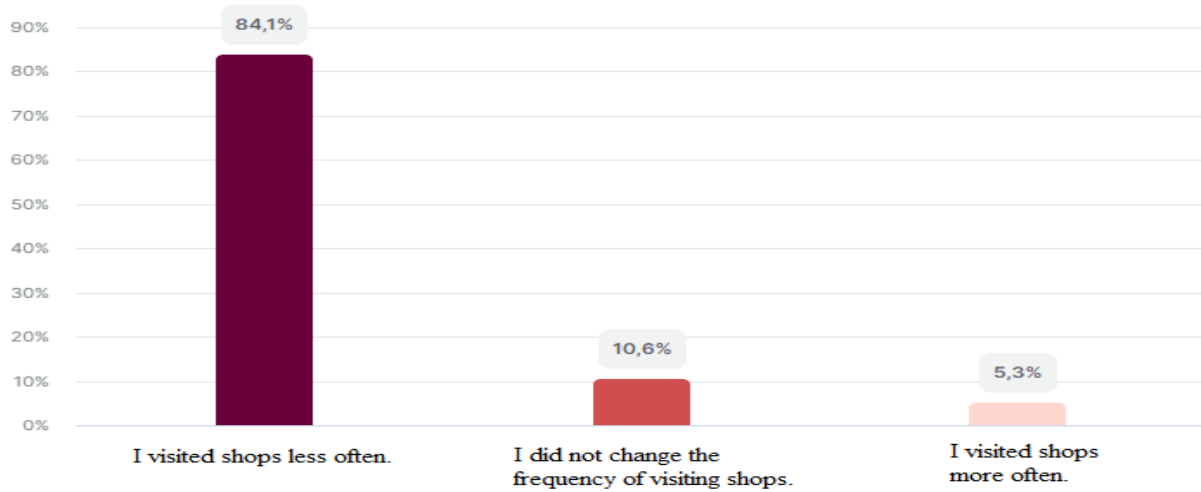


Figure 2. Frequency of visiting shops during the COVID-19 pandemic

Source: *own data*

Since gender seemed to play a significant role in pandemic perception, we decided to further look into how this consumer characteristic affected the behavior changes. Table 2 shows the changes in goods the consumers bought during the pandemic in comparison to the number of products they had bought before the outbreak. Again, we can observe differences between female and male consumers. According to the data, for more than half of female consumers, the amount of products bought during the pandemic decreased. This share was slightly less significant for male consumers. Moreover, men were less likely to change their habits. The research also explored which products were affected by these changes to most. Up to 37.9% of consumers reported that they changed the amount of daily consumption goods they bought during the pandemic. The purchase of entertainment and travel products was also significantly affected, as almost 30% of consumers changed the purchased amount of these products. Significant changes also occurred in the purchase of electronics, as 12.1% of consumers stated that their changes in purchasing behavior were related to these products. In this case, however, it is a positive change, since mostly their purchases increased. Spearman’s Rho was used to verify the possible connection between the age of consumers and changes in the amount of products bought during the pandemic in comparison to pre-pandemic times. It was discovered that there is a medium-strong indirect dependence between these factors. Therefore, it can be concluded that older consumers were more likely to decrease the amount of products bought during a pandemic than younger consumers were.

Table 2. Changes in amount of products bought during the pandemic

Gender	More	Less	No change
Female	14.53%	52.99%	32.48%
Male	16.98%	45.28%	37.74%

Source: *own data*

During the time of the COVID-19 pandemic 26.8% of Slovak consumers reported that the income of their household decreased from its pre-pandemic level in 2019. Only 19.6% of consumers experienced an increase in their incomes. The majority of Slovak people (53.6%) stated no change in the income of their household during the pandemic. The situation was slightly worse for women since 27.78% of female consumers experienced a decrease in income and only 17.78% of female consumer’s incomes increased whereas 21.56% of male consumers reported an increase and 25.75% a decrease. Table 3 shows how the income changes were experienced by different segments of consumers based on their age. According to the data, the biggest perceptual increase was in the youngest age segment. The highest portion of consumers who experienced no change in their incomes was discovered in the oldest age segment. The biggest portion of consumers who experienced a decrease in the income of their household was noted in the age segment 26 – 45-year-old consumers since nearly a third of them reported this negative outcome of the pandemic on their financial situation.

Table 3. Income changes of consumers during the COVID-19 pandemic

Age segment	Increase		Decrease		No change	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
18 – 25	15	41.67%	5	13.89%	16	44.44%
26 – 45	27	20.15%	44	32.84%	63	47.01%
46 – 65	16	14.16%	33	29.20%	64	56.64%
over 66	10	15.63%	11	17.19%	43	67.19%

Source: *own data*

Since income has always been a major factor influencing consumer behavior, it is necessary to explore its changes in context with the household income of consumers (Table 4). The lowest degree of change can be observed in households with the highest incomes since 32.61 % of them did not change the products they bought during the pandemic for any substitutes. Moreover, this segment of consumers also did not factor in the price of products as the reason for changes. Households with incomes between 401 and 1000 euros were the segment that was mostly affected by the availability of products. People with their household income of less than 400 euro only exchanged the products for substitutes because of price or availability. No other reason for changes was observed in this consumer segment. Nearly one-third of consumers replaced the products they used to regularly buy for substitutes due to problems with availability. This result was observed in all consumer segments regardless of their household income. It can be therefore concluded that this was a nation-wide issue. On the other hand, there were clearly no problems with decreased quality of products since almost no consumers chose replacements because of this reason. The Spearman’s Rho was used to evaluate the possible relationship between household income and changes in amount of products bought during the pandemic. It was discovered that the dependency was not significantly strong, therefore, we can conclude that the income changes were not the main cause for consumers’ decisions to neither less nor more products. Other factors, such as the pandemic itself could have been the cause of the change.

Table 4. The reasons for exchanging purchased items for other replacement products during the pandemic

Household income	price	quality	availability	other reason	no change
less than 400 euro	42.86%	0.00%	28.57%	0.00%	28.57%
401 – 1000 euro	34.62%	3.85%	32.69%	5.77%	23.08%
1001 – 1600 euro	30.77%	4.62%	30.77%	3.08%	30.77%
more than 1600 euro	21.74%	4.35%	30.43%	10.87%	32.61%

Source: *own data*

The COVID-19 pandemic and restrictions imposed by the government to stop the spread of the virus forced many people to stay at their homes much more than they had used to before. Being at home for study, work and free time meant that consumers had less direct contact with other people. Therefore, the influence of colleagues and friends on shopping decisions significantly decreased (by 42.3 %). On the other hand, the influence of family drastically increased (by 38.47 %) and even the influence of media slightly increased (by 12.81 %). Mandatory quarantines have become new phenomena that also impacted how consumers behaved during the pandemic. It was reported in the survey that up to 50.59 % of people had to ask others outside of their household to do the shopping for them. Furthermore, the delivery of goods has become more common. Up to 14.12 % of Slovak consumers have started regularly using food delivery.

## Conclusion

In connection with the rapid spread of the coronavirus in the world, with effect from March 16, in Slovakia, retail sales and the sale of services in establishments were prohibited for 14 days, with some exceptions (food stores, medical devices, drug stores, propellants and fuels, newsstands, stores of feed and supplies for animals, including veterinary clinics, operations of telecommunications operators, postal, banking and insurance services, and operations of online stores and delivery services). Public catering establishments and fast food stalls remained open, but it was forbidden to eat on their premises,

it was possible only outside their establishments (Ministry of Health SR, 2020c). Therefore, consumers did not have the opportunity to make their usual purchases in brick-and-mortar stores, and a large part of purchases moved to the online space. In connection with this, the method of payment via payment cards has increased (ZBK, 2020). The findings of this research reached the same conclusions, however, the increase in both uses of delivery services and credit card payment were not as significant as expected. Only 14.12 % of Slovak consumers have started regularly using food delivery.

At the end of March, several businesses that had been closed until then (optical opticians, gardening, haberdashery, hardware stores and others) were opened, but the hygienic conditions in the shops were tightened. It became mandatory to wear protective masks in store operations, and disinfection or protective gloves became mandatory, which the businesses themselves were obliged to provide. It was mandatory to ensure two-meter distances between people waiting in lines. The number of people in the operation was also limited: one person had to have 25 square meters. The time in shops was also defined preferentially for people over 65 years old as a result of the fact that they represent the most endangered group (Ministry of Health SR, 2020d). These measures caused people to leave their homes less to avoid contact with other people and shopping was not a priority. Our research proves the severity of the impacts these measures had on consumers. The frequency of visiting shops decreased drastically (84.1 %).

All these circumstances influenced the consumer behavior of the Slovak population. In addition, there have been some changes in the offer of the marketing mix by companies. This had the most significant impact on distribution, as brick-and-mortar stores were closed and many purchases moved to the online space. Despite this, it took some time for consumers to adapt to the new way of shopping, and thus there was a significant drop in purchases, especially in the first weeks after the outbreak of the disease in the Slovak Republic. Many researchers worldwide reported on panic shopping during the initial stages of the pandemic when people feared the possibility of shortages (Sim et al, 2020; Omar et al, 2021; Veselovská, Závadský, & Bartková, 2021). However, the survey of Slovak consumers proved that only a small number of people actually increased the amount of items they bought. The general trend was leaning towards a decrease.

In addition, the composition of the offered assortment also changed, when the demand for goods used to protect human health, such as facemasks, disinfections, etc., increased sharply. Demand for hygiene products and long shelf life products also increased due to the effort to supply the household due to store closures. Up to two-thirds of consumers reported on exchanging the products they bought regularly for substitutes.

Based on these findings, it can be concluded that the COVID-19 pandemic significantly altered consumer behavior in the Slovak republic. The positive outcome of these changes is the newly discovered adaptability of Slovak businesses that could have been observed by consumers who experienced almost no issues with the availability of products on the market. In the future, the managers of businesses should pay close attention to this issue, however, as the findings indicate they are not likely to be surprised by such a large-scale disruption. The recommendation that results from these findings is related to the need to carefully monitor trends in the market. It is likely that consumers will continue to be influenced by a feeling of safety in store, therefore managers should always incorporate these factors into their strategic planning and even marketing strategies. The limitation of this study is its narrow focus on Slovak consumers. Therefore, the findings and their implications cannot be generalized to the global level. However, the provided comparison of them with international studies partially overcomes this limitation. The natural extension of this study would be the prediction of how consumers will continue to be affected by the pandemic and to conduct a more detailed international comparison. The findings of this study contribute to a larger pool of knowledge that has been focusing on mapping the reactions of consumers with the aim to predict their future reaction to such major events as the COVID-19 pandemic.

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## References

- Blythe, J., Megicks, P. 2010. *Marketing Planning*. Essex: Pearson Education, 2010, 264 s. ISBN 978-0-273-72471-1.
- Djafarova, E. & Bowes, T. 2021. 'Instagram made Me buy it': Generation Z impulse purchases in fashion industry. *Journal of Retailing and Consumer Services*. 59(March 2021), 102345. Retrived: <https://doi.org/10.1016/j.jretconser.2020.102345>
- Chukwuma N., Jin Z. & Karakhan, A. 2022. Safety and health management response to COVID-19 in the construction industry: A perspective of fieldworkers. *Process Safety and Environmental Protection*, 159(March 2022), 477-488. Retrived from: <https://doi.org/10.1016/j.psep.2022.01.002>
- Golob, U., Podnar, K., Koklic, M.K., & Zabka, V. (2018). The importance of corporate social responsibility for responsible consumption: Exploring moral motivations of consumers. *Corporate Social Responsibility and Environmental Management*, 26, 416-423. Retrieved from: <https://doi.org/10.1002/csr.1693>
- Han, S. M., Hampson, P. D., Wang, Y. & Wang, H. 2022. Consumer confidence and green purchase intention: An application of the stimulus-organism-response model. *Journal of Retailing and Consumer Services*. 68(2022), 103061. Retrived from: <https://doi.org/10.1016/j.jretconser.2022.103061>
- Higashi, R.T., Sood, A., Conrado, A.B., Shahan, K.L., Leonard, T., & Pruitt, S.L. (2022). Experiences of increased food insecurity, economic and psychological distress during the COVID-19 pandemic among Supplemental Nutrition Assistance Program-enrolled food pantry clients. *Public Health Nutrition*, 25(4), 1027-1037, PII S1368980021004717. Retrieved from: <https://doi.org/10.1017/S1368980021004717>
- Hudáková, L. (2013). System approach and system analysis and their application in management. *Proceedings of the international conference Current state and perspectives of enterprises' development in conditions of international economic activity*, Banská Bystrica: Matej Bel University, pp.170-179. ISBN 978-80-557-0601-6.
- Jin, S.V., & Ryu, E. (2022). "The greedy I that gives"-The paradox of egocentrism and altruism: Terror management and system justification perspectives on the interrelationship between mortality salience and charitable donations amid the COVID-19 pandemic. *Journal of Consumer Affairs*, 56(1), 414-448. Retrieved from: <https://doi.org/10.1111/joca.12381>
- Kotler, P. & Keller, L. 2014. *Marketing Management*. London: Person, 832 pp. ISBN 978-0133856460.
- Li, Q. et al. 2020. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *The New England Journal of Medicine*, 382(March 2020), 1199-1207. Retrieved from: <https://www.nejm.org/doi/full/10.1056/nejmoa2001316>
- Ministry of Health SR. 2020a. Slovensko prijíma opatrenia v súvislosti s novým koronavírusom 2019-nCoV. Retrived from: <https://www.health.gov.sk/Clanok?premier-koronavirus-opatrenia>
- Ministry of Health SR. 2020b. Slovensko zaznamenalo prvý potvrdený prípad ochorenia COVID-19. Retrived from: <https://www.health.gov.sk/Clanok?koronavirus-pripad-prvy-opatrenia>
- Ministry of Health SR. 2020c. COVID-19 (koronavírus): Vláda prijala mimoriadne opatrenia. Retrived from: <https://www.health.gov.sk/Clanok?vlada-prijala-mimoriadne-opatrenia-15-3-2020>
- Ministry of Health SR. 2020d. COVID-19: Prísnejšie hygienické podmienky v obchodoch, viac prevádzok otvorených. Retrived from: <https://www.health.gov.sk/Clanok?covid-19-prisnejsie-hygienicke-podmienky-v-obchodoch>
- Naeem, M. 2021. Understanding the customer psychology of impulse buying during COVID-19 pandemic: implications for retailers. *International Journal of Retail & Distribution Management*, 49(3), 377-393. Retrieved from: <http://doi.org/10.1108/IJRDM-08-2020-0317>
- Navickas, V., Kontautiene, R., Stravinskiene, J., & Bilan, Y. (2021). Paradigm shift in the concept of corporate social responsibility: COVID-19. *Green Finance*, 3, 138-152. Retrieved from: <https://doi.org/10.3934/GF.2021008>
- Omar, N.A., Nazri, M.A., Ali, M.H., & Alamd, S.S., 2021. The panic buying behavior of consumers during the COVID-19 pandemic: Examining the influences of uncertainty, perceptions of severity, perceptions of scarcity, and anxiety. *Journal of Retailing and Consumer Services*, 62(2021), 102600. Retrieved from: <https://doi.org/10.1016/j.jretconser.2021.102600>
- Osvaldová, Z. & Vrabcová, V. (2021). Survey of In-Service Teacher Education in Slovakia Focused on Inclusive Education and Work with Pupils with Special Educational Needs. *Lifelong Learning*, 11(1), 59-74. Retrieved from: <https://doi.org/10.11118/lifele20211101059>

- Pandita, S., Mishra, H. G. & Chib, S. 2021. Psychological impact of covid-19 crises on students through the lens of Stimulus-Organism-Response (SOR) model. *Children and Youth Services Review*. 120(January 2021), 105783. Retrieved from: <https://doi.org/10.1016/j.chilyouth.2020.105783>
- Profesia.sk. 2020a. Najviac home officu vidíme v IT, najmenej v cestovnom ruchu. Slováci tvrdia, že doma pracujú rovnako, či dokonca sú produktívnejší ako na pracovisku. Retrieved from: <https://firma.profesia.sk/najviac-home-officu-vidime-v-najmenej-v-cestovnom-ruchu-slovaci-tvrdia-ze-doma-pracuju-rovnako-ci-dokonca-su-produktivnejisi-ako-na-pracovisku/>
- Profesia.sk. 2020b. Práca z domu a vôľa neznižovať platy. Takto bojujú firmy na Slovensku s korona vírusom. Retrieved from: <https://firma.profesia.sk/aktualita/praca-z-domu-a-vola-neznizovat-platy-takto-bojuju-firmy-na-slovensku-s-korona-virusom/>
- Sim, K., Chua, H.C., Vieta, E., & Fernandez, G. (2020). The anatomy of panic buying related to the current COVID-19 pandemic. *Psychiatry Research*, 288(113015). Retrieved from: <https://doi.org/10.1016/j.psychres.2020.113015>
- Solomon M., Bamossy, G., Askegaard, S. & Hogg, M. 2016. *Consumer Behaviour: A European Perspective Paperback*. London: Pearson, 739 pp. ISBN 978-1292116723
- Tuncer, I. 2021. The relationship between IT affordance, flow experience, trust, and social commerce intention: An exploration using the S-O-R paradigm. *Technology in Society*. 65(May 2021), 101567. Retrieved from: <https://doi.org/10.1016/j.techsoc.2021.101567>
- Veselovská, L., Závadský, J., & Bartková, L. (2021). Consumer behaviour changes during times of the Covid-19 pandemic: an empirical study on Slovak consumers. *E+M Ekonomie a Management*, 24(2), 136-152. Retrieved from: <http://doi.org/10.15240/tul/001/2021-2-009>
- Veselovská, L., Bartková, L., Hudáková, L., & Pomffyová, M. 2022. Consumption vs. savings: how the pandemic changed us. *Proceedings from Knowledge on Economics and Management*. Olomouc: Palacký University Olomouc. ISBN 978-80-244-6232-5, pp. 182-189. Retrieved from: <https://doi.org/10.5507/ff.22.24462325>
- ZBK, 2020. Koronavírus podporuje platby kartami a mobilmi, hotovosť je riziková. Retrieved from: <https://www.zbk.sk/aktualita/koronavirus-podporuje-platby-kartami-a-mobilmi-hotovost-je-rizikova>
- Zhu, N. et al. 2020. A Novel Coronavirus from Patients with Pneumonia in China, 2019. *The New England Journal of Medicine*, 382(January 2020), 727-733. Retrieved from: <https://www.nejm.org/doi/full/10.1056/nejmoa2001017>