



Consequences of the Pandemic: Consumer Behavior Changes

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Abstract: *The COVID-19 pandemic significantly impacted the business environment worldwide. Some of the most significant changes occurred due to consumers altering their habits. This paper explores some of the most significant of these changes and draws their conclusions. The main aim of this research was to examine the consumer behavior changes that occurred during the COVID-19 pandemic and their impacts on the Slovak business environment. The findings were also used to describe the major consequences that the pandemic had on society in terms of its effects. A survey was used to collect data from consumers. The research sample file consisted of 587 Slovak consumers. It was discovered that some consumers experienced panic buying and significantly increased their tendency towards stockpiling goods during the initial stages of the pandemic. The trend towards shopping unaccompanied did not survive the end of the pandemic years. The increase in online shopping has remained strong even after the pandemic concluded and still represents a new challenge for business owners, but also an opportunity.*

1. INTRODUCTION

The world around us is a constantly evolving dynamic system. Any change that occurs in the system will affect its elements. By developing human knowledge, it is possible to prepare for changes and thereby eliminate their negative effects. However, sometimes the change is so fundamental and unexpected that societies cannot foresee its consequences. Such an unexpected major event was the COVID-19 pandemic, which caught the world unprepared and its effects were manifested significantly in the years 2021 - 2023. The COVID-19 pandemic negatively affected all aspects of the process in modern societies and researchers all around the world focused on documenting its immediate effects, including consumer behavior changes. Wells et al. (2023) stressed that the interpretation of consumer behavior is more relevant in situations where supply is uncertain. The COVID-19 pandemic created disruptions even in this area of supply chain management. Such risks created both temporal and social challenges during the pandemic that needed to be addressed by businesses providing products and services. However, for them to correctly address these newly emerged needs, they first must have enough evidence on how the consumer behavior changed.

Many consumers immediately shifted their shopping habits towards safer ways. Various evidences show how consumers reacted during the pandemic years (Eger et al., 2021; Moreira et al., 2023; Wells et al., 2023). However, the reactions varied based on the severity of the pandemic impacts and the strictness of governmental response. Therefore, it is important to look at consumer behavior changes through its elements as well as throughout different pandemic years.

Even though the immediate consequences of the COVID-19 pandemic have been sufficiently mapped, its long-term effects remain still unknown. This paper aims to draw conclusions from

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the pandemic and uncover the trends of changes that enable predictions of the future direction of consumer behavior evolution. The findings of this research can also serve as guidelines for any members of society by predicting the changes that consumer behavior would go through if such a negative major event occurred again in the future. Such data is necessary to develop marketing strategies that consider changes to meet actual consumers' needs and feelings.

2. LITERATURE REVIEW

Consumer behavior is widely recognized as a broad term that encompasses many variables. This is the behavior of a person when buying and consuming products, which means external manifestations of behavior - coming to a store, choosing a product, using it and consuming it, and then getting rid of the product; as well as internal manifestations - motivation, perception, the influence of various variables, opinions and their dissemination, satisfaction. It is a complex concept that is the result between the consumer and his environment (Cazacu, 2022; Morrison, 2009). Therefore, it is possible to observe changes in consumer behavior by mapping their external manifestations or through a more demanding understanding of consumers' motivations that lead them to act or, on the contrary, stimulate them not to act.

One of the most significant changes that was observed almost immediately after the outbreak was the consumer behavior changes in terms of frequency of shop visits and changes in goods amount bought. While research all around the world points towards a decrease in the first-mentioned aspect of consumer behavior (Harantová et al., 2022; Moharana & Pattanaik, 2022), the evidence varies on the latter. Cai et al. (2023) described that even though consumers did not visit shops as often as before the outbreak, not all of them decreased the amount of products they bought.

The sudden nature of the outbreak of the COVID-19 virus also caused frequent incidents of large-scale material panic buying, resulting in an imbalance in the supply and demand of goods and threatening social stability (Chen et al., 2022). Moreover, Yin et al. (2021) described a newly formed trend related to consumers' preferred form of shopping and newly emerged factors influencing their behavior such as the feeling of safety in stores and the accessibility of shops (Al-Tarrah et al., 2021; Güngördü Belbağ, 2022; Khanna et al., 2023). The early stages of the pandemic were accompanied by uncertainty which led people to seek safety. Several cases of stockpiling were reported in the early days of the pandemic (Chen, 2020; Wang et al., 2020). However, the media coverage of this phenomenon decreased during the later years of the pandemic (Pan et al., 2022; Stanca et al., 2023). This decrease may not be a relevant indicator of the real situation. However, credible evidence in this area is currently lacking. Likewise, there are some scarce reports on how consumers may have shifted their preference towards shopping unaccompanied (Cai et al., 2023).

Furthermore, Di Crosta et al. (2021) described that the pandemic has also heavily impacted individuals' spending levels. The economic crisis that emerged as a reaction to the pandemic and a slowdown in economic activity causing a rise in unemployment often also resulted in decreased incomes for many households. Some evidence exists on the linkage between these alterations in household incomes and changes in consumer behavior (Veselovská et al., 2022). When household incomes decline, consumers typically adjust their spending patterns and priorities. These changes may include reduced spending on non-essential items, such as dining out, entertainment, or travel, and a shift towards essential goods and services like groceries, healthcare, and

housing. Consumer confidence can also play a crucial role in shaping behavior during an economic crisis. When people are uncertain about the future, they may reduce their spending to build a financial safety net. On a positive note, these changes may indicate a long-term shift towards more sustainable consumption.

Another interesting trend that occurred during the pandemic was the change in brands that consumers had used before the pandemic due to perceived value based on expectations and experience (Veselovská, 2023; Wang et al., 2023). Migliore et al. (2021) as early as 2021 described a trend toward ethnocentrism that has become abundant during the pandemic. These findings were later confirmed by Čvirik et al. (2023). According to Prymon-Ryś and Galarowicz (2021), the most important phenomena that have been observed include the growing importance of e-commerce and technologies supporting distance communication and online exchange. Many governments introduced lockdowns to stop the spread of the virus. Therefore, consumers were forced to limit their visits to classic brick-and-mortar shops. Other researchers also provided evidence of this phenomenon (Lemes Bausch et al., 2021; Phang et al., 2021; Yin et al., 2021).

The provided evidence is extensive at first glance. However, these studies provide only limited views of various elements of consumer behavior that focus mostly on their external manifestations, often lacking deeper context. Therefore, this research study focused on describing the most complex consumer behavior changes in one selected country taking into consideration its political and economic development as well as the development of the pandemic situations from the beginning of the year 2021 to the end of March 2023.

3. METHODOLOGY

This research was part of an ongoing project designed to map the effects of the pandemic on consumer behavior. A nationwide survey took place in the Slovak Republic. Data was collected from consumers almost since the outbreak of the COVID-19 pandemic. The target group was consumers who were at the time of the survey the main shopper for their household. So the goal was to build a representative sample of all people in the selected country, but to create a pool of data from consumers who possessed the relevant information. The sample file consisted of 587 consumers as presented in Figure 1.

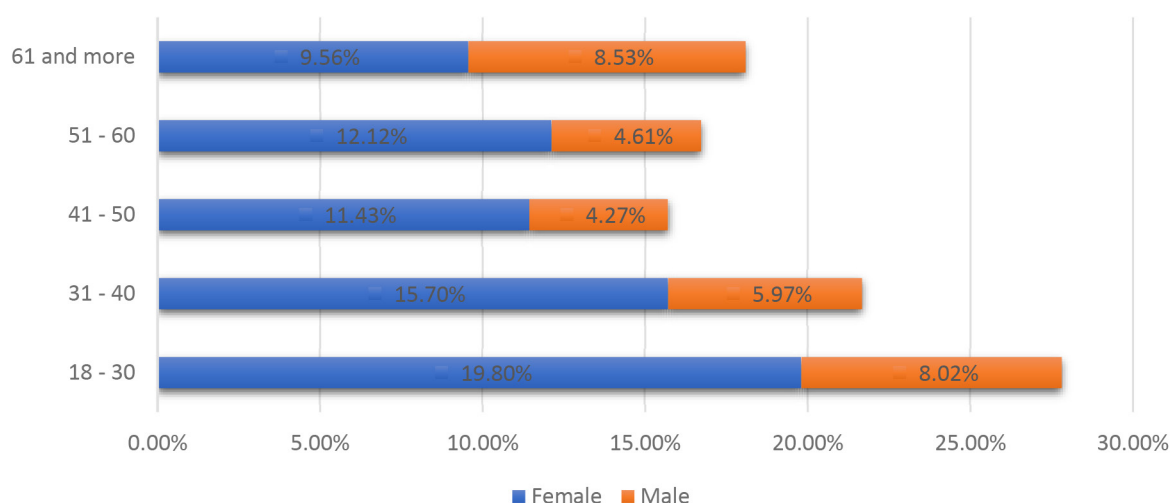


Figure 1. Sample file structure

Source: Own processing

This paper aims to explore the major consumer behavior changes that occurred during the COVID-19 pandemic. Several methods were used to collect, process, and analyze the data enabling the authors to elaborate a clear image of not only the changes that occurred but also of how different segments of consumers reacted and altered their behavior. This research uses segmentation of consumers by age, gender, and levels of education to uncover such differences.

4. RESULTS

Consumers experienced various significant changes during the pandemic. Based on its implication for sustainable consumption it would be beneficial to explore firstly the changes in the amount of products bought during the pandemic. Figure 2 and Figure 3 present the corresponding information. According to the data, the majority of consumers regardless of their level of education decreased the amount of products they bought during the years of the pandemic in comparison to amounts they had used to buy before the outbreak. However, some variation can be observed when examining this issue by segmenting the consumers based on this socioeconomic criterion. According to the findings consumers who completed just the elementary education were more prone to increasing the amount of products they bought during the pandemic. Furthermore, consumers with university degrees were least likely to change anything in their buying habits.

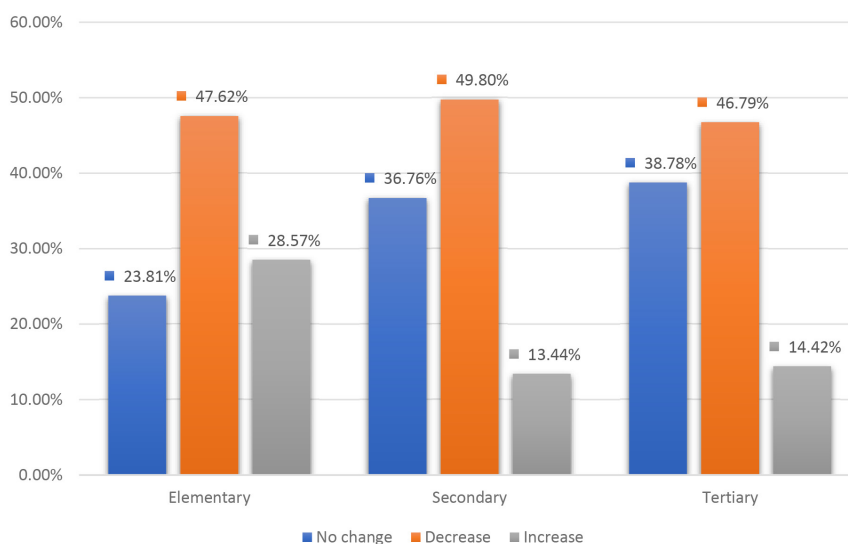


Figure 2. Changes in the amount of products bought during the pandemic

Source: Own processing

The COVID-19 pandemic significantly affected lives in societies during the years 2021 and 2023. However, its immediate effects were not consistent during this period. Therefore, it is necessary to explore any changes that occurred in consumer behavior in each year individually. According to the data presented in Figure 3, the second year of the pandemic was the time when the majority of changes occurred. On the other hand, in 2021 the majority of consumers did not alter the amount of products bought. However, this was the year when the highest share in the increase in the purchased quantity was recorded (18.18% of consumers). This year up to 36.8% of consumers experienced panic buying. This share was significantly lower during the other examined years. Given that panic buying is caused by fear, it is logical that the uncertainty at the beginning of the pandemic caused this phenomenon to an increased extent. In 2022 and 2023, more than half of all consumers reduced the amount of products they purchased. The mentioned findings indicate an increase in the caution of consumers, either by getting used to the pandemic situation or by learning

to be cautious concerning the creation of savings. In this context, this research also examined the changes that occurred among consumers in terms of their household income. Higher fluctuations occurred in 2022, which may result in lower purchase quantities.

Concerning achieving the sustainability of world consumption, it is appropriate to draw attention to the positives that the COVID-19 pandemic has brought. It is the reduction of the amount purchased, practiced by more than half of consumers since 2022, that can contribute positively to the sustainable use of resources on our planet, which is also one of the important strategic goals of sustainable development. The situation remained favorable in 2023 and hopefully, this trend will continue and prevail in the future.

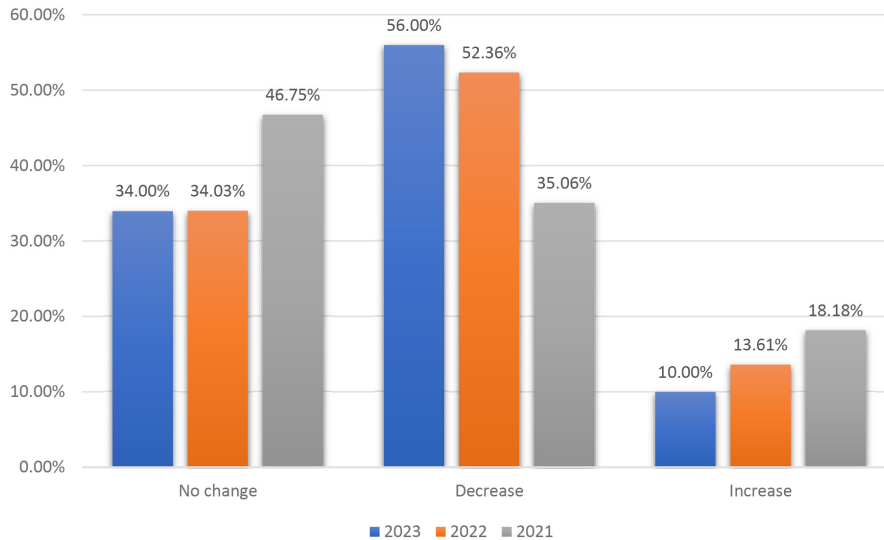


Figure 3. Changes in the amount of products bought during the pandemics according to income changes of households based on year

Source: Own processing

An accompanying sign of any sudden and unfavorable event is a rise in fear. Such negative feelings can also cause panic buying in consumers. Therefore, this research explored the preference of consumers to stockpile goods. Again, it is necessary to look at this information in the context of individual years, which also makes it possible to map the development of this phenomenon. Figure 4 shows the trend of a slight decrease in stockpiling of goods.

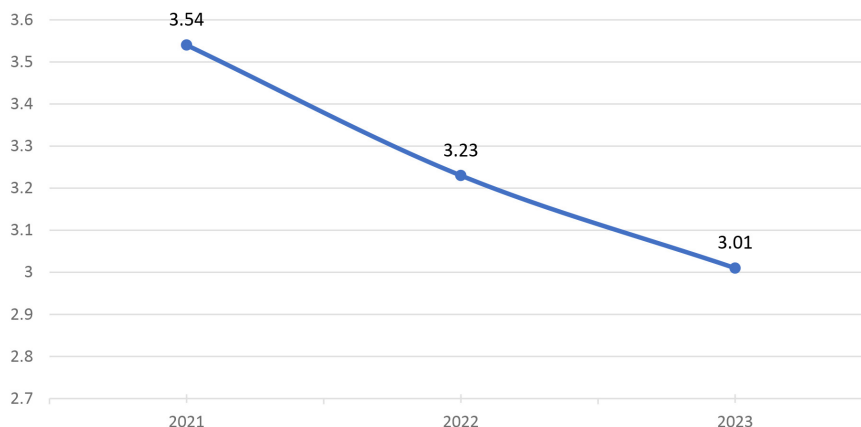


Figure 4. Changes in preference to stockpile goods based on year

Source: Own processing

Shopping in classic stores has always been a social activity when social contact is created. In the pre-pandemic period, consumers often used shopping as a leisure activity to meet friends or family members. However, the measures implemented during the pandemic led to exactly the opposite result, as they intended to limit social contact. Figure 5 shows the trend of how much consumers preferred unaccompanied shopping during the pandemic. The data suggests that this trend persists in 2023 and the situation is only slowly returning to the pre-pandemic state and consumers are still being cautious.

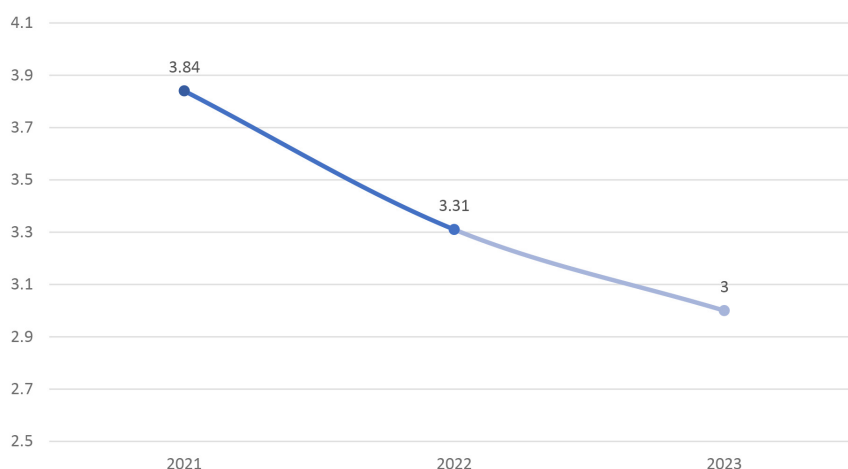


Figure 5. Changes in preference to shop unaccompanied based on year

Source: Own processing

Due to the measures implemented by the government to prevent the spread of the virus and protect people, it was necessary to move shopping to the online space. Before the COVID-19 pandemic, Slovak consumers had already been used to buying fashion items, cosmetics and electronics online. However, before the pandemic, only a very low proportion of consumers (8.72%) had bought daily products online. This share increased significantly during the pandemic, especially in 2022 and 2023. However, the changes were not equally large across the entire spectrum of consumers. Figure 6 shows how these changes were manifested during the pandemic in individual segments of consumers broken down by age. The highest increase occurred in the group of consumers in the 31-40 age group. Conversely, the lowest increase was recorded among the oldest consumers. On the figure, it is possible to also observe a downward trend in the growth of online shopping for daily consumption products as the age of consumers increases except for the youngest consumers under 30 years old.

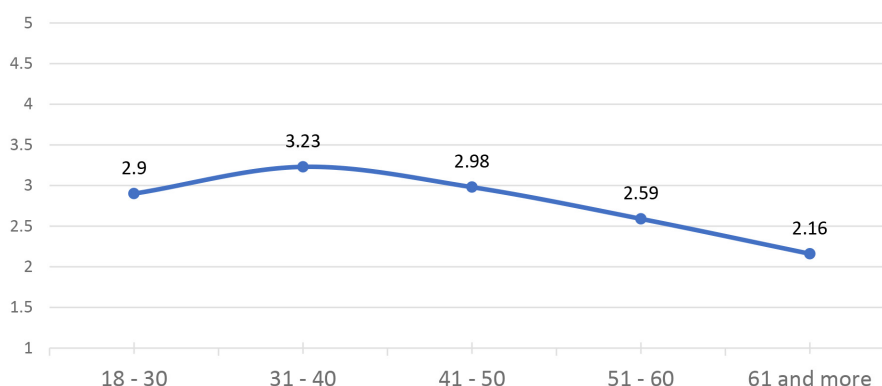


Figure 6. Changes in preference for online shopping according to the age of consumers

Source: Own processing

These findings indicate high rates of fluctuations between individual years of the pandemic. However, the majority of changes seemed to stabilize in 2023. Even though the future duration of these changes is not yet known, the immediate effects seem to indicate that consumer behavior is returning to its pre-pandemic factors of influence. However, some changes seemed to endure.

5. FUTURE RESEARCH DIRECTIONS

The findings of this research indicate that the long-term impacts of the COVID-19 pandemic have not yet been explored in sufficient detail. Therefore, future research needs to focus on consumers' preference for online shopping and delivery of products ordered online to their homes. One of the other emerging trends reflects new ways of product distribution that had not yet been sufficiently explored.

One of the obvious, but necessary directions for future research should be the exploration of consumer behavior changes during the pandemic and its impacts on sustainable development on the planet. The preliminary findings show contradictory trends of development. Current research shows that people are becoming more responsible and more conscious of their communities. Consumers have significantly started to prefer locally produced goods, especially food items. On the other hand, the evidence clearly shows major increases in waste production. A preliminary report published by the United Nations points towards deterioration in meeting the strategies designed to meet the sustainable development goals. Our research shed some light on the development of sustainable consumption and the results are not positive. However, further explorations are needed to discover the exact nature of deterioration.

6. CONCLUSION

This research focused on discovering the major changes in consumer behavior that occurred during the COVID-19 pandemic. Even though it is not possible to prove that all the changes that were observed were caused by the pandemic itself, research can show how the situation affected consumers and their buying habits. Therefore, a representative sample of consumers was used to map these changes.

It was discovered that 36.8% of consumers experienced panic buying during the pandemic. The majority of such negative feelings and their consequences were observed during the early stages of the pandemic in 2021. Another interesting finding was the observed decrease in using shopping as a method of social enjoyment. During the pandemic, the majority of consumers preferred to visit shops alone. However, this trend towards shopping unaccompanied did not survive the end of the pandemic years. Already in the second half of 2023, consumers are returning to their previous habits of shopping with family members or friends. On the other hand, there is a trend that increased severely during the pandemic. The increase in online shopping has remained strong even after the pandemic concluded and still represents a new challenge for business owners, but also an opportunity. This finding was supported by research conducted in other countries as described by [Yin et al. \(2021\)](#). Therefore, the proposed solution would be paying attention to the combination of online and offline development of marketing activities.

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References

- AlTarrah, D., AlShami, E., AlHamad, N., AlBeshar, F., & Devarajan, S. (2021). The Impact of Coronavirus COVID-19 Pandemic on Food Purchasing, Eating Behavior, and Perception of Food Safety in Kuwait. *Sustainability*, 13(16), 8987. <https://doi.org/10.3390/su13168987>
- Cai, L., Yuen, K. F., Fang, M., & Wang, X. (2023). A literature review on the impact of the COVID-19 pandemic on consumer behaviour: implications for consumer-centric logistics. *Asia Pacific Journal of Marketing and Logistics*, 35(11), 2682-2703. <https://doi.org/10.1108/apjml-08-2022-0731>
- Cazacu, A. N. (2022). Consumer behavior analysis. *Advances and Applications in Statistics*, 82, 27–42. <https://doi.org/10.17654/0972361722078>
- Chen, A. W. (2020). Consumer stockpiling behavior in the Retail Gasoline Market. *The International Review of Retail, Distribution and Consumer Research*, 30(4), 460–477. <https://doi.org/10.1080/09593969.2020.1724557>
- Chen, T., Jin, Y., Yang, J., & Cong, G. (2022). Identifying emergence process of group panic buying behavior under the COVID-19 pandemic. *Journal of Retailing and Consumer Services*, 67, 102970. <https://doi.org/10.1016/j.jretconser.2022.102970>
- Čvirik, M., Naďová Krošláková, M., Milić Beran, I., Capor Hrosik, R., & Drábik, P. (2023). Influence of health-conscious consumer behaviour on consumer ethnocentrism during the COVID-19 pandemic. *Economic Research-Ekonomska Istraživanja*, 36(1), 1510-1526. <https://doi.org/10.1080/1331677x.2022.2090402>
- Di Crosta, A., Ceccato, I., Marchetti, D., La Malva, P., Maiella, R., Cannito, L., Cipi, M., Mammarella, N., Palumbo, R., Verrocchio, M. C., Palumbo, R., & Di Domenico, A. (2021). Psychological factors and consumer behavior during the COVID-19 pandemic. *PLOS ONE*, 16(8). <https://doi.org/10.1371/journal.pone.0256095>
- Eger, L., Komárková, L., Egerová, D., & Mičík, M. (2021). The effect of COVID-19 on consumer shopping behaviour: Generational Cohort Perspective. *Journal of Retailing and Consumer Services*, 61, 102542. <https://doi.org/10.1016/j.jretconser.2021.102542>
- Güngördü Belbağ, A. (2022). Impacts of Covid-19 pandemic on consumer behavior in Turkey: A qualitative study. *Journal of Consumer Affairs*, 56(1), 339-358. <https://doi.org/10.1111/joca.12423>
- Harantová, V., Kalašová, A., Skřivánek Kubíková, S., Mazanec, J., & Jordová, R. (2022). The impact of mobility on shopping preferences during the COVID-19 pandemic: The evidence from the Slovak Republic. *Mathematics*, 10(9), 1394. <https://doi.org/10.3390/math10091394>
- Khanna, P., Sehgal, R., Malviya, M., & Dubey, A. M. (2023). Examining the role of saving and safety on the buying behavior: lessons from the Indian consumer's in COVID-19 crisis. *Benchmarking: An International Journal*, 30(9), 3674-3698. <https://doi.org/10.1108/bij-06-2022-0351>
- Lemes Bausch, C., Sperandio Milan, G., Graciola, A. P., Eberle, L., & Beber, S. (2021). The COVID-19 pandemic and the changes in consumer habits and behavior. *Revista Gestão e Desenvolvimento*, 18(3), 3–25. <https://doi.org/10.25112/rgd.v18i3.2846>
- Migliore, G., Rizzo, G., Schifani, G., Quatrosi, G., Vetri, L., & Testa, R. (2021). Ethnocentrism effects on consumers' behavior during COVID-19 pandemic. *Economies*, 9(4), 160. <https://doi.org/10.3390/economies9040160>
- Moharana, T. R., & Pattanaik, S. (2022). Post-pandemic revisit intentions: How shopping value and visit frequency matters. *International Journal of Retail & Distribution Management*, 51(3), 386–406. <https://doi.org/10.1108/ijrdm-04-2022-0115>
- Moreira, I., Lopes, J. M., Borges, A. P., & Oliveira, J. C. (2023). Was There an Alteration on Consumers Pattern with COVID-19 Pandemic? A Pre and Post-Pandemic Research on

- Consumers Behavior (2023). *International Journal of Marketing, Communication and New Media*, 11(20). <https://doi.org/10.54663/2182-9306.2023.v11.n20.5-40>
- Morrison, J. L. (2009). Consumer behavior. *Journal of Education for Business*, 84(4), 252–256. <https://doi.org/10.3200/joeb.84.4.252-256>
- Pan, X., Mantin, B., & Dresner, M. (2022). When the going gets tough, do the tough go shopping? *Journal of Business Logistics*, 44(1), 61–79. <https://doi.org/10.1111/jbl.12319>
- Phang, I. G., K. P. D. Balakrishnan, B., & Ting, H. (2021). Does sustainable consumption matter? consumer grocery shopping behaviour and the pandemic. *Journal of Social Marketing*, 11(4), 507–522. <https://doi.org/10.1108/jsocm-12-2020-0245>
- Prymon-Ryś, E., & Galarowicz, A. (2021). Buying behaviors of Polish consumers during the pandemic lockdown – research results. *Problemy Zarządzania - Management Issues*, 4/2021(94), 19–37. <https://doi.org/10.7172/1644-9584.94.3>
- Stanca, L., Dabija, D.-C., & Câmpian, V. (2023). Qualitative analysis of customer behavior in the retail industry during the COVID-19 pandemic: A word-cloud and sentiment analysis approach. *Journal of Retailing and Consumer Services*, 75, 103543. <https://doi.org/10.1016/j.jretconser.2023.103543>
- Veselovská, L. (2023). Risk based approach to documenting consumer behavior changes during the COVID-19 pandemic. *Societal Impacts*, 1(1-2), 100006. <https://doi.org/10.1016/j.socimp.2023.100006>
- Veselovská, L., Hudáková, L., & Bartková, L. (2022). Feeling of safety: A new important factor influencing consumers? *Cogent Business & Management*, 9(1). <https://doi.org/10.1080/23311975.2022.2143007>
- Wang, D., Chen, W., Zheng, X., & Wang, X. (2023). Driving mechanism of consumer migration behavior under the COVID-19 pandemic. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.1005265>
- Wang, E., An, N., Gao, Z., Kiprop, E., & Geng, X. (2020). Consumer Food Stockpiling Behavior and willingness to pay for food reserves in COVID-19. *Food Security*, 12(4), 739–747. <https://doi.org/10.1007/s12571-020-01092-1>
- Wells, V., Carrigan, M., & Athwal, N. (2023). Pandemic-driven consumer behaviour: A foraging exploration. *Marketing Theory*, 147059312311756. <https://doi.org/10.1177/14705931231175695>
- Yin, B., Yu, Y., & Xu, X. (2021). Recent advances in consumer behavior theory: Shocks from the COVID-19 pandemic. *Behavioral Sciences*, 11(12), 171. <https://doi.org/10.3390/bs11120171>

