



Lessons from the COVID-19 Pandemic: Consumer Behavior During Adverse Events

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Abstract: *The COVID-19 pandemic created unique conditions in societies with various implications for the future. A research study based on empirical research conducted on a sample of 1172 consumers explores the consumer behavior changes that occurred during the pandemic. It was discovered that the consumers in the age group 30 – 39 years old living alone to the greatest extent decreased the amount of products they bought during the pandemic. In 2021, the most significant impact of the shop availability factor was recorded, from the point of view of consumers aged 50 to 59. Consumers aged 40-49 were most likely to be influenced by expert information in their purchasing decisions and they were the ones who most trusted the official government information on pandemic development. Fear was an important factor that influenced consumer behavior during the pandemic. The fear of job loss manifested itself in higher savings among consumers in the 40-59 age group. On the contrary, lower age categories of consumers were more concerned about the health of their loved ones, which was mainly reflected in the tendency to shop in brick-and-mortar stores unaccompanied. Guidelines were formulated based on these findings in order to predict how the consumers will adapt their behavior during the next adverse event that may occur in the future. By explaining in detail what changes occurred and why they occurred it is possible to predict consumer behavior during adverse events in the near future.*

1. INTRODUCTION

The COVID-19 pandemic marked a significant crisis period in societies worldwide from its outbreak in 2020 up until its official conclusion in 2023. However, its impacts are still significant even after its conclusion. Any adverse event or time of crisis introduces significant changes in all aspects of life. Such changes provide both challenges and opportunities for the business environment. Enterprises need to face these challenges and introduce significant adjustments and even sometimes new strategies to not only survive but also thrive. Several major lessons can be derived from this experience. However, that depends on the organization's ability to learn.

The challenges that businesses face during the COVID-19 pandemic can be divided into two categories based on the sources from which they were introduced. The first group of challenges can be traced back to the government that its introduction of new policies and restrictions designed to stop the spread of the virus. As the reports show (Fletcher & Griffiths, 2020; Hean & Chairassamee, 2023; Iwuoha et al., 2021; Mahmud & Riley, 2022), these were the challenges that were very easy to overcome. However, it was the second category that created major problems for businesses worldwide. Since the pandemic introduced new changes in societies, people were forced to adapt. Therefore, this period also observed significant modifications in consumer behavior.

Consumer behavior on its own is already a very complex system of factors influencing how consumers decide to either buy or not purchase a certain product. However, during adverse events,

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this fragile system experiences major turmoil. Consumer behavior changes have been a significant focus of research throughout the pandemic and soon after its conclusion. Various researchers mapped the changes that occurred during the pandemic in all major aspects of consumer behavior as we understand it today (Bisaria, 2021; Cai et al., 2023; Ma et al., 2023).

However, all that is currently still missing from the pool of knowledge are the conclusions. The synthesis of all analyzed aspects of consumer behavior changes needs to be transformed into lessons for the near future. Predicting consumer behavior is very difficult, however, predicting its development during adverse events can become essential for businesses to overcome such challenges and to thrive. This research aims to provide several of these lessons and their implications for the business environment in the form of guidelines for companies to develop strategies in order to flexibly react to consumer behavior changes should another adverse event arise in the near future.

2. LITERATURE REVIEW

Consumer behavior can be perceived as a complex set of factors influencing behavior that results in either a purchase or not. The complexity of this issue has been known and explored by various researchers for many decades (Ma et al., 2023; Novotny & Duspiva, 2014). However, it was discovered that consumer behavior is a dynamic phenomenon that changes over time or under specific circumstances. The COVID-19 pandemic was such a significant adverse event that it impacted even the most basic processes in societies and created a whole new reality that people had to adjust to. As a result, consumer behavior changed drastically. Various research studies explored these changes.

The most significant and fundamental change in consumer behavior that many researchers explored since the start of the COVID-19 pandemic was the fluctuation in the quantity of products consumers were buying. Kumar and Pole (2024) provided evidence that the emergence of the pandemic and consequent governmental measures were a cause for an increase in the quantity of bought products. However, other research studies conducted in later pandemic years show that this increase did not last (Juhasz et al., 2022). There is a significant discrepancy between the findings of these studies that prove that consumers in different countries reacted differently to pandemic conditions.

Furthermore, differences were also observed in different types of products that were bought during the pandemic. Zuokas et al. (2022) provided evidence that it was daily consumption products that were bought during the pandemic in different quantities. However, leisure products also observed changes in their bought quantities, these changes were not as significant as it was observed in the previous category.

Research has also proven that any major adverse event is always accompanied by an increase in fear (Zhang et al., 2022). However, very few studies have explored how different types of fear affected consumers during the COVID-19 pandemic and what were the consequent consumer behavior changes. Belbag (2021) explored how the fear manifested in panic buying. However, this study covered only the first stage of the pandemic, not exploring how this phenomenon evolved in the later months and years of the COVID-19 pandemic.

Moreover, there are many studies focused on how the factors influencing consumer behavior evolved their influence during the pandemic (Ali Taha et al., 2021; Sostar & Ristanovic, 2023). Special attention was given to media, especially social networks (Mason et al., 2021). However, the results varied. Some authors provided evidence on positive examples of how media can instigate

a positive change in consumer behavior even during harsh conditions of an adverse event (Ng et al., 2022). Other research studies cite media as the main source of social discord and even a cause of panic in societies (Ali Taha et al., 2021; Belbag, 2021; Luc & Hoang, 2023). Based on these findings, it is clear that societies were very polarized during the pandemic and consumers reacted differently based on other factors.

These findings draw a clear picture of major consumer behavior changes that occurred during the COVID-19 pandemic. However, their connections remain not fully explored. Furthermore, some studies even focused on suggesting what these changes could mean for businesses (Khouja & Liu, 2021; Poon & Tung, 2022; Tao et al., 2022). However, such implications have not yet been fully covered, especially with the connection to post-pandemic consumer behavior or future adverse events. This research aims to contribute to filling this research gap by addressing this issue and by developing guidelines for businesses.

3. METHODOLOGY

The main aim of this research was to explore consumer behavior changes that occurred during the COVID-19 pandemic, to draw the lessons from this information and to develop guidelines for enterprises to be able to flexibly react to consumer behavior changes that may occur during an adverse event in the future. This research study was based on an empirical research. A sample of 1172 consumers in the Slovak Republic was used to collect data and to explore the consumer behavior changes that occurred during the pandemic to draw guidelines for the future. The representativeness of this sample file was verified according to the criterion of the consumer's age. The base file consisted of all Slovak citizens of legal age that is older than 18 years old. The chi-square test was used to calculate and consequently also confirm the representativeness of the sample file. The structure of the sample file according to the criterion of consumers' age is provided in Table 1.

Table 1. Sample file

Base file (population as of 1 st July of researched year)				Sample file		
Age	2023*	2022	2021	2023	2022	2021
18 - 29		856586	878419	72	206	26
30 - 39		815154	828026	82	135	26
40 - 49		879998	872853	37	125	32
50 - 59		705272	703452	62	118	18
60 - 69		683376	689923	39	99	22
70 and more		618244	599217	4	55	14
Total		4558628	4571888	296	738	138

* The data is not available at the time of processing

Source: Own processing

Moreover, other social and economic characteristics of consumers were collected and consequently used in the analysis of various phenomena related to consumer behavior changes during the pandemic. This sample file consisted of 68.61% of female consumers. The majority of consumers in the sample file were employed (61.09%) and 22.69 % of them were entrepreneurs. Up to 21.5% of consumers in the sample file lived alone during the time of the pandemic, 21.51% lived with their parents, 24.23% shared a household with a partner without children and the remaining 32.78% lived in a household with a partner with children.

4. RESULTS

The first change explored in this study was the extent of the quantity of products bought that varied during the pandemic years. It was discovered that even though consumers initially increased the quantity of products they bought at the time of the outbreak, only older consumers continued to buy more as the pandemic progressed. Consumers of all other age groups either returned to the amounts of products they had bought before the pandemic or some even decreased the quantity of products they bought. It was the consumers in the age group 30 – 39 years old living alone who to the greatest extent decreased the amount of products they bought during the pandemic. This result can signify an indication of the turn towards sustainable consumption as the lifestyle that has become popular among younger generations. Furthermore, it was discovered that daily consumption goods, not entertainment products observed the largest decline in their purchase amounts in 2022. This is a surprising finding indicating that consumers were more mindful during the pandemic of their expenses. This trend was observed to a higher extent among female consumers.

This research also focused on exploring factors that influenced the purchasing behavior of consumers during the COVID-19 pandemic. Several traditional factors such as family, friends, and media were considered. However, some new factors emerging during the COVID-19 pandemic were also included in the research. Figure 1 and Table 2 show the fluctuation in the influence of such factors structured according to the age of consumers and the year of the pandemic. The scale used to evaluate the influence of any factor was from 1 point (the lowest influence) to 5 points (the highest influence).

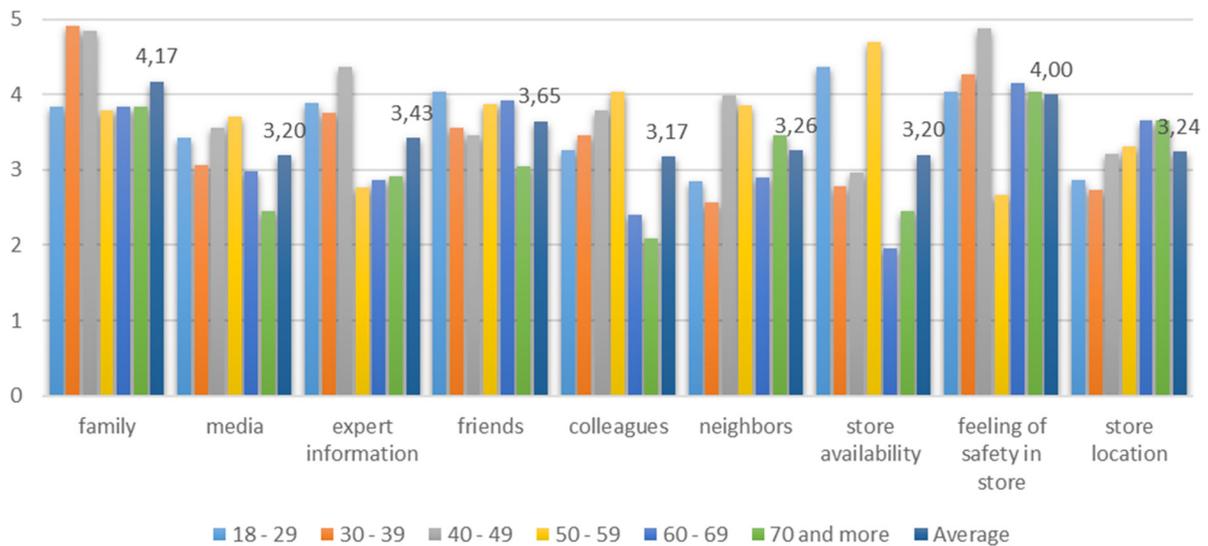


Figure 1. Influence of factors – based on age of consumers

Source: Own processing

It was discovered that in 2021, the significantly highest impact of the shop availability factor was recorded, especially in the age groups of consumers 50 to 59 years and 18 to 29 years old. However, this factor had only a moderate effect on the 60 - 69 age group. Furthermore, the influence of this factor significantly decreased in other years of the pandemic. A high impact of the factor of feeling safe in the store was recorded across all age categories, except for consumers aged 50 – 59. However, this high impact was recorded mostly in the later years of the pandemic. Furthermore, a significant increase in the influence of the family factor can be observed mainly among consumers aged between 30 and 49 years. However, this factor had a very steady influence on

all consumer segments. It was also discovered that consumers aged 40 - 49 were also most likely to be influenced by expert information in their purchasing decisions and they were the ones who most trusted the official government information on pandemic development.

Table 2. Changes in influence of factors – based on pandemic year

Factors	2021	Interannual change of		2022	Interannual change of		2023
	Level of influence			Level of influence			Level of influence
family	4,59	-0,49	-10,68%	4,10	-0,12	-2,93%	3,98
media	3,35	-0,11	-3,28%	3,24	-0,12	-3,70%	3,12
expert information	3,63	0,15	4,13%	3,78	-0,82	-21,69%	2,96
friends	3,41	0,28	8,21%	3,69	0,08	2,17%	3,77
colleagues	2,14	1,51	70,56%	3,65	0,14	3,84%	3,79
neighbors	3,26	0,25	7,67%	3,51	-0,46	-13,11%	3,05
store availability	4,96	-2,49	-50,20%	2,47	-0,31	-12,55%	2,16
feeling of safety in store	3,69	0,60	16,26%	4,29	-0,28	-6,53%	4,01
store location	3,02	0,29	9,60%	3,31	0,09	2,72%	3,40

Source: Own processing

As the current pool of knowledge shows, any major adverse event is always accompanied by the emergence of fear. Different aspects of fear and its influence on consumer behavior during the COVID-19 pandemic were also explored in this research (Figure 2). The significant stockpiling was observed in a very polarized way. The highest rate was expressed by the oldest consumers, but consumers in the age group 30 – 39 years old were stockpiling nearly as much. Furthermore, health concerns were very significant throughout the age spectrum. However, it was the fear for the health of loved ones that was more impactful on consumers' shopping tendencies, even over the concerns for their health except for the oldest consumers.

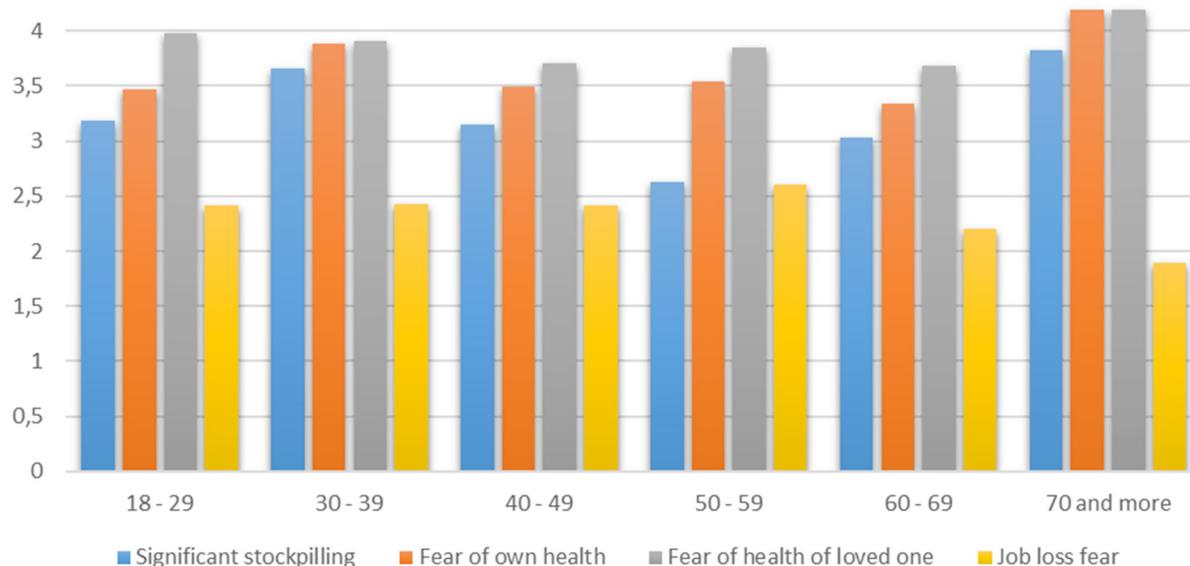


Figure 2. Influence of fear on consumer behavior

Source: Own processing

It was discovered that lower age categories of consumers were more concerned about the health of their loved ones, which was mainly reflected in their tendency to shop in brick-and-mortar stores unaccompanied. Furthermore, it was discovered that panic buying was not significantly present in the Slovak Republic. Very few consumers felt the need to significantly increase the number of daily consumption goods that they bought during the COVID-19 pandemic except for the first months of the pandemic.

The findings of this research also proved adverse events are always periods of increased fear. The consumer behavior theory suggests that consumers become more cautious during such times and spend less of their household income. However, the data collected in the Slovak Republic shows the opposite trend. The tendency to create savings decreased during the COVID-19 pandemic in this country. The only exception that was observed was when in 2022 the fear of job loss manifested itself in higher savings among consumers in the 40 - 59 age groups.

5. FUTURE RESEARCH DIRECTIONS

The findings of this research indicate various significant new trends that are emerging in the post-pandemic world. It is clear that societies have changed and therefore, consumers have also changed since they have adapted to these changes. Information and communication technologies have made access to news very fast and easy. Therefore, decisions related to purchase can also be made significantly quicker. Moreover, consumers now make well-informed decisions based on gained knowledge. Or so they would like to believe. Nowadays, consumers have many opportunities to gain information if they seek it correctly. However, not all consumers are prepared to properly apply critical thinking when processing the information. The Internet and especially social networks are the main sources of recommendations for many consumers. Friends and family members are the pillars of absolute truths. Therefore, consumers are more prone to believing information coming from such sources, even if it's contradictory to the official information provided by government offices. [Herrero-Diz and Perez-Escolar \(2022\)](#) described the consequences of disinformation and consumer behavior. Their research provided evidence of how fake health news could potentially be more harmful to consumer welfare than political hoaxes. Moreover, [Di Domenico and Visentin \(2020\)](#) explored how fake news and problematic information that has been rapidly contaminating the digital world could negatively impact consumers and marketing managers. Therefore, one direction for future research could be the exploration of the potential connection between fear that was present during the COVID-19 pandemic and fake information. Both these negative phenomena can have negative impacts on consumer behavior on their own, however, what is currently missing from the pool of knowledge are the potential combined influences of both these factors.

Furthermore, this research proved that the influence of media and family remains steady even during severe adverse events. Therefore, the focus of new marketing strategies should be on implementing measures that can combine these factors and exploit such influences. Future research on marketing strategies should focus on this topic to provide current information valid in the post-pandemic business environment.

[Min et al. \(2021\)](#) provided evidence on how generations differ in coping with a pandemic. Their research also proved what this research study explored in terms of the different reactions of consumers of different ages during the pandemic. However, this topic remains not fully understood, therefore further research into its implications should be conducted.

The findings of this research also focused on the link between fear and consumer behavior changes. Mamgain (2021) also provided evidence on labor market disruptions and job losses amidst COVID-19 that confirm the fact that job loss was a serious threat during the COVID-19 pandemic and therefore, this fear was not completely unfounded. Other authors reached similar conclusions (Andersen et al., 2023; Bisaria, 2021). The threat of job loss should have passed since the conclusion of the pandemic; however, the initial indications are that it may not be the case (Zheng et al., 2024). Therefore, further research is needed to explore this phenomenon in the post-pandemic world.

6. CONCLUSION

The COVID-19 pandemic brought on a major socioeconomic transformation that also impacted attitudes and beliefs. In order to understand a modern consumer a more pronounced thinking in a system context that focuses on both supply and demand side is needed. Guidelines were formulated based on the research findings in order to predict how the consumers will adapt their behavior during the next adverse event that may occur in the future.

The most important fact that all business managers need to be aware of is the nature of adverse events and their severity. Adverse events such as pandemics can impact societies in very significant ways. Therefore, the very fundamentals of marketing principles need to be adjusted. Orientation on the marketing mix is essential to successfully adapt to new conditions. The first area that needs to be considered is the very products the companies sell. This research study discovered that younger generations of consumers are more conscious of the sustainable principles of modern societies. Therefore, these generations are the segments of consumers that should be targeted by preparing new ways of producing more sustainable products.

Secondly, the price as another part of the marketing mix also needs to be considered during these adverse events. Data from the COVID-19 pandemic showed that many businesses adjusted their prices in order to compensate for the lack of revenues, especially during lockdowns. However, this proved to be counterproductive since consumers reacted negatively to such price adjustments. Therefore, the main recommendation in the area of prices is not to increase them significantly during such adverse events, since it could lead to a significant loss of customers. If prices need to be adjusted during a pandemic or other adverse events in the future the recommendation is to use other ways to make changes or implementation of other methods, for example, promotions or loyalty programs.

The marketing mix component that experienced the biggest changes during the pandemic was distribution. It quickly became obvious that the pre-pandemic models were not sufficient for such altered conditions. Therefore, businesses should strive to discover and implement new ways of product distribution that do not rely on face-to-face contact or on customers who need to come to the traditional brick-and-mortar store to see and purchase products. However, this poses a significant challenge for businesses that sell services instead of physical products. Diversification seems to be the only option for such businesses to prepare for situations when they would not be able to deliver their services to customers. The other option is to prepare their premises to accommodate governmental restrictions, for example, those on social distancing. Therefore, by creating conditions that enable the feeling of safety in stores or business premises can become beneficial when such negative conditions arise.

Overall, the implementation of new technologies should become an integral part of all business processes already on a strategic level of management. Innovations in information and communication

technologies will lead the way in progress and that way create new possibilities for businesses to adjust their processes in order to better accommodate the customers' needs and desires. If technologies are used correctly, they can become a good way to compensate for negative restrictions during adverse events and to gain a competitive advantage. Therefore, the biggest lesson from the COVID-19 pandemic for business should be the orientation on implementing innovations in this area to be better prepared for the future.

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