



Proceedings of the
6th Virtual International Conference
Path to a Knowledge Society -
Managing Risks and Innovation

Editors:
Stanković, M. and Nikolić, V.

Publishers:
Complex System Research Center, Niš, Serbia
Mathematical Institute of the Serbian Academy
of Sciences and Arts, Belgrade, Serbia

October 21-22, 2024



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PaKSoM 2024

6th Virtual International Conference
Path to a Knowledge Society-Managing Risks and
Innovation
Proceedings

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Serbia, Niš, October 21-22, 2024



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6th Virtual International Conference
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Editors:

Prof. Dr. Miomir Stanković and Prof. Dr. Vesna Nikolić

Technical Editor:

Dr. Lazar Z. Velimirović

Published by:

Complex System Research Centre, Niš, Serbia, and
Mathematical Institute of the Serbian Academy of Sciences and Arts

Printed by:

Copy House, Niš, Serbia

Number of copies printed: 100

The publishing year: 2025

Printing of this edition has been financially supported by
The Ministry of Science, Technological Development and Innovation of the Republic
of Serbia

ISBN 978-86-82602-04-0

CIP - Каталогизacija у публикацији
Народна библиотека Србије, Београд

005.94(082)

005.591.6(082)

007:004(082)

VIRTUAL international conference Path to a Knowledge Society-Managing Risks and Innovation
(6 ; 2024 ; Niš)

Proceedings / 6th Virtual international conference Path to a Knowledge Society-Managing Risks
and Innovation PaKSoM 2023, Serbia, Niš, October 21-22, 2024 ; [organizer Mathematical Institute
of the Serbian academy of sciences and arts] ; [co-organizers Complex System Research Centre] ;
editors Stanković, M. [Miomir], Nikolić, V. [Vesna]. - Niš : Complex System Research Centre :
Mathematical Institute of SASA, 2025 (Niš : Copy house). - 346 str. : ilustr. ; 25 cm

Tiraž 100. - Bibliografija uz svaki rad.

ISBN 978-86-82602-04-0 (CSRC)

а) Знање -- Менаџмент -- Зборници б) Предузећа -- Пословање -- Иновације -- Зборници в)
Информациона технологија -- Зборници

COBISS.SR-ID 161737737

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Post-pandemic Consumer Behavior: Reflecting on the COVID-19 Pandemic Lessons

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Abstract —The COVID-19 pandemic significantly impacted societies all around the world. Currently, almost a year after the pandemic's conclusion, it is obvious that this period of adversity created changes that prevail. The main aim of this paper was to explore these changes and outline future trends in consumer behavior. The findings of this research are based on a survey conducted on a representative sample of consumers from the selected country. This method for collecting and processing data enabled the results to be based solely on consumers' opinions and experiences. According to the data, the main aspect of consumer behavior that prevailed is the online shopping and preference for food delivery. The phenomenon that was important during the pandemic but disappeared completely was the preference for shopping unaccompanied.

Keywords- consumer behavior, COVID-19 pandemic, post-pandemic period, Slovak republic.

I. INTRODUCTION

Consumer behavior is a central concept of modern marketing. Its purpose is to understand how the consumers perceive their products, what factors affect their decision to either buy or not buy this product and most importantly, how to change these consumers into loyal customers. Since this concept is crucial a lot of research has been conducted on consumer behavior and all its aspects are well mapped. However, this information is only valid during the conditions that are perceived as normal. During adverse events, consumers significantly alter their behavior under the strain of fear and other previously irrelevant factors. As a result, these

conditions create a whole new reality that consumers need to face. COVID-19 pandemic was such a major adverse event that it significantly altered the regular patterns of behavior. Therefore, it is necessary to explore even the most basic aspects of consumer behavior during the pandemic in order to understand it completely. Furthermore, after the conclusion of the pandemic, consumers are changed. During the adverse years, they explored new patterns of behavior, some they even found more convenient and therefore, some of the habits that they gained during the pandemic prevail even after its conclusion. This research focuses on exploring which of the consumer behavior aspects prevailed after the conclusion of the pandemic and which aspects were solidly related to the pandemic conditions.

Understanding how these consumers behave is crucial for enterprises to predict their demand and to also create measures to effectively manage their products and supply chains. Adverse events such as pandemics can create new trends and shift towards new reality. The COVID-19 pandemic was such a situation that completely altered the so-called normal trends of behavior that had been expected from consumers before. There are a lot of research studies that focus on how consumers behave during the pandemic. However, there is still little evidence on what changes that occurred during the pandemic still prevailed or if the consumers returned to their pre-pandemic habits of behavior. These aspects of consumer behavior still need to be explored to



properly understand the effects of the COVID-19 pandemic on societies.

II. LITERATURE REVIEW

Consumer conduct is an intricate occurrence that is exceedingly hard to comprehend and even more demanding to accurately depict. Nonetheless, the notion of consumer conduct is essential for contemporary marketing. Consumer behavior pertains to the examination of how individuals, groups, or entities arrive at decisions and behave [1].

According to [2] consumer behavior refers to the actions and decisions that individuals or households make when they choose, buy, use, and dispose of products or services. Understanding consumer behavior is crucial for businesses to create effective marketing strategies and meet customer needs. Majority of studies confirm that consumer behavior remains stable under normal conditions and it takes a major change to force significant adjustments [3,4]. Authors in [5,6] divided these stimuli into two categories depending on their source of origin. Internal stimuli can include for example an arrival of child into family or promotion in work of one of the family members whose income is a major contribution to household budget. On the other hand, external stimuli can affect whole population. Several such events and their consequences were documented. One of the most prominent recent cases was the impacts of the Fukushima power plant disaster. Due to fear of contamination even years after the event the consumers were scared to buy food products that originated from the area despite of several assurances and scientific evidence that products were safe [7-10].

Therefore, [11] argue that key influences on consumer behavior are psychological factors such as motivation, perception and attitudes and believe. Motivation involves needs and desires that drive consumer actions. Basic needs like food and security often take precedence regardless of external environment and its current conditions. Perception is related to how consumers interpret information about products and also current situation. Attitudes and beliefs shape how consumers feel about products and brands, influencing their buying behavior. The [12] also added learning to psychological factors since past experiences with products shape future purchasing decisions.

On the other hand, [13] promote the importance of social factors such as family and other reference groups. Family members can significantly influence buying decisions and reference groups such as friends, colleagues, and social groups can severely impact consumer choices or current and desired social status.

Various authors [14,15] also explored the influence of other sets of factors such as cultural, personal and economic factors. Consumers' culture as broader cultural context, including traditions and values, shapes consumer preferences. Even subcultures that are represented by smaller groups within a culture, such as ethnic groups, can have distinct buying behaviors. According to [16] personal factors such as age and life cycle stage are the ones with most distinct changes. Different stages of life bring different needs and buying behaviors. Even a person's job can influence their purchasing power and preferences. Even a lifestyle is not without an impact. How individuals live their lives, including activities and interests, affects their buying choices [17]. Economic factors represent the limiting factors in the mind of consumer. Disposable income levels determine what consumers can afford which is often the other side of the equation. Even the expectations of future income changes can affect what the consumers buy today. Even broader economic trends, such as inflation or recession, impact consumer spending [18].

Understanding these fundamental factors at any given time is crucial for businesses tailor their marketing strategies to better meet the needs and preferences of their target audience.

Evidence within the current body of knowledge on consumer behavior changes during the COVID-19 pandemic is divided regarding how consumers adjusted their purchasing habits compared to the pre-pandemic period. Several studies indicate that consumers increased their product purchases, particularly in the early stages of the pandemic [19,20]. Conversely, other research suggests that consumers shifted towards more sustainable consumption and actually reduced their product purchases [21]. This latter evidence is supported by studies conducted in the pandemic's initial phases, challenging the assumption that government measures to contain the virus would lead to decreased consumer purchases [22]. Given these contradictory trends, this research study also aims to provide insights into the

behavior of Slovak consumers during the pandemic.

III. RESEARCH METHODOLOGY

This research focused on consumer behavior changes that occurred during the COVID-19 pandemic and prevailed after its conclusion. Therefore, the main aim of this paper was to explore these changes and outline future trends in consumer behavior. This research was based on consumers and their opinions, habits and experiences. Therefore, an empirical analysis was selected as the main method of this research. A survey was conducted to collect the consumer data. A questionnaire was used to structure the information necessary for analysis. This questionnaire consisted of total of 26 questions. Seven of those questions collected socioeconomic data of consumers and the remaining 19 questions were targeted to collect

data on consumer behavior changes. Validity and reliability of collected data was verified statistically. Consumers were addressed by email and in person using personal method of filling in the questionnaire through members of the project team and university students.

The sample file consisted of 1172 consumers from Slovak republic. In order to make this research credible and its findings generalized for whole public, the sample file was created as a representative sample of base file that consisted of all consumers in Slovak republic older than 18 years old, which is the age of adulthood in this country. The data was collected during the period of years 2021 and 2023. Table I shows the structure of sample file according to the age of consumers in sample file and the base file. Pearson Chi-square test was used to verify and confirm representativeness of this sample.

TABLE I. SAMPLE FILE AND BASE FILE

Base file – absolute expression				Sample file – absolute expression		
Age	2023	2022	2021	2023	2022	2021
18-29	Date is not available at the time of processing	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 or more		618244	599217	4	55	14
Total		4558628	4571888	296	738	138
Base file – relative expression				Sample file – relative expression		
Age	2023	2022	2021	2023	2022	2021
18-29	Date is not available at the time of processing	18.79%	19.21%	24.32%	27.91%	18.84%
30-39		17.88%	18.11%	27.70%	18.29%	18.84%
40-49		19.30%	19.09%	12.50%	16.94%	23.19%
50-59		15.47%	15.39%	20.95%	15.99%	13.04%
60-69		14.99%	15.09%	13.18%	13.41%	15.94%
70 or more		13.56%	13.11%	1.35%	7.45%	10.14%
Total		100.00%	100.00%	100.00%	100.00%	100.00%

Source: Own elaboration according to Slovak bureau of Statistics.

Other statistical tests were used to analyze the data and to identify trends for the future. The most important tests that were used are the following: binomial test, correlation tests (Pearson and Spearman) and *t*-tests.

IV. RESULTS

This research covers a current topic of post pandemic societal impacts and changes with emphasis on consumer behavior. Since there is already a lot of information on how the consumers behave during the pandemic, this research focuses most importantly on how their behavior evolved after the conclusion of the pandemic. Therefore, the findings of this research are also structured by the individual

years of the pandemic. One of the most significant changes in consumer behavior during the pandemic was related to fluctuations in quantities of products bought. According to the data presented in Fig. 1, it can be concluded that the majority of consumers in each age group reduced the quantity of products they purchased during the pandemic. The most significant reduction is observed among consumers aged 30 to 39, with up to 60.91% decreasing their purchases. Conversely, consumers over 70 years old exhibited an equal likelihood of either maintaining or reducing their purchase quantities. Notably, nearly 21% of this age group increased their purchases, the highest percentage across all age groups.

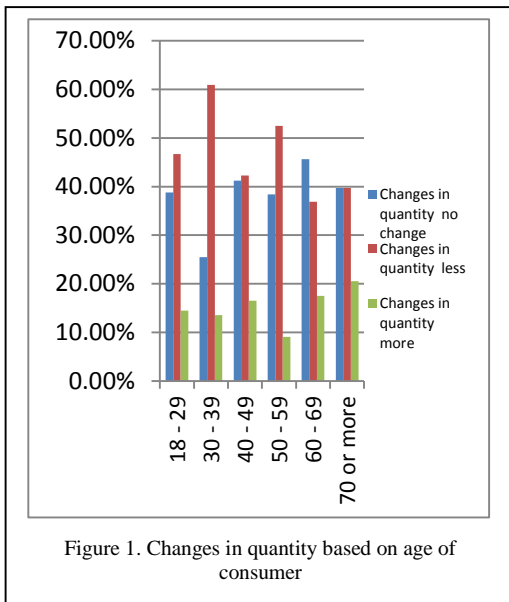


Figure 1. Changes in quantity based on age of consumer

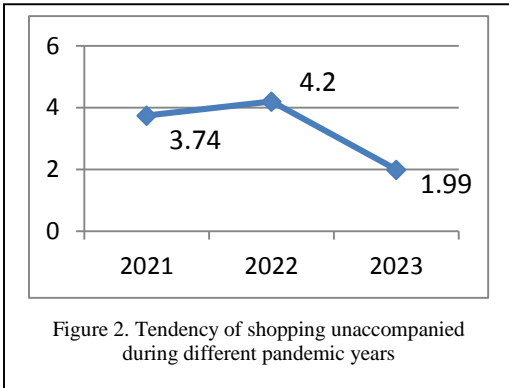


Figure 2. Tendency of shopping unaccompanied during different pandemic years

However, this phenomenon and its effects need to be further explored. This research also measured the different aspects of fear that consumers felt during the COVID-19 pandemic and how these fears impacted their consumer behavior. The data shows that consumers were very concerned about the health. However, fear for the health of loved ones was more impactful than the fear for their own health. This finding can also be explored in terms of one of the interesting phenomena that were observed during the pandemic that was the tendency to visit shops unaccompanied. Fig. 2 shows how this tendency evolved during different years of pandemic. It is

clear that as the pandemic progressed consumers were more concerned for the health of their loved ones and therefore, in 2022 at the height of the pandemic, the coefficient was observed at its highest level. On the other hand, the data shows that in 2023 the situation was starting to return to its pre-pandemic state.

However, not all consumers responded to such treats equally. According to the data, older consumers were less likely to take health fears under consideration when making shopping decisions even though they were more at risk during the pandemic. Only one in four considered their own health when choosing whether to visit a store. The most dominant factor influencing their behavior was the location of store. On the other hand, consumers between 30 – 49 years old were most affected by such fears. Fear for health of a loved one was even more dominant than fear for own health. This also resulted in significant decrease in shopping accompanied (up to 71.69% in these age segments).

Furthermore, the influence of common factors on consumer behavior was altered during the pandemic. Data shows that even though family remained the most important factor, its influence significantly increased (by 1.33 points on 5-point scale based on comparison between its levels during 2020 - 2023 period). On the other hand, the influence of other groups of people such as colleagues, friends, neighbors decreased throughout all age spectra. In some of these groups the observed decrease was up to 0.96 points (colleagues in 2021). This finding proved that consumers need a direct contact with such people to be influenced by them even during this digital age. Furthermore, the influence of media varied based on this consumer characteristic. Fig. 3 demonstrates how the influence of media changed during the individual pandemic periods according to the age of consumers. According to the data, the influence of media gradually increased in the age segment of the oldest consumers. It is also notable that the trend was opposite for the youngest consumers, even though it was not so radical.

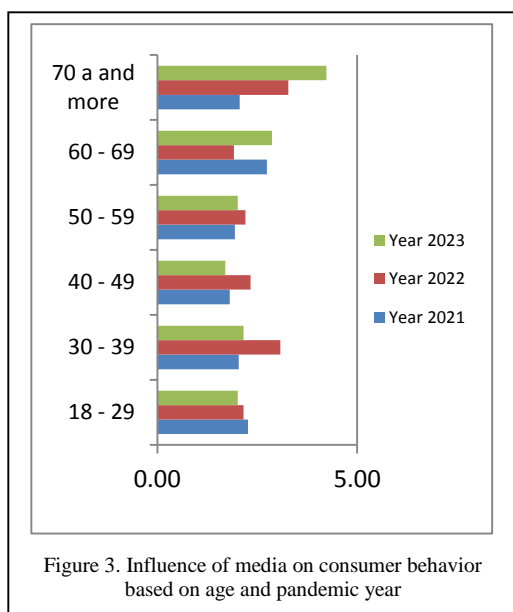


Figure 3. Influence of media on consumer behavior based on age and pandemic year

The year 2022 marked the highest influence of media on consumers between 30 to 59 years old, however it was the opposite for consumers in segment 60 – 69 years of age.

In comparison, Fig. 4 shows the influence of family. It is clear that this factor was more impactful in 2023 than media. However, its influence on younger consumer observed a slight gradual decrease. On the other, hand data shows that family was constantly important as a factor for consumers older than 60 years old and its impacts marked a gradual increase in age segment 50 – 59 years of age. The influence of family was very high for consumers aged 40 – 49 in 2022 and 2023.

This research also shows new factors of influence that emerged during the pandemic times. Notably, the feeling of safety was significantly correlated with shop selection of consumers. Up to 56.45% of all Slovak consumers took this factor under consideration when choosing a brick-and-mortar shop to visit during pandemic. Interestingly, this number was lower for more at-risk groups of consumers such as elderly people (41.93 %).

The most notable change in shopping during the pandemic was its shift towards online methods of procuring goods and even contactless expansion of contactless payments. The findings of this research proved that these phenomena also occurred in Slovak republic. However, the findings again observe differences among

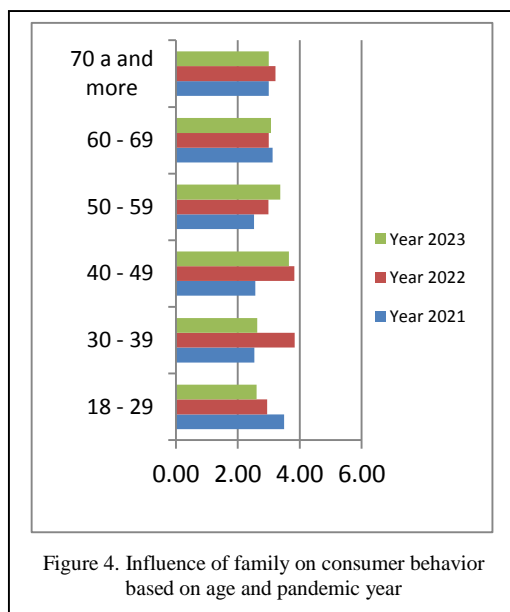


Figure 4. Influence of family on consumer behavior based on age and pandemic year

consumer segments. Fig. 5 shows the average level of agreement with several statements related to preference of these technological approaches during the COVID-19 pandemic.

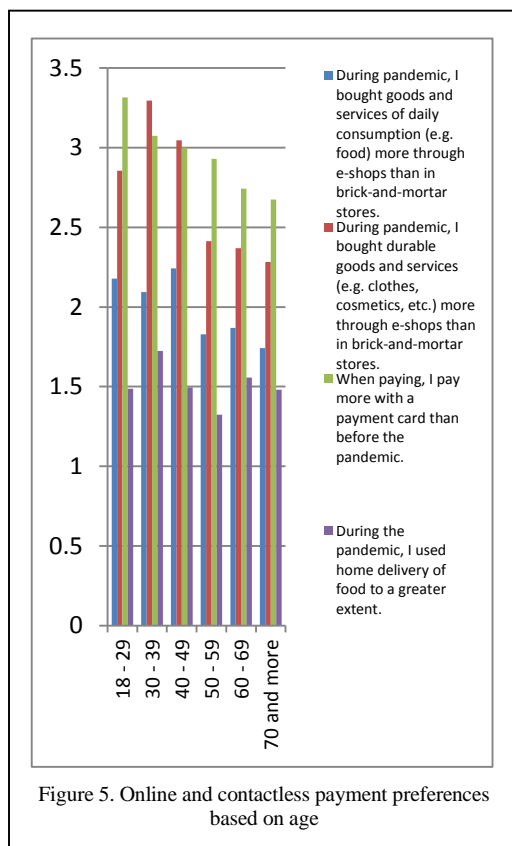


Figure 5. Online and contactless payment preferences based on age

According to the data provided in Fig. 5 the highest rates of preference were observed in younger generation, especially their increased preference of buying durable goods and credit card payment as preferred payment method. Furthermore, it was also the younger consumer segments that were more likely to buy daily consumption goods online. On the other hand, older generation was more likely to use food delivery in comparison to their pre-pandemic habits. These findings demonstrate the ability to adapt and evolve their consumer behavior to accommodate the conditions in external environment during an adverse event.

V. CONCLUSION

This research focused on exploring some major aspects of consumer behavior during the COVID-19 pandemic and shortly after its conclusion. The research into effects of COVID-19 pandemic has provided many significant findings with drastic implications for societies worldwide. Such major changes created a new reality that many of the entrepreneurs had to face. Therefore, understanding consumers' opinions during such major adverse events is crucial for several reasons. Several other research studies focused on exploring consumer behavior changes in other countries [4,9,11,12,21,23]. Their findings do not vary significantly from the results obtained by this study on the sample of Slovak consumers. This indicates that the effects of the COVID-19 pandemic were observed worldwide.

Even though the COVID-19 pandemic has officially concluded, its effects have still not yet been overcome. This research study proved that some changes that occurred during the pandemic and societies still remain in practice today. The most significant of these are the preference for online shopping, increase in delivery of goods and food and in some cases also the more sustainable models of consumption. The latter can be observed, especially in younger generations. They are more aware of the impacts of production and their consumption on societies and environment. This finding is especially positive since it's going to be this younger generation that are going to form the future trends of development in our economies. Businesses should therefore prepare and implement measures to target such emerging consumer segment. This focus can for example be on environmentally friendly products especially those that use less plastic or are

outsourced locally. Working with local providers could be especially beneficial since not only it can reduce transportation costs, it can also help to attract these types of consumers. Furthermore, it is clearly essential to operate an e-shop along the traditional brick-and-mortar store in order to attract younger consumers and also to be better prepared for adverse events that could potentially include lockdowns.

Should another pandemic or similar adverse event occur in near future, it is probable that consumers would react similarly as described in this research. Now that we know how the consumers change their behavior during pandemic, we can be more prepared to react to such adverse events in near future. One of the most significant findings is the fact that even though consumers are initially affected by their fear this effect is not long lasting.

Several recommendations for entrepreneurs can also be formulated based on these findings. Since it's obvious that younger generations are more aware of effects of consumption and production on environment, it would be useful to focus more on production of environmentally friendly products and also use this information in advertisement of such products. Furthermore, it is important to provide correct information for these consumers, since they are they adapt it using information technologies. Therefore, being truthful and environmentally aware is going to be a very important trend for near future.

ACKNOWLEDGMENT

This contribution was supported by the project VEGA No. 1/0134/22, "Changes in consumer behavior due to the COVID-19 pandemic with intent to predict its development".

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ISBN: 978-86-82602-04-0

