

Zesz. Nauk. UEK, 2023, 4(1002): 11–28
ISSN 1898-6447
e-ISSN 2545-3238
<https://doi.org/10.15678/ZNUEK.2023.1002.0401>

The Post-pandemic Consumer: Evidence from Empirical Research of Four Generations of Consumers

Konsument postpandemiczny – dowody z badań empirycznych czterech generacji konsumentów

Grzegorz Maciejewski

University of Economics in Katowice, Department of Market and Consumption, 1 Maja 50, 40-287 Katowice,
e-mail: grzegorz.maciejewski@ue.katowice.pl, ORCID: <https://orcid.org/0000-0002-1318-0747>

This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 License (CC BY 4.0); <https://creativecommons.org/licenses/by/4.0/>

Suggested citation: Maciejewski, G. (2023), "The Post-pandemic Consumer: Evidence from Empirical Research of Four Generations of Consumers", *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie* 4(1002): 11–28, <https://doi.org/10.15678/ZNUEK.2023.1002.0401>.

ABSTRACT

Objective: The article analyses the changes in Polish consumer behaviour during the pandemic caused by the SARS CoV-2 virus. Changes in behaviour identified in 2022 were also analysed through the crisis caused by the war in Ukraine.

Research Design & Methods: Literature studies and original empirical research were conducted. The empirical research – an online survey using the Ariadna National Research Panel – was carried out in two waves, the first in November 2020 on a sample of $N = 1,045$ consumers and the second in November 2022 on a sample of $N = 1,100$ consumers. The online survey technique made it possible to reach adult consumers from all regions of Poland.

Findings: The research findings confirmed that consumer behaviour changed during the pandemic. Above all, consumers did more things remotely. They also took better care of their health and hygiene, and used payment cards more often than they had. Going out to cultural institutions and using the services of catering establishments were subject to the most radical

restrictions. Respondents were mainly unsure of whether the two crises increased their household spending.

Implications/Recommendations: Compared to 2020, in 2022 the percentage of consumers undertaking various types of preventive and prudent behaviours due to the pandemic decreased. This may indicate a desire among consumers to return to the lifestyle and behaviours they led before the pandemic. Consumers seem to be slowly forgetting about the pandemic, absorbed by another real threat: the war in Ukraine.

Contribution: The conducted research contributes to the development of the theory of consumer behaviour. It shows changes in the behaviours of these entities caused by the pandemic situation, which they have not experienced so far. It complements the research on the behaviour differentiation of individual generations of consumers (Z, Y, X, and BB).

Article type: original article.

Keywords: consumer behaviour, consumer generations, household, change, COVID-19 pandemic, the war in Ukraine.

JEL Classification: D12, D91, M31.

STRESZCZENIE

Cel: Celem artykułu jest diagnoza zmian zaobserwowanych w zachowaniach polskich konsumentów, które zaszły w czasie pandemii wywołanej przez wirus SARS-CoV-2. Zmiany zachowań zidentyfikowane w 2022 r. poddano analizie przez pryzmat kryzysu spowodowanego wojną w Ukrainie.

Metodyka badań: Przeprowadzono studia literaturowe oraz oryginalne badania empiryczne, które zrealizowano w dwóch falach – w listopadzie 2020 r. na próbie liczącej 1045 konsumentów oraz w listopadzie 2022 r. na próbie 1100 konsumentów. W badaniach zastosowano technikę ankiety online, korzystając z Ogólnopolskiego Panelu Badawczego Ariadna. Umożliwiła ona dotarcie do pełnoletnich konsumentów ze wszystkich regionów Polski.

Wyniki badań: Wyniki badań potwierdziły zmiany w zachowaniach konsumentów, obserwowane w czasie pandemii. Konsumenty przede wszystkim więcej spraw załatwiali zdalnie, bardziej dbali o swoje zdrowie i codzienną higienę, a podczas transakcji płatniczych częściej posługiwali się kartami płatniczymi. Najbardziej radykalnym ograniczeniem poddane zostały wyjścia do instytucji kultury oraz korzystanie z usług placówek gastronomicznych. W opiniach respondentów przeważa niezdecydowanie co do siły oddziaływania obu kryzysów: pandemii COVID-19 i wojny w Ukrainie na wzrost wydatków gospodarstw domowych.

Wnioski: W porównaniu z 2020 r. w roku 2022 odsetek konsumentów podejmujących różnego rodzaju działania zapobiegawcze i ostrożnościowe z uwagi na sytuację pandemiczną wyraźnie zmalał. Może to wskazywać na chęć powrotu do stylu życia i zachowań sprzed pandemii. Konsumenty zdają się powoli zapominać o pandemii, absorbowani kolejnym realnym zagrożeniem, jakim jest wojna w Ukrainie.

Wkład w rozwój dyscypliny: Przeprowadzone badania stanowią wkład w rozwój teorii zachowań konsumentów. Ukazują zmiany w zachowaniach tych podmiotów, powodowane sytuacją pandemiczną, dotąd przez nich niedoświadczaną. Uzupełniają lukę badawczą dotyczącą zróżnicowania zachowań poszczególnych generacji konsumentów (Z, Y, X oraz BB).

Typ artykułu: oryginalny artykuł naukowy.

Słowa kluczowe: zachowania konsumentów, generacje konsumentów, gospodarstwo domowe, zmiana, pandemia COVID-19, wojna w Ukrainie.

1. Introduction

Although the COVID-19 pandemic has slowed down significantly and the SARS-CoV-2 virus has abated, epidemic outbreaks continue to occur in various places worldwide (Misiurewicz-Gabi 2022). The pandemic remains a major global emergency over two years after the first case was reported. Many governments are struggling with uncertainty about how to prioritise their actions at a time when the pandemic appears to be in transition (WHO 2022) – especially since the risk of new variants and future surges remains very real (Klimczuk 2021). In September 2022, WHO Director-General T. A. Ghebreyesus acknowledged that the end of the COVID-19 pandemic, which has killed around 6.5 million people worldwide, is in sight but at a great distance (Miller 2022). Despite this, the epidemic's end was pronounced over in many countries, including Poland (Rozporządzenie Rady Ministrów z dnia 13 maja 2022 r. ...).

For societies and economies today, recovering from the crisis caused by the COVID-19 pandemic is proving the most difficult task since World War II (Mróz 2021). The difficulty has been further compounded by another centuries-old humanitarian and economic crisis – it began with Russia's invasion of Ukraine in February 2022. That makes two black swans simultaneously landing on the waters of the global economy. The combination of these very unfavourable conditions has had repercussions for the current behaviour of consumers, both in the market and in their households. The pandemic has significantly impacted these behaviours, often forcing consumers not only to change their lifestyles but also to change their habits, routines, and behavioural patterns in purchasing and using consumer goods or services.

This article examines changes in consumer behaviour in Poland resulting from the pandemic caused by the SARS CoV-2 virus in the years 2020–2022. It looks particularly at changes in the behaviour of individual generations of consumers, while also taking into account gender and place of residence. The changes in behaviours identified in 2022 should also be considered through the lens of the crisis caused by the war in Ukraine.

The work contributes to the literature on changes in the behaviour of modern consumers, in markets and households, as well as changes in consumer behaviour

caused by the SARS CoV-2 pandemic. It also complements the research on the diversity of behaviour of individual generations of consumers.

The article is addressed to both scientists and those involved in business who follow changes in the behaviour of contemporary consumers. The study can also be a source of knowledge for entrepreneurs and employees of marketing departments seeking to offer products and services that meet the expectations of the post-pandemic consumer.

The work comprises a literature review, a discussion of the research process, especially the data and research methods used, a presentation of the results of the primary research and conclusions.

2. Literature Review

The course and effects of the COVID-19 pandemic, which affected almost all spheres of human life, have become a primary area of research for scientists across the disciplines and the world (Nicola *et al.* 2020). The bulk of the research has been done in medicine, particularly centering on efforts to find a drug or at least a vaccine to protect against the virus (AOTMiT 2023). A good deal has also been written on psychology (Javed *et al.* 2020) and sociology (Moore & Kolencik 2020, Popescu Ljungholm & Olah 2020) to better understand the thinking of individuals and entire societies.

A good deal of interest has also been aroused in macro and microeconomics, including work by Liu, Xu, and Skare (2021), among numerous others. The following trends can be noted in these works:

- the economic effects of the pandemic (e.g., Karabag 2020, Gagnon, Kamin & Kearns 2023), including in various countries and regions (e.g., Debata, Patnaik & Mishra 2020, Naseer *et al.* 2023),
- the pandemic's impact on individual industries (e.g., Haroon & Rizvi 2020, Huang & Wang 2023),
- economic assessments of the effects of the pandemic and scenarios for further economic development (e.g., Oravsky, Toth & Banociova 2020, Chang, Mohsin & Iqbal 2023).

Many studies have looked at the impact of the pandemic on consumer behaviour. They mainly address changes in consumer behaviour (Zwanka & Buff 2021), including their scale and directions (Wiśniewska 2022) and the determinants shaping consumer behaviour during a pandemic (Di Crosta *et al.* 2021), ways of dealing with the threats posed by the pandemic (Khayru 2021) and how changes in consumer behaviour influence the development of various forms of retail trade (Inoue & Todo 2023, Verhoef, Noordhoff & Sloot 2023). The extent to which changes in behaviour may persist after the pandemic has passed has also been addressed (Chlipała & Żbikowska 2022).

The last of the research problems is currently taking on greater importance. From May 16, 2022, under the new regulation of the Council of Ministers, the state declared Poland free of the epidemic and the state of epidemic emergency entered into force (Rozporządzenie Rady Ministrów z dnia 13 maja 2022 r. ...). This gives rise to further research and discussion on the changes that have occurred as a result of the COVID-19 pandemic and will continue to occur in the behaviour of consumers living in post-pandemic times. Taking into account the objectives of the article and the scientific literature, the following research questions were posed:

RQ1: What changes in the market behaviours of consumers and in their households have occurred as a result of the pandemic caused by the SARS CoV-2 virus?

RQ2: Which of these behaviours have demonstrated a tendency to return to their pre-pandemic forms after the pandemic restrictions are lifted?

RQ3: In the opinion of consumers, which of the crises – that caused by the pandemic or the war in Ukraine – is more responsible for the increase in the main expenditure groups of their households?

3. Materials and Methods

In order to answer the research questions, quantitative research was carried out based on a questionnaire. The research had a primary research character and was conducted in two waves, one carried out in November 2020 on a sample of $N = 1,045$ units, and the other in November 2022 on a sample of $N = 1,100$. They were designed this way in order to consider possible changes in consumer behaviour as a result of the COVID-19 pandemic (Maciejewski & Lesznik 2022). In both waves, adult consumers from throughout Poland were surveyed. The survey was done online, using the Ariadna National Research Panel, which made it possible to reach consumers from all regions of Poland.

The tool used a scale identifying changes that occurred in consumer behaviours as a result of the outbreak of the pandemic (16-item, five-point, ordinal scale of behaviour changes), as well as six questions describing the respondents' demographic, social, and economic characteristics. The reliability of the scale used in both waves of the study was calculated using Cronbach's alpha coefficient, whose value for the scale in the 2020 study was 0.910 and in 2022 was 0.856 – a very high level of reliability (Aron, Coups & Aron 2013). In the 2022 survey, consumers were also asked for their opinions on the COVID-19 pandemic and the war in Ukraine as the reasons for the increases in individual groups of household expenditure in Poland.

The research was conducted among registered participants of the Ariadna National Research Panel. The demographic and sociographic profile of people registered in Ariadna is consistent with the profile of people using the Internet in Poland (Ariadna Nationwide Research Panel 2023). From among 300,000 registered and

verified members of the panel, a research sample was randomly selected (*Dobór próby...* 2021). The sample size was set such that the maximum measurement error did not exceed 3% (with a confidence level of 95% and a fraction size of 0.5). An error level of 3% is acceptable in social research (Maciejewski & Lesznik 2022). The costs of the research were taken into during its design. Only public funds from the subvention of the Ministry of Education and Science of the Republic of Poland were available (Maciejewski 2020).

Beyond population size, population homogeneity also plays a key role in determining sample size. The sample size may be reduced as the homogeneity of the population increases, based on selected characteristics (Pietrucha & Maciejewski 2020). As a result, the research yielded 1,045 correctly and fully completed questionnaires in 2020 (Maciejewski 2023) and 1,100 in 2022. The data obtained were subjected to statistical analysis using the IBM SPSS Statistics 28 statistical package for Windows. The research received a positive opinion from the Human Subject Research Ethics Committee at the University of Economics in Katowice (no. 001/11/2022).

In terms of the distribution of the research samples, in the 2020 sample (Table 1) there is a slight overrepresentation of women (53.4%) compared to men. This reflects Poland's general population make-up (GUS 2021). The sample was dominated by people with secondary and higher education (respectively 47.1% and 41.0%), who described their financial situation as average or good (43.3% and 40.3%). The respondents represented mostly two- and three-person households (30.2% and 23.4%) from large urban centers with a population of over 200,000 (31.0%). The distribution of respondents by age – Baby Boomers (60–80), generations X (40–59), Y (25–39) and Z (18–24) – was almost even (about 25% in all of the generations). The median age of the respondents was 40 years, and the median number of people in the respondents' households was three.

Table 1. Characteristics of Consumers Participating in the Research in 2020 and 2022 (in %)

Specification		Research Sample	
		2020 ($N = 1,045$)	2022 ($N = 1,100$)
Gender	female	53.4	51.7
	male	46.6	48.3
Age	18–24	24.1	25.0
	25–39	24.8	25.0
	40–59	25.5	25.0
	60–80	25.6	25.0

Table 1 cont'd

Specification		Research Sample	
		2020 (N = 1,045)	2022 (N = 1,100)
Place of residence	rural area	23.4	25.5
	cities with < 50,000 inhabitants	22.3	25.0
Place of residence	cities with 51,000–200,000 inhabitants	23.3	24.0
	cities with > 200,000 inhabitants	31.0	25.5
Education level	elementary	2.7	4.1
	vocational	9.3	10.5
	high school	47.1	46.0
	tertiary	41.0	39.4
Number of household members	1 person	12.7	13.1
	2 persons	30.2	33.4
	3 persons	23.4	21.7
	4 persons	20.4	20.3
	5 and more persons	13.3	11.5
Subjective assessment of financial situation	very bad	3.2	2.4
	bad	9.6	11.0
	average	43.3	57.0
	good	40.3	26.3
	very good	3.6	3.3

Source: the author.

In the sample taken in 2022, the distribution of respondents by gender corresponded precisely to the distribution of Polish residents shown in Central Statistical Office data from Poland's 2021 census (GUS 2022). The samples of the respondents were equal in terms of consumers' age ranges (generations) and nearly identical in terms of their place of residence – 25% each. As with the sample from the first wave, people with secondary (46.0%) and higher education (39.4%) predominated in the 2022 sample. People taking part in the research most often characterised their financial situation as average (57.0%) or good (26.3%) and represented two- (33.4%) and three-person (21.7%) households – Table 1. The median age of the respondents was 39.5 years, and the median number of people in their households was three.

4. Results

Changes in consumer behaviours caused by the COVID-19 pandemic can be observed both in the market and in their households (Table 2). In the first year of the pandemic in Poland, due to the rapid spread of the disease, the lack of medicines and vaccines, and the recommendations of the authorities, consumers abandoned many of their market behaviours or transferred them to their households. The declarations of the respondents show that the most frequent restrictions were related to going to cultural institutions (38% answered “I agree” and 36% “I strongly agree”) and the use of food serving services (36% and 24%, respectively). It can be stated that the obligatory isolation used by governments as a main strategy to limit the spread of the pandemic also limited the liberty and freedom of consumer choices. It also shifted many activities, such as shopping and administrative errands, into the virtual sphere, enabling them to be carried out remotely.

Moreover, fear of infection and sometimes death caused respondents to take better care of their health and hygiene. Because of the fear of “dirty cash”, they now paid by card more often. The consequences of the spreading virus were also visible in consumption financed from future income. Nearly 60% of the respondents agreed that they limit their financial liabilities by refraining from taking out various types of loans and credits (Table 2).

In terms of the 2020 results, it can also be assumed that the pandemic had the least impact on consumer behaviour in such areas as supporting charities and aid organisations (total 30% of answers “I strongly agree” and “I agree”) and a preference for purchasing over renting necessities (total 24%) – see Table 2.

Table 2. Changes in the Behaviours of Respondents and Members of Their Households That Occurred as a Result of the COVID-19 Pandemic (in %)

Specification	I strongly agree		I agree		I neither disagree nor agree		I disagree		I strongly disagree	
	2020	2022	2020	2022	2020	2022	2020	2022	2020	2022
We limit going out to cultural institutions	36.2	10.1	37.9	32.2	21.2	32.7	3.0	17.1	1.7	7.9
We limit taking out loans and credits	26.3	22.3	33.0	32.1	33.2	35.0	4.1	6.9	3.3	3.7
We rarely use catering services	24.0	10.7	36.2	33.4	28.4	32.2	7.8	17.3	3.6	6.5
We do more things remotely by phone, computer	24.0	15.9	47.4	49.1	22.9	25.7	3.5	6.5	2.2	2.7
We use payment cards more often	23.9	14.3	38.1	37.9	27.8	31.5	5.8	10.2	4.3	6.2

Table 2 cont'd

Specification	I strongly agree		I agree		I neither disagree nor agree		I disagree		I strongly disagree	
	2020	2022	2020	2022	2020	2022	2020	2022	2020	2022
We shop online more often	19.3	17.9	40.1	41.5	30.7	28.6	6.7	9.5	3.2	2.5
We waste less food	18.5	11.1	35.8	38.0	35.8	38.3	6.5	10.0	3.4	2.6
We feel less secure	18.1	9.8	42.4	32.6	30.3	35.9	6.8	15.6	2.4	6.0
We take better care of health and hygiene	16.6	13.2	51.7	44.1	24.9	33.4	4.7	6.8	2.2	2.5
We do more on our own	16.4	9.7	38.1	36.4	35.1	33.4	7.3	15.3	3.2	5.3
We limit large expenditure	15.3	9.6	33.7	34.5	35.6	40.5	11.9	10.5	3.5	4.9
We feel more tired, depressed	13.9	10.5	42.5	36.6	31.6	32.1	8.6	15.5	3.4	5.3
We shop less often	11.3	4.1	34.0	26.5	35.3	35.5	14.6	25.8	4.8	8.1
We pay more attention to environmental protection	9.6	8.5	33.8	34.1	41.8	39.9	10.9	12.4	3.9	5.2
Where possible, we rent more often than we buy	6.8	3.1	16.8	12.5	42.1	41.1	23.8	27.3	9.5	15.5
We support aid organisations to a lesser extent	6.5	6.0	23.0	22.1	50.6	49.8	14.9	17.5	5.0	4.5

Source: the author.

Behaviours that returned to their pre-pandemic form and those that remained unchanged from the beginning of the pandemic can also be seen for 2022 (Table 2). The first group includes, above all, going out to cultural institutions. In 2020, nearly 75% of respondents agreed that they limit visits to cultural institutions (answers “strongly agree” and “agree”). In 2022, that number had fallen to just over 40%. Outings in restaurants and shopping were no longer subject to the restrictions they had been. In both cases, the percentage of responses confirming the application of such restrictions by the respondents decreased by approximately 15 percentage points (pp.) in 2022 over the 2020 levels. The second group of behaviours certainly includes online shopping and paying attention to environmental protection. These behaviours came in at the same level in 2020 and 2022: 60% for the frequency of online shopping and around 43% for declarations of greater concern for the environment. The second group of behaviours also includes such consumer behaviour as throwing away less food, limiting large expenses, and limiting borrowing and credit-taking. In all of these cases, the percentage of those who answered “strongly agree” and “agree” decreased by only about 5 pp. It can therefore be concluded that

for some consumer behaviours, the pandemic catalysed changes that appear to have become permanent.

Universal access to vaccines in 2021 and 2022, which for most people mitigated the dangerous consequences of possible infection, clearly improved the sense of security and consumer sentiment in the period under review. In the 2020 study, nearly 60% of respondents admitted that they felt less secure but more tired and depressed, while in the 2022 study, the former feeling fell to about 42%, and the latter to 47%. The respondents also were less concerned with health and hygiene than at the beginning of the pandemic. In 2022, the percentage of people who agreed or strongly agreed with the statement “we care more about health and hygiene” decreased by 11 pp.

Both in 2020 and in 2022 women declared more often (a few percentage points) than men that their behaviours had changed due to the pandemic. The exception was shopping behaviours on the Internet in 2020. The increase in the frequency of online purchases during the pandemic was confirmed by over 11 pp. more women than men. In turn, in 2022, women more often than men declared doing more things remotely (over 12 pp.) and using payment cards (nearly 11 pp.) – see Table 3.

In terms of behavioural shifts from one generation to the next, the pandemic caused the most changes in the behaviour of people aged 60–80. Moreover, the changes seem more permanent within this group than in younger generations of consumers. Even if one of the generations declared a given type of behaviour more often than the BB generation, the differences in these declarations were small, at the level of statistical error (Table 3).

In terms of location of residence, the pandemic caused the most changes in behaviours among the inhabitants of medium-sized cities (51–200 thousand people). The residents of rural areas, more often than their urban counterparts, began to shop online and do more things on their own when the pandemic struck. In turn, the residents of the largest cities (more than 200,000) in 2020 reduced large expenses for the purchase of cars, furniture, or household appliances more often than those from other location types, while in 2022 they did more things remotely. As in the cross-sections analysed earlier, the differences are minor, which is also important information in itself (Table 3).

When Russia attacked Ukraine in February 2022, Poland became a frontline country. During the survey, the respondents were also asked which of the two adverse events – the COVID-19 pandemic and the war in Ukraine – caused household spending to increase more.

In all of the expenditure groups, the most common answer was “it is hard to say”. Looking at the other variants of the answers, however, it is clear that the war in Ukraine contributed to the increase in household expenses more than the COVID-19 pandemic (Table 4).

Table 3. Changes in the Behaviours of the Respondents and Members of Their Households as a Result of the COVID-19 Pandemic by Respondents' Characteristics (Summed Answers "Strongly Agree" and "Agree" in %)

Specification	Year	Samples in total	Respondents by									
			gender		generation			place of residence				
			F	M	Z	Y	X	BB	rural	< 50K	51-200K	> 200K
We limit going out to cultural institutions	2020	74.1	78.2	69.4	64.7	65.2	79.3	86.2	72.6	73.0	76.5	74.1
	2022	42.3	44.1	40.3	29.8	38.9	45.5	55.0	42.5	42.9	43.8	40.0
We do more things remotely by phone, computer	2020	71.4	75.1	67.1	68.2	63.7	73.3	79.9	71.0	67.3	74.9	71.9
	2022	65.0	71.0	58.6	66.6	63.7	64.3	65.5	64.7	62.5	64.1	68.6
We take better care of health and hygiene	2020	68.3	71.3	64.7	61.5	60.6	70.7	79.5	70.2	68.6	70.4	64.8
	2022	57.3	60.8	53.5	56.8	51.3	56.4	64.7	55.3	59.2	56.2	58.2
We use payment cards more often	2020	62.0	65.7	58.3	59.1	50.9	64.6	72.7	59.2	62.3	68.7	58.9
	2022	52.2	57.3	46.7	56.0	49.8	48.4	54.5	49.6	57.5	54.7	47.2
We feel less secure	2020	60.5	63.8	56.7	50.4	49.8	63.9	76.9	59.6	58.3	64.6	59.6
	2022	42.4	48.7	35.7	32.8	39.3	48.8	49.1	43.6	39.2	46.0	41.1
We rarely use catering services	2020	60.2	62.6	57.5	48.1	55.2	62.4	74.2	61.2	58.3	60.9	60.2
	2022	44.1	47.3	40.7	31.6	39.2	46.5	58.9	44.6	47.3	45.7	38.9
We shop online more often	2020	59.4	64.7	53.3	66.6	54.8	61.7	54.9	65.4	54.0	58.0	49.9
	2022	59.4	63.0	55.6	64.0	58.9	59.7	54.9	58.6	59.6	59.6	59.7
We limit taking out loans and credits	2020	59.3	62.0	56.2	48.8	50.2	65.1	72.4	55.9	57.5	65.0	58.9
	2022	54.4	57.1	51.5	49.8	48.8	58.2	60.7	53.9	58.9	55.4	49.3
We feel more tired, depressed	2020	56.4	61.8	49.9	55.6	49.9	56.0	63.8	54.7	52.4	62.1	56.2
	2022	47.1	51.7	42.2	44.7	44.4	54.2	45.1	45.4	48.0	49.0	46.0
We do more on our own	2020	54.6	58.4	49.9	53.6	49.8	56.0	58.2	57.1	53.2	55.9	52.1
	2022	46.1	49.6	42.3	41.4	43.3	48.4	51.3	49.3	50.2	44.5	40.3

Table 3 cont'd

Specification	Year	Samples in total	Respondents by									
			gender		generation				place of residence			
			F	M	Z	Y	X	BB	rural	< 50K	51–200K	> 200K
We waste less food	2020	54.3	55.9	52.3	39.3	46.4	59.0	71.3	53.1	57.9	59.3	48.8
	2022	49.1	55.7	42.0	39.6	43.3	52.8	60.7	51.8	51.3	51.7	41.8
We limit large expenditures	2020	49.0	52.2	45.4	42.9	41.8	50.0	60.8	46.2	45.9	50.2	52.4
	2022	44.1	48.9	39.2	38.5	40.0	49.5	48.7	45.4	48.0	47.6	36.0
We shop less often	2020	45.3	49.8	40.0	36.9	39.0	45.9	58.6	47.0	43.8	44.8	45.4
	2022	30.6	33.7	27.3	26.9	28.0	30.9	36.7	28.9	30.5	34.0	29.3
We pay more attention to environmental protection	2020	43.4	47.0	39.2	32.1	35.1	44.7	60.5	42.5	45.5	49.8	37.6
	2022	42.6	47.8	37.1	41.4	33.8	39.2	55.6	44.0	45.1	43.0	38.2
We support aid organisations to a lesser extent	2020	29.5	28.9	30.1	29.3	33.2	31.9	23.5	28.2	30.5	33.8	26.6
	2022	28.1	29.9	26.2	22.5	22.6	30.9	36.3	29.6	28.7	30.1	24.0
Where possible, we rent more often than we buy	2020	23.6	24.4	22.8	22.6	28.1	26.3	17.6	24.5	25.4	25.1	20.7
	2022	15.6	14.8	16.6	17.1	17.1	16.0	12.3	14.7	15.6	17.8	14.7

Notes: F – women, M – men; Z – 18–24 years, Y – 25–39 years, X – 40–59 years, BB – Baby Boomers 60–80 years; < 50K – cities with up to a population of 50,000 inhabitants, 51–200K – cities with a population of 51,000 to 200,000 inhabitants, > 200K – cities with more than 200,000 inhabitants. Source: the author.

Table 4. Respondent Opinions on the COVID-19 Pandemic and the War in Ukraine as the Main Reasons for the Increase in Individual Groups of Household Expenditures ($N = 1,100$, in %)

Specification	The COVID-19 pandemic	Probably the COVID-19 pandemic	It is hard to say/ to a similar degree with both factors	Probably the war	Definitely the war
Maintaining my household	2.7	5.7	42.4	26.6	22.5
Food for my household members	3.2	7.9	53.5	22.3	13.1
Keeping pets	2.3	8.4	73.5	10.5	5.3
Protecting the health of my household members	9.8	21.7	53.2	9.6	5.6
Educating members of my household	6.3	13.1	69.5	7.5	3.6
Commuting to work, school, shops, offices	3.5	10.6	58.2	17.1	10.5
Holiday/vacation trips of my household members	6.6	16.8	59.0	11.8	5.7
Spending free time/ pursuing hobbies/interests of my household members	6.0	14.0	64.3	11.2	4.5
Car maintenance/use	2.5	7.5	50.5	23.5	15.9
Renovation and construction works	3.5	10.7	60.0	16.9	8.9

Source: the author.

This is primarily the case in groups of basic expenditures, such as maintaining a household (49.1% of the answers “probably the war in Ukraine” and “definitely the war in Ukraine”), car maintenance (39.4%), food for household members (35.4%), expenses on all kinds of commuting (27.6%), renovation and construction works (25.8%), and keeping pets (15.8%). Respondents believed the COVID-19 pandemic contributed to a greater extent than the war in Ukraine to the increase in such expenditure groups as healthcare expenses (31.5% of the answers “rather the COVID-19 pandemic” and “definitely the COVID-19 pandemic”), holiday trips and other ways of spending free time (23.4% and 20.0%, respectively) and education-related expenses (19.4%). See Table 4.

5. Discussion and Conclusions

The primary goal of the considerations undertaken in the article was to show changes in Polish consumers' behaviour during the COVID-19 pandemic.

The research results have allowed us to sketch, though not very sharply, a picture of the post-pandemic consumer in Poland. They also confirm the findings of other authors (e.g., Mróz 2021, Chlipała & Żbikowska 2022).

A review of the literature and the results of both waves of research reveals that the COVID-19 pandemic was a huge shock for societies the world over (Dąbrowska & Janoś-Kresło 2022). This shock has slowly subsided over time, and consumers began using several countermeasures to reduce the risk of contracting the virus. These strategies took the form of both active (e.g., increasing care for hygiene or remote learning, remote work, remote shopping) and passive behaviours (e.g., limiting visits to cultural institutions, dining, and retail establishments). The pandemic has changed the lifestyle of many consumers.

The most frequently indicated changes in the respondents' market behaviours and the behaviours taking place in their households resulting from the pandemic primarily included forced restrictions on current activities (going to cultural institutions, cafes and restaurants, and other service and commercial facilities). Other changes included the need to do many of these activities virtually (remote work, remote learning, meetings with family and other people, online shopping) and, thirdly, increased care of health and hygiene. Finally, refraining from taking out various types of loans and credits helped people limit financial losses.

In addition, the fear of contracting the virus and the uncertainty of tomorrow caused the respondents to take greater care of health and hygiene, as well as reduce consumption from future income. The results obtained in 2022 confirm the continued occurrence of these behaviours, but on a smaller scale. The consumers surveyed show a desire to abandon all the restrictions that held them back during the pandemic, to return to "normality" and the lifestyle they led before the pandemic. In the longer term, after the pandemic has completely subsided, a large return to pre-pandemic consumerism can be expected, especially in the group of high-income households of the X and BB generations (RQ2). However, not all forms of behaviour appear to be returning to pre-2020 norms. For example, the IT competencies acquired or developed during the pandemic and the accompanying convenience of handling things remotely appear to mean that shopping online or dealing with various matters remotely (e.g., official matters), for example, may prove to be permanent changes in consumer behaviours. May a further increase in sustainable consumer behaviour, such as greater care for the natural environment, rational use of limited natural resources, or the pursuit of reducing post-consumer waste, especially throwing away less food, turn out to be a permanent change? The findings presented here and elsewhere give one reason to hope. This is particularly likely for Gen Z consumers. The rationalisation and change in the consumption structure of this group of people and the evolution towards pro-ecological trends of behaviour such as eco-consumption, collaborative consumption, or the virtualisation of

consumption (especially social commerce, social offering, social shopping) should be expected (Zalega 2022).

During the pandemic, another focus of the global crisis appeared – the war in Ukraine. It was difficult for the respondents to indicate which of these phenomena has had a greater impact on the growth of their household expenditures. However, the respondents' answers show that a larger percentage of consumers lean towards the war in Ukraine, particularly as concerns essential expenditure related to maintaining a household. In a prolonged war of attrition, with the last outbreaks of the pandemic fading out, this crisis will become the single most destabilising factor on the global economy (RQ3).

This study is not without its limitations. Although it was conducted on samples of over 1,000 respondents, it was geographically limited to the territory of Poland. Therefore, the obtained results should be related mainly to the Polish consumer and interpreted from the perspective of Polish market conditions (Maciejewski 2023). Nonetheless, the results can serve as a reference point for analysing consumer behaviours in other European countries (Henson *et al.* 2020). The research results enrich the theory of consumer behaviour with new evidence. After the epidemic fades, many consumers are likely to return to their pre-pandemic behaviours. They still maintain only those solutions that allow them to save time and live more comfortably. This is reflected in their everyday activities and attitudes, although it must be borne in mind that research has a declarative character (Jaworsky 2021). Finally, online survey has a number of advantages, but these do not preclude limitations (*Badania...* 2016). Therefore, further research based on experiments, projections or big data analysis is needed to reliably describe the actual behaviours of the post-pandemic consumer. The literature has presented only initial evidence (Morales 2021, Salvietti *et al.* 2022).

References

- AOTMiT (2023), Baza publikacji COVID-19, <https://covid19-baza.aotm.gov.pl/#/> (accessed: 3.01.2023).
- Ariadna Nationwide Research Panel (2023), Rules for Participation in the Ariadna Research Program, <https://panelariadna.pl> (accessed: 3.01.2023).
- Aron A., Coups E. J., Aron E. N. (2013), *Statistics for Psychology*, Pearson Education Ltd., London.
- Badania marketingowe. Metody, techniki i obszary aplikacji na współczesnym rynku* (2016), ed. K. Mazurek-Łopacińska, Wydawnictwo Naukowe PWN, Warszawa.
- Chang L., Mohsin M., Iqbal W. (2023), *Assessing the Nexus between COVID-19 Pandemic-driven Economic Crisis and Economic Policy: Lesson Learned and Challenges*, "Environmental Science and Pollution Research", vol. 30(9), <https://doi.org/10.1007/s11356-022-23650-0>.

- Chlipała P., Żbikowska A. (2022), *Konsumpcja w czasach pandemii. Jak kryzys spowodowany pandemią COVID-19 zmienił zachowania konsumentów?*, PWE, Warszawa.
- Dąbrowska A., Janoś-Kresło M. (2022), *Spółeczna odpowiedzialność konsumenta w czasie pandemii. Badania międzynarodowe*, Oficyna Wydawnicza SGH, Warszawa.
- Debata B., Patnaik P., Mishra A. (2020), *COVID-19 Pandemic! It's Impact on People, Economy, and Environment*, "Journal of Public Affairs", vol. 20(4), <https://doi.org/10.1002/pa.2372>.
- Di Crosta A., Ceccato I., Marchetti D., La Malva P., Maiella R., Cannito L. (2021), *Psychological Factors and Consumer Behavior during the COVID-19 Pandemic*, "PLoS ONE", vol. 16(8), <https://doi.org/10.1371/journal.pone.0256095>.
- Dobór próby we współczesnych badaniach marketingowych. Podejścia ilościowe, jakościowe i mieszane* (2021), M. Rószkiewicz, K. Mazurek-Łopacińska, A. Sagan (eds), Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin.
- Gagnon J. E., Kamin S. B., Kearns J. (2023), *The Impact of the COVID-19 Pandemic on Global GDP Growth*, "Journal of the Japanese and International Economies", vol. 68, <https://doi.org/10.1016/j.jjie.2023.101258>.
- GUS (2021), *Polska w liczbach 2021*, Główny Urząd Statystyczny, Warszawa.
- GUS (2022), *Ludność według cech społecznych – wyniki wstępne NSP 2021*, Główny Urząd Statystyczny, Warszawa.
- Haroon O., Rizvi S. A. R. (2020), *COVID-19: Media Coverage and Financial Markets Behavior – A Sectoral Inquiry*, "Journal of Behavioral and Experimental Finance", vol. 27, <https://doi.org/10.1016/j.jbef.2020.100343>.
- Henson S., Kambhampati U., Mogue T., Olsen W., Prowse M., Ramos R., Rand J., Rasiah R., Roelen K., Tiessen R., Yap O. F. (2020), *The Development Impacts of COVID-19 at Home and Abroad: Politics and Implications of Government Action*, "The European Journal of Development Research", vol. 32(5), <https://doi.org/10.1057/s41287-020-00334-4>.
- Huang S., Wang X. (2023), *COVID-19 Two Years on: A Review of COVID-19-related Empirical Research in Major Tourism and Hospitality Journals*, "International Journal of Contemporary Hospitality Management", vol. 35(2), <https://doi.org/10.1108/IJCHM-03-2022-0393>.
- Inoue H., Todo Y. (2023), *Has COVID-19 Permanently Changed Online Purchasing Behavior?*, "EPJ Data Science", vol. 12(1), <https://doi.org/10.1140/epjds/s13688-022-00375-1>.
- Javed B., Sarwer A., Soto E. B., Mashwani Z.-R. (2020), *Impact of SARS-CoV-2 (Coronavirus) Pandemic on Public Mental Health*, "Frontiers in Public Health", vol. 8, <https://doi.org/10.3389/fpubh.2020.00292>.
- Jaworsky A. (2021), *Irrational Behavior and COVID 19: Its Origins and Lasting Impact*, "Michigan Journal of Economics", 29 November, <https://sites.lsa.umich.edu/mje/2021/11/29/irrational-behavior-and-covid-19-its-origins-and-lasting-impact/> (accessed: 3.01.2023).

- Karabag S. F. (2020), *An Unprecedented Global Crisis! The Global, Regional, National, Political, Economic and Commercial Impact of the Coronavirus Pandemic*, "Journal of Applied Economics and Business Research", vol. 10(1).
- Khayru R. K. (2021), *Opinions about Consumer Behavior during the COVID-19 Pandemic*, "Journal of Social Science Studies (JOS3)", vol. 1(1), <https://doi.org/10.56348/jos3.v1i1.6>.
- Klimczuk A. (2021), *The COVID-19 Pandemic from the Perspective of Risk Theory*, MPRA, Munich.
- Liu N., Xu Z., Skare M. (2021), *The Research on COVID-19 and Economy from 2019 to 2020: Analysis from the Perspective of Bibliometrics*, "Oeconomia Copernicana", vol. 12(2), <https://doi.org/10.24136/oc.2021.009>.
- Maciejewski G. (2020), *Konsumenci wobec zrównoważonej konsumpcji żywności*, "Marketing Instytucji Naukowych i Badawczych", vol. 36(2), http://minib.pl/wp-content/uploads/2020/06/2-Maciejewski_pl.pdf (accessed: 3.01.2023).
- Maciejewski G. (2023), *Zrównoważone zachowania konsumentów w czasie pandemii COVID-19*, "Studia i Prace Kolegium Zarządzania i Finansów", vol. 188, <https://doi.org/10.33119/SIP.2023.188.3>.
- Maciejewski G., Lesznik D. (2022), *Consumers towards the Goals of Sustainable Development: Attitudes and Typology*, "Sustainability", no. 14(17), <https://doi.org/10.3390/su141710558>.
- Miller K. (2022), *WHO Chief Says the End of the COVID-19 Pandemic Is Coming – but There's Still Work to Do*, Prevention, 15 September, <https://www.prevention.com/health/a41230482/who-chief-says-end-covid-19-pandemic-in-sight/> (accessed: 3.01.2023).
- Misiurewicz-Gabi A. (2022), *Czy to już koniec pandemii?*, Termedia, 27 October, <https://www.termedia.pl/mz/Czy-to-juz-koniec-pandemii-,49136.html> (accessed: 3.01.2023).
- Moore C., Kolencik J. (2020), *Acute Depression, Extreme Anxiety, and Prolonged Stress among COVID-19 Frontline Healthcare Workers*, "Psychosociological Issues in Human Resource Management", vol. 8(1), <https://doi.org/10.22381/PIHRM8120209>.
- Morales M. (2021), *Post-pandemic Consumer Behavior towards E-commerce and Retail Stores in United States*, "Revista Venezolana de Gerencia", vol. 26(6), <https://doi.org/10.52080/rvgluz.26.e6.4>.
- Mróz B. (2021), *Zachowania konsumentów w czasie pandemii COVID-19*, Oficyna Wydawnicza SGH, Warszawa.
- Naseer S., Khalid S., Parveen S., Abbass K., Song H., Achim M. V. (2023), *COVID-19 Outbreak: Impact on Global Economy*, "Frontiers in Public Health", vol. 10, <https://doi.org/10.3389/fpubh.2022.1009393>.
- Nicola M., Alsafi Z., Sohrabi C., Kerwan A., Al-Jabir A., Iosifidis C., Agha M., Agha R. (2020), *The Socio-economic Implications of the Coronavirus Pandemic (COVID-19): A Review*, "International Journal of Surgery", vol. 78, <https://doi.org/10.1016/j.ijssu.2020.04.018>.

Oravsky R., Toth P., Banociova A. (2020), *The Ability of Selected European Countries to Face the Impending Economic Crisis Caused by COVID-19 in the Context of the Global Economic Crisis of 2008*, "Journal of Risk and Financial Management", vol. 13(8), <https://doi.org/10.3390/jrfm13080179>.

Pietrucha J., Maciejewski G. (2020), *Precautionary Demand for Cash and Perceived Risk of Electronic Payments*, "Sustainability", vol. 12(19), <https://doi.org/10.3390/su12197977>.

Popescu Ljungholm D., Olah M. L. (2020), *Mental Health Consequences of the COVID-19 Crisis on Frontline Healthcare Professionals: Psychological Impairments as a Result of Work-related Stress*, "Psychosociological Issues in Human Resource Management", vol. 8(1), <https://doi.org/10.22381/PIHRM8120205>.

Rozporządzenie Rady Ministrów z dnia 13 maja 2022 r. zmieniające rozporządzenie w sprawie ustanowienia określonych ograniczeń, nakazów i zakazów w związku z wystąpieniem stanu epidemii, Journal of Laws of 2022, item 1025.

Salvietti G., Ziliani C., Teller C., Ieva M., Ranfagni S. (2022), *Omnichannel Retailing and Post-pandemic Recovery: Building a Research Agenda*, "International Journal of Retail & Distribution Management", vol. 50(8/9), <https://doi.org/10.1108/IJRDM-10-2021-0485>.

Verhoef P. C., Noordhoff C. S., Sloot L. (2023), *Reflections and Predictions on Effects of COVID-19 Pandemic on Retailing*, "Journal of Service Management", vol. 34(2), <https://doi.org/10.1108/JOSM-09-2021-0343>.

WHO (2022), *COVID-19 Policy Briefs*, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-policy-briefs> (accessed: 3.01.2023).

Wiśniewska M. Z. (2022), *Ewolucja trendów i zagrożeń w konsumpcji żywności w świetle celów zrównoważonego rozwoju*, „Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie”, no. 1(995), <https://doi.org/10.15678/ZNUEK.2022.0995.0104>.

Zalega T. (2022), *Sustainable Consumption and the Fair Trade Idea versus the Consumption Behavior of Young Singles in Poland*, "Problemy Zarządzania (Management Issues)", vol. 20(4), <https://doi.org/10.7172/1644-9584.98.2>.

Zwanka R. J., Buff C. (2021), *COVID-19 Generation: A Conceptual Framework of the Consumer Behavioral Shifts to Be Caused by the COVID-19 Pandemic*, "Journal of International Consumer Marketing", vol. 33(1), <https://doi.org/10.1080/08961530.2020.1771646>.