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# The effect of COVID-19 on consumer shopping behaviour: Generational cohort perspective

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## ABSTRACT

The purpose of this research is to contribute to an understanding of the trends and impacts of the COVID-19 pandemic on consumer buying behaviour. The results document changes in consumer behaviour patterns that came to dominate at the start of the second wave of the COVID-19 pandemic in the context of the Czech Republic. The questionnaire survey using an online panel in a selected country was conducted to identify how consumers from the Baby Boomers, X and Y generations changed their shopping behaviour and which needs they gave preference to during the pandemic crisis in relation to their fears. Using a multiple regression analysis, we demonstrated that fear appeal (fears for health and economic fears) are associated with the changes in customer behaviour and influence traditional and online shopping related to COVID-19. The findings demonstrate significant differences as well as similarities in consumer behaviour between generations. Through empirical investigation, this research supports and expands generation cohort theory in relation to changes in consumer behaviour during the Covid-19 pandemic from a Central European perspective, and provides useful information for researchers and practitioners, particularly for retailers and marketers, to implement appropriate strategies.

## 1. Introduction

The global COVID-19 pandemic has seriously affected societies and economics around the world and has hit various sectors of society in different ways. This unprecedented situation has several consequences for the everyday life of consumers and has dramatically changed how businesses act and consumers behave (Donthu and Gustafsson, 2020; Pantano et al., 2020). The surveys carried out after the first wave have argued that consumers across the globe are looking at products and brands through a new lens (Accenture, 2020; McKinsey, 2020). The conducted study examines the antecedents and dynamics of impulse buying patterns in the rise of COVID-19 and assesses the impact of the impulse purchasing behaviour of Czech citizens during this situation based on fear (cf. Ahmed et al., 2020; Iyer et al., 2020).

The current situation, after the first wave and at the beginning of the second wave of the COVID-19 pandemic in Europe, has made many consumers reconsider their established buying and shopping habits or even to learn new one (Sheth, 2020). Due to the extraordinary containment measures, some consumers for instance have had to move to online shopping, home-deliveries or cashless payment, which they

never considered before (Pantano et al., 2020). There is a need for retail managers and marketers to monitor the changes in consumers' shopping behaviour and habits to understand which changes in strategies they need to adopt (Verma and Gustafsson, 2020).

An essential component to understanding shopping behaviour is marketing segmentation (McKinney et al., 2004). According to Parment (2013) a useful segmentation approach is that based on generational cohort, because of the relative homogeneity within generations, and at the same time of the heterogeneity across generations. As stated by Marjanen et al. (2019), generational cohort membership shares similar values which affect attitudes, preferences, as well as shopping habits and behaviour. Similarly, Chaney et al. (2017) argue that generational cohorts' experiences, beliefs, core values, attitudes, and preferences shape their behaviours. Thus, in contrast to the previous surveys this research uses the generational cohort theory as a framework to examine changes in consumer shopping behaviour and needs. More particularly, this research compares three significant cohorts: Baby Boomers, Generation X and Generation Y.

The purpose of this research is to examine the impact of the COVID-19 pandemic on consumer behaviour and the changes in their shopping

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habits. Understanding consumers' buying behaviour in the face of this pandemic and beyond is vitally important for retailers and marketers as well as business and public policy makers to implement strategies and tactics to maintain existing consumers and attract new one. This research intends to contribute to the analysis of consumer behaviour in the situation when the second wave of the COVID-19 pandemic in the Czech Republic started.

## 2. Theoretical background

### 2.1. Consumers' behaviour during pandemic situation

Recent literature has shown that a perceived scarcity of products can significantly affect consumer choices (Hamilton et al., 2019; Laato et al., 2020; Pantano et al., 2020). Since the beginning of the COVID-19 outbreak (early 2020), consumers have displayed stockpiling behaviours that significantly deviate from their usual shopping behaviour. A further consequence of the lower accessibility of store premises, combined with consumers' greater health concerns, has been an immediate increase in demand for alternative distribution channels. Unexpected regulations imposing social distancing are further having a vast impact on consumers' favoured channel for shopping. For example, while online grocery shopping has witnessed stable though limited growth in the last decade (Harris et al., 2017), it has significantly increased during the COVID-19 pandemic crisis (Pantano et al., 2020). Also, older and less digitally-savvy consumers (see Baby Boomers below) have started discovering and enjoying online shopping, welcoming the safety offered by technology.

In addition to the acceleration of online retailing, other distribution options in which no physical human interaction is needed may gain in popularity (Amazon, 2020; Kirk and Rifkin, 2020). Anti-epidemic measures and the call to leave house only in the most urgent cases have brought a large number of orders for delivery to end users and growth of this business in the order of tens of percent. The share of Czechs shopping online this year has increased from 39% to 54% year-on-year (CZSO, 2020).

Pantano et al. (2020) point out that consumers have reviewed their shopping habits and at the same time have discovered benefits from services they had never used before. For instance, some consumers are switching to online purchases, discovering the safety and benefits of home deliveries, store pick-up, and cashless payment. Further, these authors noted that unexpected regulations by government imposing social distancing are further having a vast impact on consumers' previously preferred channels for shopping. Laato et al. (2020) underline that the government prepared lockdown by closing schools, restaurants, some shops, and public services, which may have sparked fears of upcoming disruptions and triggered behavioural responses in people.

In this context, it is also possible to consider that customers will change their shopping habits in the long run. For example, Sheth (2020) claims that there are four major contexts which govern or disrupt consumer habits. They are social context (e.g., changes in the workplace and in interaction with neighbours and friends), the implementation of new technology (including online shopping and delivery), the impact of consumption habits due to new rules (the COVID-19 pandemic regulations), and less predictable context (the development of the global COVID-19 pandemic).

Of course, there are generally three factors which are likely to generate new consumer habits. These are public policy, including at the EU level (e.g., European Commission, 2020a) and national level in the selected country, digital technology and its development (cf. DESI, 2020), and changing demographics, which in some EU countries is very important (European Commission, 2020 b).

All consumption and consumer behaviour is anchored to time and location (Sheth, 2020). Kirk and Rifkin (2020) argue that history has shown that times of crisis often result in major transformations throughout society and recommend paying attention to consumer

behaviours in each of these three phases: reacting, coping, do-it-yourself behaviours and then also longer-term adapting.

Previous research was conducted by Accenture (2020) and McKinsey (2020) in spring 2020. For example, Accenture (2020) states that consumers are deeply concerned about the impact of COVID-19, both from a health and an economic perspective. The findings of the mentioned research showed that purchases were centred on the most basic needs, people shopped more consciously, bought locally and were embracing digital commerce. To manage isolation, consumers were using ICT to connect, learn and play, and they will probably continue to do so.

As consumers have begun to cope with the pandemic crisis, they are responding differently to the actions of brands. According to psychological contract theory, consumers form psychological contracts with the brands they patronize based on implicit promises that they believe the brand has made (Kirk et al., 2013). It is possible that brands with a high socially-responsible positioning (Kirk and Rifkin, 2020; He and Harris, 2020) may therefore be particularly subject to punishment by consumers if they are perceived to have betrayed their positioning promises during the pandemic. For example, in a recent Edelman Trust Barometer special survey (2020) of 12,000 consumers worldwide, two-thirds of consumers reported their future purchase decisions will be strongly influenced by how brands respond to the pandemic. This research was carried out in March during the first wave of the pandemic crisis. The findings show that one-third of respondents have already actively switched from a brand based on what they perceived to be an inappropriate response to the crisis. In addition, the McKinsey (2020) survey reported that consumers around the world change purchasing loyalty differently.

Retailers and local services are aware that their responses to the emergency will dramatically impact their business, but are scrambling to adapt as they have very little time to take action. On the other hand, Pantano et al. (2020) argue that consumers who have stopped purchasing the brands during the first wave of the pandemic crisis might be even more willing to repurchase them once the crisis has passed if they feel the brands or stores were empathic and did their part to help.

The current situation has impacted business worldwide. Companies have already suffered growing competition from online stores, the pandemic crisis will be the last straw and they will either go out of business or permanently close a high proportion of physical stores, meaning that consumers will be unable to revert to their former shopping habits.

### 2.2. Fear appeal and the change in consumer behaviour

Recent literature has pointed out that conscious (planned) or subconscious (impulsive) purchase patterns are driven mainly by hedonic (emotional) and utilitarian (practical) stimuli (Ahmed et al., 2020; Leverin and Liljander, 2006). Several studies (Addo et al., 2020; Chinnazzi et al., 2020; Kim, 2020; Wiranata and Hananto, 2020) reported that in the context of the fear-inducing COVID-19 phenomenon, impulse buying behaviour has increased significantly across the world. Thus, in this research we have also employed the theory of Fear Appeal. According to Ahmed et al. (2020), it is an almost forgotten theory.

The theory of Fear Appeal has not been frequently used in academic research in recent times. It is applied in marketing and advertising campaigns, especially in health insurance, life insurance, and product safety features. According to Addo et al. (2020), and Wegmann et al. (2017), fear grew as an instrument to safeguard from situations in which life is endangered. Lai et al. (2016) state that Fear Appeal comprises three significant conceptions: perceived efficacy, threat, and fear. According to Wegmann et al. (2017) Fear Appeal can be categorized into fear control and danger control, where fear control revolves around emotional reactions caused by risk and danger control directs the adaptive behaviour of customers to avoid it (Accenture, 2020; Addo et al., 2020). Similarly, Addo et al. (2020) argue that danger control guides adaptive behaviour to deal with or avoid danger while fear

control guides emotional responses resulting from risk. Several studies suggested that Fear Appeal is an important mediating variable during impulse purchase behaviour (Ahmed et al., 2020; Addo et al., 2020; Iyer et al., 2020).

The development of the COVID-19 epidemic in the world is currently being monitored. (e.g. WHO, 2021). The findings of meta-analysis by Levin et al. (2020) show exponential relationship between age and infection fatality rate for COVID-19. Studies show that COVID-19 and its consequences has led to fears, worries and anxiety and has become one of the major factors impacting the health and wellbeing of individuals worldwide (Reznik et al., 2020; Ahorsu et al., 2020). Furthermore, some studies argue that occurrence of symptoms of fear among population is associated with age (Chen, 2020; Šljivo et al., 2020).

Generally, purchase decisions and consumers choices are the results of scrutiny of the pros and cons, and further are influenced by affective and sensitive aspects of selected products. Products that are perceived to overcome a specific risk or danger, fomenting fear, and could be successful in reducing perceptions of danger, attract greater purchases (Addo et al., 2020; McDaniel and Zeithaml, 1984). Similar to Addo et al. (2020), this research is also based on the above assumption and predicts that, in the wake of the continuing spread of COVID-19, Fear Appeal will have a positive relationship with the purchase of selected products.

The following research hypotheses were developed based on the literature above related to the Fear Appeal theory:

**H1.** The level of health fears influences the change in customer shopping behaviour during the COVID-19 pandemic crisis.

**H2.** The level of economic fears influences the change in customer shopping behaviour during the COVID-19 pandemic crisis.

The conducted research concentrates on a purchase assessment of essential items, such as buying out of utilitarian (necessity) and hedonism (fear) stimuli (Ahmed et al., 2020; Wegmann et al., 2017). There are many different factors influencing the way of purchasing, but consumer needs could be considered as the first step in the process of consumer behaviour (Maslow, 1970; Solomon, 2002). According the Maslow's hierarchy of needs, the first physiological need usually appears at a time of fear, distress or deprivation, in this instance, the COVID-19 pandemic. The certain basic human needs serve as motivation for consumers to take action, including buying action (Seeley, 1992). The basic human needs resulted in a huge increase in demand, with many stores running out of essential products and many non-essential products being forgotten during pandemic shopping behaviour (cf. Accenture, 2020; Deloitte, 2020).

The fear of COVID-19 and of complete lockdown has had a very strong impact on inhabitants in selected country in autumn 2020. At the beginning of the second wave in Europe, the Czech Republic was considered the country with the worst increase in COVID-19 per hundred thousand inhabitants. People were inclined towards impulse buying behaviour due to the negative information in mass media, new media (especial due social media), word of mouth of peers and also by watching the buying behaviour of neighbours and peers. We suppose that COVID-19 pandemic has resulted not only in more concerns around health and employment, as well as access to needed resources to fulfil basic human needs. Hence, the following hypothesis is framed based on the literature and specific situation in selected country:

**H3.** Consumers, during the COVID-19 pandemic crisis, are focused more on basic needs than self-fulfilment needs.

### 2.3. Generation differences and shopping behaviour

According to generation cohort theory, every generation cohort differs from the others in some way because of different experiences occurring at different times (Ignatius and Hechanova, 2014). The theory further states that generational differences are not determined by an individual's age but more likely by the shared influences and

experiences of a particular generation (Jones et al., 2018). Thus, groups of individuals born during the same period and growing through the same experiences will share similar values, attitudes and beliefs and expectations which are constant throughout the generation's lifetime and constitute a generational identity (Carpenter et al., 2012; Schewe and Meredith, 2004). In the consumer context, generational identity significantly influences purchase patterns and shopping behaviour (Lissitsa and Kol, 2016; Parment, 2013).

In the following text, each selected generation in the context of the presented research is briefly defined.

#### 2.3.1. Baby Boomers (1945–1964)

Baby Boomers are described as individualistic, competitive free agents, with strong interests in self-fulfilment through personal growth. This group has high job involvement, which leads to economic security and career success (Jackson et al., 2011). They are called digital immigrants because they were not born into a digital world. They prefer communication conducted face-to-face, by phone, or through traditional mail. Baby Boomers are more likely to shop at one location near home. Members of this generation usually prioritize products that are reliable, fairly priced, and budget friendly (Williams and Page, 2011). They are also characterized as focusing more on families and finances and medical services (Brosdahl and Carpenter, 2011), like new products and technologies that makes their lives easier and save them time (Williams and Page, 2011).

#### 2.3.2. Generation X (1965–1982)

People from Generation X grew up in the information age when ICT had started to develop, during the emergence of computers and the introduction of mobile phones (consider some delay in the implementation of ICT for Central and Eastern European countries). Members of Generation X are more competent and comfortable with computer-mediated communication. But they tend to ignore advertising aimed at them and reject any form of segmentation and marketing technique (Lissitsa and Kol, 2016). Generally, they like to communicate by mobile phones, use online forums, Facebook, etc., but they are not as comfortable with face-to-face communication as the previous generation and do not like written communication such as writing formal letters. They value direct, clear and concise communication, which influences their purchase habits, too. On the other hand, these people have no problem asking questions. As consumers they are sophisticated as far as products and shopping (Brosdahl and Carpenter, 2011), need to buy products and messages designed uniquely for their tasks, look for customer convenience and community relations. This generation is price conscious and has low price sensitivity (Williams and Page 2011).

#### 2.3.3. Generation Y (1983–2000)

Generation Y is also known as the Internet Generation or digital natives. Members of this generation are usually confident, ambitious, speak various foreign languages and are achievement-oriented. They are well-informed about all the news and look for changes and innovations and usually make purchase decisions having undertaken prior research on the topic (Lissitsa and Kol, 2016). They do not visit the same stores their parents did when they needed shopping. They prefer online shopping, which offers them a range of benefits compared with traditional shops, including easy ordering and delivery and low prices. They want products that match their personality and lifestyle. Consumers from this generation tend to devote their spending more to personal or digital services than to apparel, suffer higher levels of debt, and earn less on average than previous generations. In their communication social media like Facebook plays an important role, they use different kinds of mobile resources and platforms (cf. Lewy et al., 2019). They are more likely to seek out a specific brand. They prefer speedy shopping in a lot of situations, as opposed to Baby Boomers.

Every generation relates to brands differently, and they have varying objectives when shopping and buying. But despite their differences,

every generation looks for payment security, easy brand interactions, and transparent promotions (National Retail Federation, 2020). And of course, great customer service is always the most important thing for all customers. Consumers from all generations are starting to make more purchases on internet and using smartphones. Every generation is receptive to loyalty and rewards programs (Lewy et al., 2019).

In the light of the characteristics of the generations and the Fear Appeal theory described above, the following hypotheses relating to the customer behaviour were posed:

**H4.** The level of fears about health (own and others) and fears about the economic situation (job loss and economic situation in society) differs between the selected generations.

**H5.** There are differences in purchasing of selected items during the COVID-19 pandemic in relation to fears of the selected generations in brick-and-mortar shops and online shops.

It is not new, that the cohort generation consists of individuals who share the major events in history, which impact personality behaviour including consumer behaviour (Zwanka and Buff, 2021). Current comparison by Jindrová and Labudová (2020), using European Statistics of Income and Living Condition, showed that some of socio-economic determinants between old and new members of the EU-28 were not very large in 2018, but variable Age had the most substantial influence on self-perceived health. This fact supports the generational approach and claim by Parment (2013) that studying purchasing behaviour of generational cohorts could be very beneficial. Hence, the following hypothesis is framed based on literature:

**H6.** There are generational differences in the needs that influence consumer shopping of the selected generations during the COVID-19 pandemic.

For clarity, Fig. 1 then shows an investigation model comprising all six presented hypotheses together.

**3. Methods**

At the time of conducting this research, the Czech Republic and many EU countries had placed some parts of their economies in lockdown in the hope of reducing deaths by an order of magnitude but with substantial negative consequences in terms of damage to national

economies, businesses and individual jobs (cf. Pantano et al., 2020). The quantitative research in the form of questionnaire survey was carried out in the first days of the second wave of the COVID-19 pandemic in the Czech Republic at the end of September 2020. That means that the respondents had experience from the time of the first wave (March–May 2020) and a short summer period without strict restrictions on social distance in this country. The primary data were collected using an online panel at the end of September 2020.

**3.1. Online panel**

Talk Online Panels operate in Central and South Eastern Europe through a network of representative offices. The organisation uses control measures such as verification of user data through random post and telephone checks, a monthly limitation on the number of surveys taken, and by running requests for profile updates. The panels use local expertise and management and centralized oversight. Talk Online Panel is an ESOMAR member and meets its guidelines (Talk online panel, 2020). Detailed tracking across selected demographic attributes allows respondents to be selected according to the required sample selection characters. The panel has a size of approximately 80 thousand people aged 15+. The data were collected by both a self-administered questionnaire (CAWI) and computer-assisted telephone interviewing (CATI).

**3.2. Sample**

The respondents for the questionnaire survey were adult consumers (aged 18+) living in the Czech Republic. The sample size was set at 1000 respondents, which is the usual size for surveys within the Czech population (cf. CVVM, 2021). Due to the collection via the Talk Online Panel and using the quota sampling (cf. Burs et al., 2017), it was possible to ensure an adequate distribution of respondents in the sample according to the basic demographic characteristics of the population, such as gender and age, but also the region. Therefore, the sample could be considered as representative of the Czech Internet population. In addition, in 2020 89% Czechs used the Internet (Eurostat, 2021).

However, the sample contains only 36 participants from Generation Z and 47 from the Silent Generation. These two groups of participants were therefore excluded from analysis, which means that the final

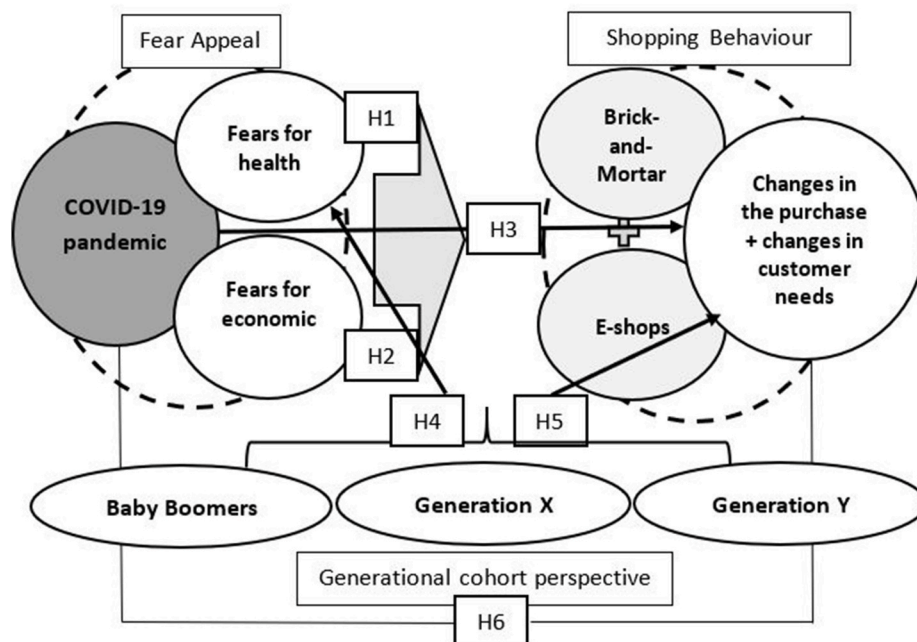


Fig. 1. Investigation model.

sample consists of 917 participants (Baby Boomers = 302, Generation X = 323, Generation Y = 292).

### 3.3. Instrument

The questionnaire design was inspired by a literature review (particularly by the studies by Kirk and Rifkin, 2020; Pantano et al., 2020; Sheth, 2020) and previously conducted surveys focused on similar topics (particularly Edelman, 2020; Accenture, 2020; McKinsey; 2020). The questionnaire included four main parts. The first part was related to consumers' fear for themselves along with broader society. The next part contains items related to new buying behaviour with the emphasis on online shopping. The difference between local and online shopping was also the subject of this part of the survey. This part also contains items that investigated consumer priorities related to selected categories and brand or convenience, etc. The third part is focused on consumers' needs. The specific items and scales used are then presented in more detail in the Results section. In the final part of the questionnaire, supporting information for further statistical analysis was collected from the demographic information of the respondents.

### 3.4. Statistical methods

First, the questionnaire data were evaluated using descriptive statistics, namely sample means and frequencies. In particular, based on relative frequencies, the ranking of consumer needs was determined to verify H3. Second, formal statistical methods were used to verify the other five hypotheses. Specifically, to verify H1 and H2, the effect of fears on shopping behaviour was assessed using multiple regression analysis including individual t-tests on regression parameters. The effect of generation on fear level was assessed using a one-way ANOVA; differences between generations (H4) were then detected by Tukey's multiple comparison method. Multiple regression analysis was also used to estimate of the partial effects of the fears and generation variables on changes in the purchase of selected items (H5). Whereas in the case of examining the partial effects of fears and generation on needs (H6), multiple logistic regressions were chosen with respect to the binary response (1 – belonging to the top 3 needs, 0 – not belonging to the top 3 needs). In both types of regression analysis, multiple comparisons for the generation variable were performed using the method of Hothorn et al. (2008). Statistical analysis was performed in statistical software R version 4.0.3 (R Core Team, 2020).

## 4. Results

The Results section is divided into five thematic subsections.

### 4.1. Fears about health and Economic Situation

As in the Accenture survey (2020), we looked at respondents' fears for their health, health of others, job loss, and the economic situation in society. In our case, we focus on the average level within a five-point Likert scale (1 – strongly agree, 5 – strongly disagree). The distribution of responses is presented according to generations B, X and Y (Table 1, Fig. 2) for use in more detailed analyses.

In an international survey conducted by Accenture (2020), 64% of

respondents expressed fears (agree or significantly agree responses) about their health. However, in our case, it was 37%, specifically, 45% of respondents from generation B, 38% from Generation X and 27% from generation Y. The stacked bar graph in Fig. 2 documents that respondents from Generation Y expressed the fewest fears for their own health. On average, the level of fear for the health of others turned out to be higher than the level of fear for their own health (2.41 vs 2.82), which is in line with the Accenture study (2020). There were 82% respondents with fears for the health of others. In our case, the item was formulated as fears for the health of the respondent's loved ones. In our research, 56% of respondents agreed with this fear. Specifically, the highest fears were expressed by Generation X (59%), then Generation B (56%) and slightly lower, Generation Y (53%).

Interestingly, 64% of respondents expressed fears of losing their jobs in the Accenture (2020) research. In our case, it was a total of 31%, where respondents from Generation Y (38%) had the greatest fears, followed by Generation X (35%) and Generation B (20%). It should be noted that among the respondents from generation B there are already pensioners who are no longer employed and therefore many of them are not worried about losing their jobs. From this point of view, and in relation to Fear Appeal, the answer to the item, which is focused on the population from the economic situation in society, is more significant. The Accenture (2020) research reported 88%. In our research, the overall proportion was 80% and the distribution between the generations is quite similar (B 78%, X 80%, Y 83%).

In further analyses, we work with two variables, FearH representing health fears and FearE representing economic fears. The variable FearH was created by averaging the items fear for own health and fear for the health of others, while the variable FearE was created by averaging the items fear for job loss and fear for the economic situation. FearH and FearE are two fundamental variables in our research in relation to the Fear Appeal theory.

Table 2 shows the average values of these two fear variables according to generation, while according to the ANOVA F-test a statistically significant result was found in both cases. Post hoc analysis based on Tukey's method, with p-values adjusted for multiple comparisons (Padj. in Table 2), identified the difference between Generation Y and others for fear for health (Generation Y is significantly more afraid), while for fear for economic situation, Generation B differs from others (Generation B is significantly less afraid). The results are therefore consistent with Hypothesis H4. However, at the item level, generational differences were insignificant in "Health of Others" (ANOVA F-test:  $p = 0.330$ ) and "Economic Situation" (ANOVA F test:  $p = 0.222$ ).

### 4.2. Health and economic fears and changes in shopping behaviour

Changes in shopping behaviour was examined through 13 items on a five-point Likert scale (1 – strongly agree, 5 – strongly disagree). The basic results of this part of the questionnaire in the form of summary statistics are presented in Table 3. Most of the respondents (almost two-thirds) tried to minimize waste food. This result is consistent with the Accenture (2020) consumer research. In the other two items, namely More Health Product (24%) and Thoughtful Purchase (41%), figures in our study did not reach a share above 50% as in the Accenture (2020) study.

Table 4 presents the results of the multiple regression analyses. The

**Table 1**

The level of fears for health (own and others), job loss and economic situation by generation: average levels and percentages.

Characteristic Need/Generation	Average Level				Percentage for Levels 1 and 2			
	B	X	Y	Total	B	X	Y	Total
Own Health	2.58	2.77	3.13	<b>2.82</b>	45.0	38.1	27.4	<b>37.0</b>
Health of Others	2.38	2.36	2.48	<b>2.41</b>	55.6	59.4	53.1	<b>56.2</b>
Job Loss	3.62	2.99	2.99	<b>3.20</b>	19.9	35.3	38.4	<b>31.2</b>
Economic Situation	1.81	1.88	1.75	<b>1.81</b>	78.1	79.6	82.5	<b>80.0</b>

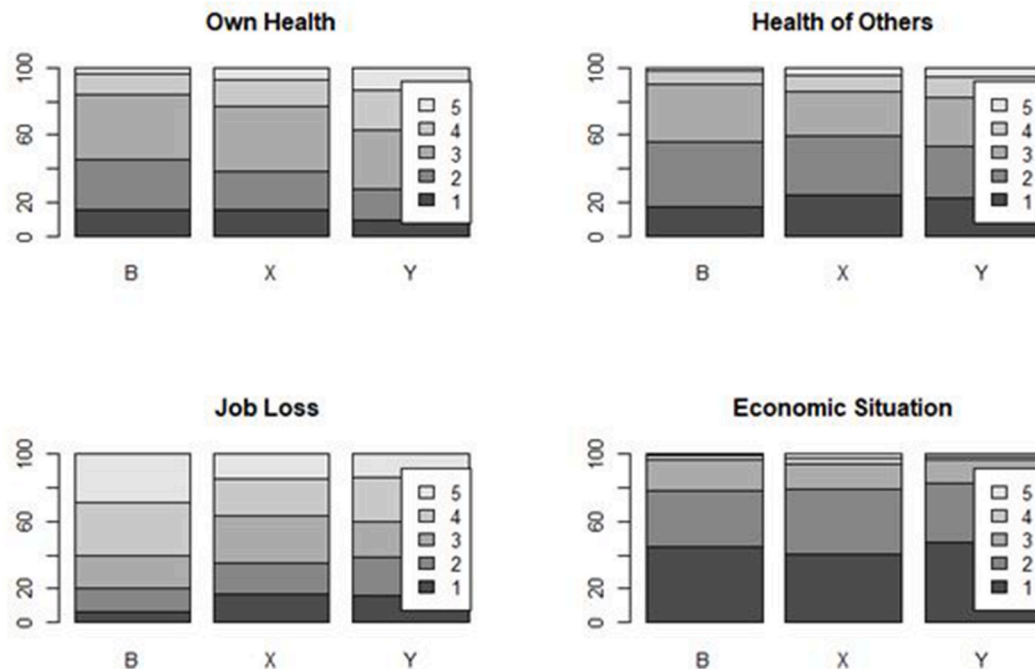


Fig. 2. Distribution of the fear level (in percent) according to the considered generations.

Table 2  
Generational Differences in Fears related to the COVID-19 pandemic: ANOVA F-test.

Fear Variable	Mean Estimates			Total	ANOVA F-test	X – B		Y – B		Y – X	
	B	X	Y			Diff	Padj.	Diff	Padj.	Diff	Padj.
FearH	2.48	2.57	2.80	2.61	0.000	0.08	0.561	0.32	0.000	0.24	0.010
FearE	2.72	2.43	2.37	2.51	0.000	-0.28	0.000	-0.35	0.000	-0.06	0.649

Table 3  
Changes in shopping behaviour by generation: average levels and percentages.

No.	Characteristic Item/Generation	Average Level				Percentage for Levels 1 and 2			
		B	X	Y	Total	B	X	Y	Total
1	More Health Products	3.19	3.15	3.30	3.21	24.5	24.5	24.0	24.3
2	Basic Product Selection	2.62	2.90	2.95	2.82	48.3	33.4	33.6	38.4
3	Thoughtful Purchase	2.65	2.86	2.89	2.80	49.0	37.8	37.3	41.3
4	More from Local Retailers	3.24	3.17	3.22	3.21	16.6	21.1	23.3	20.3
5	Unimportant Purchase Place	3.00	3.11	2.97	3.03	31.1	25.1	32.2	29.3
6	Known Brands	2.73	2.86	2.93	2.84	40.7	34.7	34.9	36.8
7	Brands Search before Shopping	2.99	2.99	3.03	3.00	29.8	35.3	32.2	32.5
8	Less Shopping	2.76	2.83	2.83	2.81	43.0	41.2	41.4	41.9
9	Large Shopping	2.63	2.69	2.67	2.67	47.7	45.5	50.3	47.8
10	Shopping for Others	3.39	2.98	3.03	3.13	18.5	35.9	34.2	29.7
11	Cheaper Products	3.08	3.10	3.05	3.08	28.1	25.1	31.2	28.0
12	Minimize Food Waste	2.11	2.34	2.45	2.30	72.8	63.5	57.9	64.8
13	Change in Shopping	3.11	3.20	3.28	3.20	25.5	24.5	23.6	24.5

individual items of changes in shopping behaviour from Table 3 were dependent variables and the independent variables were always FearH, FearF, and generation. Thus, thirteen regression models were analysed. The significance of the fear variables effects was assessed by related t-tests, while the effect of generation represented by two dummy variables (with respect to the categorical nature of the original variable) was assessed by the sub-model F-test. Multiple comparisons were then performed using the method of Hothorn et al. (2008).

As the findings in Table 4 show, consumer behaviour during shopping generally depends on fear; the greater the fear, the greater the change in behaviour. The exception is item 5 (“it didn’t matter where I shopped”), which did not depend on health fears, and, moreover,

depends on economic fears in the opposite direction (effect estimate: -0.10). The highest sensitivity to the health fears was for items 1 (“I bought more health products”) and 13 (“overall, I think I changed my shopping as a result of the crisis”) with slope estimates 0.36 and 0.37, while in terms of economic fears, it was for item 11 (“I bought cheaper products to save money”) with slope estimate 0.26. Therefore, it is established that Hypotheses H1 and H2 are supported. Health fears and economic fears have a significant influence on buying behaviour.

#### 4.3. Changes in shopping in brick-and-mortar compared to online shops

As part of the conducted research, we also focused on individual

**Table 4**  
Changes in shopping behaviour in relation to fears related to the COVID-19 pandemic and generation: multiple linear regression results.

Variable Subject (Item)	FearH		FearE		Gen	X – B		Y – B		Y – X	
	Effect	P	Effect	P	P	Diff	Padj.	Diff	Padj.	Diff	Padj.
1: More Health	0.36	0.000	0.12	0.001	0.628	-0.03	0.938	0.05	0.823	0.07	0.603
2: Basic Product	0.17	0.000	0.15	0.000	0.000	0.31	0.000	0.32	0.000	0.02	0.973
3: Thoughtful P.	0.26	0.000	0.17	0.000	0.004	0.24	0.006	0.22	0.016	-0.01	0.979
4: Local Retail	0.19	0.000	0.12	0.001	0.808	-0.05	0.802	-0.04	0.886	0.01	0.989
5: Unimp. Place	-0.01	0.856	-0.10	0.010	0.173	0.09	0.495	-0.06	0.768	-0.15	0.155
6: Known Brand	0.10	0.003	0.09	0.016	0.022	0.15	0.102	0.20	0.022	0.05	0.748
7: Brand Search	0.12	0.001	0.14	0.000	0.866	0.02	0.952	0.04	0.853	0.02	0.963
8: Less Shopp.	0.11	0.001	0.17	0.000	0.385	0.11	0.382	0.09	0.559	-0.02	0.966
9: Large Shopp.	0.26	0.000	0.12	0.004	0.640	0.07	0.707	-0.00	1.000	-0.07	0.690
10: for Others	0.22	0.000	0.15	0.000	0.000	-0.40	0.000	-0.38	0.000	0.02	0.977
11: Cheaper P.	0.18	0.000	0.26	0.000	0.507	0.08	0.565	0.00	0.999	-0.07	0.596
12: Min. Waste	0.18	0.000	0.16	0.000	0.000	0.27	0.000	0.35	0.000	0.08	0.521
13: Change	0.37	0.000	0.15	0.000	0.350	0.10	0.427	0.10	0.405	0.01	0.995

Note: For reasons of space, numbers with abbreviated titles were used for the items, the full names of the items can be found in Table 3.

shopping for eight items with scale (1 – more frequently than before, 5 – more infrequently than before), both in traditional stores (brick-and-mortar shops) and online stores (e-shops). For online shopping, a specific Internet entertainment item was added. Medicines (21.2%, 20.2%), drugstores (14.7%, 17.2%) and food (11.6%, 12.3%) were bought more both in brick-and mortar shops and online shops (Table 5, Table 6).

As in previous analyses, we constructed the related linear models: eight for traditional shopping and nine for online shopping. The results of the regression analyses can then be found in Table 7 and Table 8.

The frequency of shopping in brick-and-mortar stores was statistically significantly related to health fears for the following items: drugstores and hygiene (p = 0.024), medicines and medical supplies (p < 0.001) with the positive correlation (the greater the fear, the greater the frequency of purchases), and sporting goods (p = 0.046) and hobbies (p = 0.006) with the negative correlation (the greater the fear, the lower the frequency of purchases). Due to economic fears, there was a decrease in purchases for two items, namely 4 – electronics and 5 – household equipment. The influence of generation was found for five items (all except food, drugstore and hygiene, medicines and medical devices), where Generation B significantly reduced the purchase of these items compared to the other two generations.

The frequency of online shopping was related to health fears for the following items: food (p = 0.031), drugstore and hygiene (p = 0.002), medicines and medical supplies (p < 0.001) with the positive correlations (the greater the fear, the greater the frequency). Due to fears of the economic situation, there was a significant change in the purchase of three items: electronics (p = 0.004), sports equipment (p = 0.036) and paid online entertainment (0.014) with the negative correlations (the greater the fear, the lower the frequency). The influence of generation was detected for all nine items, with Generation B significantly reducing the purchase of these items compared to the other two generations. In addition, Generation X, compared to Generation Y, limited purchases of clothing and entertainment on the Internet.

Concerning Hypothesis H5, the influence of generation was

identified for most items (five out of eight) in traditional stores (Table 7) and all nine items in online stores (Table 8). Thus, Hypothesis H5 is partially supported by our results.

#### 4.4. Reasons for choosing new shopping items

As a further part of the research, respondents were asked to choose three main reasons for choosing new shopping items from the list. The percentages of the individual reasons in the top 1 and in the top 3 can be found in Table 9. The reasons for the new purchase were mainly the quality (top 1: 41%, top 3: 79%), then the availability (top 1: 18%, top 3: 72%) and convenience of the purchase (top 1: 15%, top 3: 57%).

The probability of including a reason in the top 3 depending on fear variables FearH, FearE, and generation was investigated using multiple logistic regressions. Table 10 shows odds ratio (OR) estimates obtained from logit models. With regard to the scale used for fear (lower values mean greater fear), OR < 1 means a higher probability of occurring in the top 3 while, vice versa, OR > 1 means a lower probability of occurring in the top 3. The significance of the fear variables effects was assessed by the Wald tests, while the effect of generation (represented by two dummy variables) was assessed by the likelihood ratio chi-squared test. Multiple comparisons were again performed using the method of Hothorn et al. (2008).

In the case of the top 3 reasons for choosing new shopping items, health fears affect reasons such as hygiene and health or quality (p < 0.001 for both). The probability of health and hygiene in the top 3 reasons increases with increasing fear of health, while the probability of quality in the top 3 reasons decreases with increasing fear of health. Besides that, the effect of fear for the economic situation was also manifested. Specifically, the reason for a comfortable purchase (p = 0.007) and the purpose of the purchase (p = 0.039) depended on this type of fear. It reduced the ranking of these two reasons in the top 3.

**Table 5**  
Changes in the purchase of selected items in brick-and-mortar stores by generation: average levels and percentages.

No.	Characteristic Item/Generation	Average Level				Percentage for Levels 1 and 2			
		B	X	Y	Total	B	X	Y	Total
1	Food	3.01	3.03	2.93	2.99	8.3	10.5	16.1	11.6
2	Drugstore and Hygiene	3.01	2.98	2.94	2.98	11.6	15.8	16.8	14.7
3	Clothing and Footwear	3.74	3.48	3.50	3.57	2.3	5.9	8.9	5.7
4	Electronics	3.79	3.54	3.51	3.61	2.3	3.1	7.2	4.1
5	Home Appliances	3.77	3.49	3.49	3.58	3.3	4.6	7.5	5.1
6	Sporting Goods	4.00	3.56	3.49	3.68	0.7	4.3	9.2	4.7
7	Hobbies outside Sport	3.91	3.48	3.39	3.59	1.3	5.3	11.3	5.9
8	Medicines, etc.	2.90	2.91	2.92	2.91	20.5	21.7	21.2	21.2



**Table 6**  
Changes in the purchase of selected items in online shops by generation: average levels and percentages.

No.	Characteristic Item/Generation	Average Level				Percentage for Levels 1 and 2			
		B	X	Y	Total	B	X	Y	Total
1	Food	3.52	3.16	3.18	<b>3.29</b>	6.0	14.2	16.8	<b>12.3</b>
2	Drugstore and Hygiene	3.35	3.04	3.03	<b>3.14</b>	10.9	20.7	19.9	<b>17.2</b>
3	Clothing and Footwear	3.59	3.23	2.99	<b>3.27</b>	8.9	13.0	27.4	<b>16.2</b>
4	Electronics	3.67	3.25	3.16	<b>3.36</b>	7.0	12.4	18.2	<b>12.4</b>
5	Home Appliances	3.68	3.26	3.25	<b>3.40</b>	6.3	11.1	14.7	<b>10.7</b>
6	Sporting Goods	3.92	3.37	3.27	<b>3.52</b>	2.0	8.4	12.3	<b>7.5</b>
7	Hobbies outside Sport	3.88	3.30	3.24	<b>3.47</b>	2.6	10.5	13.7	<b>8.9</b>
8	Medicines, etc.	3.25	2.97	3.03	<b>3.08</b>	17.9	22.6	19.9	<b>20.2</b>
9	Internet Entertainment	4.00	3.45	3.18	<b>3.54</b>	1.7	8.7	15.4	<b>8.5</b>

**Table 7**  
Changes in the purchase of selected items in brick-and-mortar stores in relation to fears related to the COVID-19 pandemic and generation: multiple linear regression results.

Variable Subject	FearH		FearE		Gen	X – B		Y – B		Y – X	
	Effect	P	Effect	P	P	Diff	Padj.	Diff	Padj.	Diff	Padj.
1: Food	0.04	0.052	0.01	0.730	0.069	0.03	0.857	-0.09	0.225	-0.11	0.064
2: Drugstore	0.05	0.024	0.01	0.697	0.262	-0.04	0.761	-0.09	0.233	-0.05	0.580
3: Clothing	-0.03	0.255	-0.05	0.129	0.000	-0.27	0.000	-0.25	0.002	0.02	0.946
4: Electronics	-0.02	0.511	-0.11	0.002	0.000	-0.28	0.000	-0.31	0.000	-0.03	0.881
5: Home Appl.	-0.04	0.144	-0.08	0.026	0.000	-0.29	0.000	-0.29	0.000	0.00	0.999
6: Sport. Goods	-0.06	0.046	-0.06	0.099	0.000	-0.45	0.000	-0.51	0.000	-0.07	0.632
7: Hobbies	-0.08	0.006	-0.03	0.325	0.000	-0.43	0.000	-0.50	0.000	-0.07	0.597
8: Medicines	0.11	0.000	0.04	0.143	0.946	0.01	0.976	-0.01	0.993	-0.02	0.943

Note: For reasons of space, numbers with abbreviated titles were used for the items, the full names of the items can be found in Table 5.

**Table 8**  
Changes in the purchase of selected items in online shops in relation to fears related to the COVID-19 pandemic and generation: multiple linear regression results.

Variable Subject	FearH		FearE		Gen	X – B		Y – B		Y – X	
	Effect	P	Effect	P	P	Diff	Padj.	Diff	Padj.	Diff	Padj.
1: Food	0.07	0.031	0.02	0.534	0.000	-0.36	0.000	-0.36	0.000	0.00	1.000
2: Drugstore	0.10	0.002	-0.02	0.666	0.000	-0.32	0.000	-0.36	0.000	-0.04	0.870
3: Clothing	0.05	0.117	-0.06	0.106	0.000	-0.39	0.000	-0.64	0.000	-0.26	0.004
4: Electronics	0.03	0.391	-0.08	0.040	0.000	-0.45	0.000	-0.54	0.000	-0.10	0.406
5: Home Appl.	0.00	0.970	-0.05	0.203	0.000	-0.43	0.000	-0.45	0.000	-0.02	0.963
6: Sport. Goods	-0.01	0.830	-0.08	0.036	0.000	-0.56	0.000	-0.67	0.000	-0.11	0.306
7: Hobbies	-0.02	0.601	-0.05	0.194	0.000	-0.59	0.000	-0.65	0.000	-0.06	0.681
8: Medicines	0.14	0.000	0.05	0.193	0.000	-0.28	0.001	-0.25	0.005	0.03	0.890
9: Internet	0.04	0.280	-0.09	0.014	0.000	-0.58	0.000	-0.87	0.000	-0.29	0.001

Note: For reasons of space, numbers with abbreviated titles were used for the items, the full names of the items can be found in Table 6.

**Table 9**  
Percentage of reasons within the Top 1 or Top 3 by generation.

Reason/ Generation	Top 1				Top 3			
	B	X	Y	Total	B	X	Y	Total
Brand Value	3.3	5.9	6.8	<b>5.3</b>	15.6	22.3	29.1	<b>22.2</b>
Availability	20.9	17.0	16.4	<b>18.1</b>	70.5	71.2	73.6	<b>71.8</b>
Quality	33.4	41.5	49.0	<b>41.2</b>	72.5	79.3	84.9	<b>78.8</b>
Purchase	18.2	14.9	10.6	<b>14.6</b>	60.9	56.7	53.4	<b>57.0</b>
Comfort								
Health & Hygiene	14.6	11.8	7.9	<b>11.5</b>	45.0	37.2	28.8	<b>37.1</b>
Purchasing Purpose	9.6	9.0	9.2	<b>9.3</b>	35.4	33.4	30.1	<b>33.0</b>

4.5. Consumer needs in times of crisis

Consumer needs were identified in a similar way as for the reasons for new items of purchase. The ranking of needs was based on the conducted research as follows: 1. Health of family and friends (top 1: 48%, top 3: 77%), 2. Personal health (top 1: 14%, top 3: 48%), 3. Food

security and health care (top 1: 8%, top 3: 45%), see Table 11. We can state that Hypothesis H3 is supported - consumers during the COVID-19 pandemic crisis have in first place top of mind basic needs.

Table 12 then shows the results of eleven logistic regressions for being in the top 3 needs for new items of purchase. According to the obtained results, health fears increased needs for 1/health of family and friends, 2/personal health, and 3/food and medicine safety. Further, it decreased needs for 1/personal success, 2/hobbies, and 3/entertainment. Fears for economic situation increased the need for financial security and decreased the need for entertainment. There were also generational differences in the eight out of eleven needs: 1/personal success, 2/hobbies, 3/entertainment, 4/education, 5/friendships, 6/health of family and friends, 7/food and medicine safety, and 8/personal health. Thus, Hypothesis H6 is partially supported.

5. Discussion and conclusion

The COVID -19 pandemic has changed usual social contacts, our working, schooling, free time spending and also shopping behaviour. As mentioned in the Accenture research (2020), people are living differently, buying differently and, in many ways, thinking differently. As

**Table 10**

Inclusion in top three reasons for choosing new shopping items in relation to fears related to the COVID-19 pandemic and generation: multiple logistic regression results.

TOP 3 Reason	FearH		FearE		Gen	X vs. B		Y vs. B		Y vs. X	
	OR	P	OR	P	P	OR	Padj.	OR	Padj.	OR	Padj.
Brand Value	1.03	0.730	0.94	0.552	0.001	1.53	0.107	2.16	0.001	1.42	0.150
Availability	1.13	0.123	0.91	0.313	0.868	1.00	1.000	1.09	0.895	1.09	0.881
Quality	1.41	0.000	0.83	0.063	0.016	1.35	0.269	1.83	0.013	1.36	0.325
Purchase Comfort	0.96	0.548	1.25	0.007	0.447	0.90	0.781	0.80	0.412	0.90	0.789
Health & Hygiene	0.64	0.000	0.84	0.056	0.001	0.69	0.080	0.51	0.001	0.74	0.206
Purchas. Purpose	1.11	0.147	1.19	0.039	0.453	0.95	0.953	0.80	0.453	0.85	0.607

**Table 11**

Percentage of needs within the Top 1 or Top 3 by generation.

No.	Need/Generation	Top 1				Top 3			
		B	X	Y	Total	B	X	Y	Total
1	Personal Success	0.7	2.5	4.8	2.6	1.7	5.3	12.0	6.2
2	Job Satisfaction	3.3	4.0	4.8	4.0	8.3	13.6	12.7	11.6
3	Community Belonging	2.0	4.3	4.5	3.6	15.9	17.3	19.5	17.6
4	Hobbies	4.6	4.0	12.7	7.0	14.2	21.4	31.5	22.2
5	Entertainment	1.0	1.5	5.8	2.7	4.0	8.4	23.6	11.8
6	Education	0.7	2.2	5.5	2.7	4.3	12.4	17.1	11.2
7	Friendships	1.0	3.7	4.5	3.1	12.6	13.0	20.2	15.2
8	Health of Family and Friends	55.6	54.2	34.6	48.4	84.4	82.4	62.7	76.8
9	Financial Security	4.0	4.6	5.1	4.6	30.1	35.0	39.4	34.8
10	Food and Medicine Safety	10.3	5.9	6.5	7.5	59.9	45.8	29.1	45.1
11	Personal Health	16.9	13.0	11.3	13.7	64.6	45.5	32.2	47.5

**Table 12**

Inclusion in main three needs in times of crises in relation to fears related to the COVID-19 pandemic and generation: multiple logistic regression results.

TOP 3 Subject	FearH		FearE		Gen	X vs. B		Y vs. B		Y vs. X	
	OR	P	OR	P	P	OR	Padj.	OR	Padj.	OR	Padj.
1: Pers. Success	1.91	0.000	0.96	0.804	0.000	2.99	0.085	6.41	0.000	2.15	0.039
2: Job Satisfaction	1.14	0.230	1.05	0.703	0.092	1.75	0.091	1.56	0.248	0.89	0.889
3: Community B.	1.09	0.332	1.05	0.637	0.565	1.12	0.870	1.27	0.536	1.14	0.815
4: Hobbies	1.60	0.000	1.07	0.492	0.000	1.60	0.082	2.49	0.000	1.56	0.053
5: Entertainment	1.45	0.001	1.40	0.008	0.000	2.27	0.060	7.73	0.000	3.41	0.000
6: Education	1.12	0.282	1.10	0.436	0.000	3.19	0.001	4.58	0.000	1.43	0.261
7: Friendships	1.16	0.125	1.16	0.177	0.023	1.06	0.966	1.77	0.041	1.66	0.059
8: Health of Loved	0.64	0.000	0.94	0.516	0.000	0.89	0.861	0.34	0.000	0.38	0.000
9: Financ. Security	0.99	0.914	0.71	0.000	0.247	1.13	0.758	1.35	0.222	1.19	0.561
10: F. & M. Safety	0.77	0.001	0.95	0.542	0.000	0.56	0.002	0.29	0.000	0.51	0.000
11: Pers. Health	0.70	0.000	1.09	0.315	0.000	0.47	0.000	0.29	0.000	0.61	0.011

Note: For reasons of space, numbers with abbreviated titles were used for the items, the full names of the items can be found in Table 11.

consumers adapt to house quarantine for a prolonged period of time, they are adopting not only new technologies which facilitate work, study, free time activities but also consumption in a new and relevant manner.

In this research, we document some of the many unusual consumer behaviour patterns that came to dominate the early days of the second wave of the COVID-19 pandemic crisis in the context of the Czech Republic. We offer insights based on Fear Appeal theory to help explain changes in consumer behaviour and associated outcomes in order to inform researchers and marketing practitioners how pandemic crises influence consumers also from a generational point of view.

The research expands on the findings of two international surveys conducted after the first wave of the COVID-19 pandemic (Accenture, 2020; McKinsey, 2020) and provides, according to Fear Appeal theory (Addo et al., 2020; Wegmann et al., 2017) in a selected cultural context, a better understanding of how customer fears for health and fears for job and the economic situation in society influence their behaviour. Among others, the findings also indicate cultural differences. For example, in the international survey by Accenture (2020) more respondents expressed fears for health and fears for the economic situation than in

our survey from the Czech Republic.

The results of the conducted research show that consumer behaviour during shopping in the COVID-19 pandemic generally depends on fear - the greater the fear, the greater the change in shopping behaviour. As we expected, fears for health were statistically significant for the main reasons in choosing new items. The reasons for the new purchase for our sample of respondents were the quality, availability and convenience of the purchase. The findings of this research correlate with findings by Accenture (2020) and show that consumers have become centred on the most basic needs during the pandemic crisis.

This research investigated the changes in the purchase of selected items in brick-and-mortar and online shops in relation to fears related to the COVID-19 pandemic. We predict the pandemic situation and greater implementation of online shopping (CZSO, 2020) will modify existing habits (c.f. Sheth, 2020). The findings show that, e.g., the frequency of shopping in brick-and-mortar and in online stores was statistically significantly related to health fears for the following items: drugstores and hygiene, medicines and medical supplies with a positive correlation, and the opposite in relation to economic fears for electronics, household equipment, paid online entertainment with a negative correlation. Our

research partially supports findings by McKinsey (2020). Quality and purpose were the most important considerations when choosing new items and brands. In our case, the top three reasons were the quality, availability and convenience of the purchase.

The second main purpose of this research was to evaluate differences in purchasing behaviour between generations B, X and Y during the COVID-19 pandemic. As mentioned above, generational determined lifestyles and social surrounding influence buying and purchasing. The research provides a better understanding of how strong the impact of the COVID-19 pandemic is in this research field. Respondents were most worried about the health of loved ones and job loss. The distribution about fears of other was similar, Generation X (59%), then Generation B (56%) and, slightly lower, Generation Y (53%). As mentioned above, fears for losing their jobs were lower than in research by Accenture (2020). The least fears were expressed by Generation B, but many of the respondents from this sample were pensioners.

In general, restrictions in pandemic times are expected to affect the shopping behaviour of the oldest generation in particular. Adjusted for the fears' effects, the findings show that Generation B significantly reduced the purchase of selected items compared to the other two generations in brick-and-mortar stores and in online stores, too. The only exception was the purchase of basic items (food, drugstores and hygiene, medicines) in traditional shops. The research also found generational differences in these eight needs: personal success, hobbies, entertainment, education, friendships, health of family and friends, and personal health. The mentioned results are in line with, for example, Ordun (2015) or Lissitsa and Kol (2016), who applied the generational approach to their analysis of changes in consumption expenditure.

History has shown that times of crisis, including this COVID-19 pandemic crisis, often result in major transformations throughout society (Kirk and Rifkin, 2020). In the conducted research, we documented some of the consumer behaviour patterns characteristic of the first days of the second wave of the COVID-19 pandemic, some of which may foreshadow changes that will change the customer behaviour we know so far.

### 5.1. Implications

This research makes several contributions, both to researchers and to practitioners in retailing and marketing. Retailers and marketers need to learn quickly if they hope to survive until the COVID-19 restrictions are a thing of the past. Retailers and suppliers (Laato et al., 2020) must successfully transfer and apply new knowledge about customer behavioural changes, their changing needs, and implement it into communication to their consumers (cf. Pantano et al., 2020; Zwanka and Buff, 2021). They need to consider not only the influence of customers' fears, but also customers' reasons for choosing new shopping items.

Retailers and marketers have to take a different approach when it comes to the Baby Boomers generation. Especially in their purchase decision-making, fears for health play an important role. Marketing communication and the retailing process have to address their fears and reduce the risks that are connected with the shopping process (cf. Wegmann et al., 2017). Thus, in order to help them with online shopping, to alleviate security risks and reduce the uncertainty of online purchasing, after-sale services, such as alterations and money-back guarantees, should be provided.

The research provides evidence of which items customers preferred in shopping during the COVID-19 pandemic and how changing needs in a pandemic crisis influenced their shopping behaviour. The research proves that during the crisis consumers focused on their most basic needs and this result is in line with findings by Accenture (2020). This finding, for example, should be used in retailing activities and marketing campaigns.

The research investigated the effects of Fear Appeal theory by breaking it down into Fear for health and Fear for economic situation. This approach provided an understanding of the impact of selected fears

on consumer behaviour during the pandemic situation, taking into account generational cohort theory. The results showed that the impacts of the two selected variables on Generations B, X and Y were asymmetrical.

### 5.2. Limitations and recommendations for future research

Some limitations of the research survey must be considered. First, the research, focused on customer behaviour during the COVID-19 pandemic crisis, was conducted in the context of the Czech Republic in September 2020. Second, the research design was inspired by the mentioned resources, Fear Appeal theory and two surveys which were conducted at the end of the first COVID-19 pandemic wave. Third, the data were obtained using quota sampling and the online panel in the selected country.

In further research, we need to follow the question asked by Sheth (2020, 280) "Will consumers permanently change their consumption habits due to lockdown and social distancing or will they go back to their old habits once the global crisis is over?" and organise research in this field over time. Our results have shown that it is important to conduct this investigation and take context and cultural differences into account.

### Declarations of competing interest

None.

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### Appendix A. Supplementary data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.jretconser.2021.102542>.

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