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The Effects of Covid-19 Pandemics on Changes in Shopping Behavior across Different Market Segments

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Abstract. With the spread of COVID-19 across the world global trade was decreased and many Global Value Chains (GVC) disrupted, especially in the trade of COVID-19 related products, since individual economies have significantly extended trade barriers. Goods were needed on the market, but regular supply did not function well, as open markets and small shops closed down, and service providers and consumers locked down. Owners of goods had surplus of limited duration, while consumers, locked in homes, panicked and tried to make purchases, oftentimes of inadequate products and quantities. Some attempts to install an e-market and e-commerce at the national and enterprise levels have been made. Poor functioning of these new institutions indicates that additional optimizations are needed since the physical delivery of goods was not organized, or was very difficult and costly. Changes in behaviour of two groups in marketing channels during pandemic were identified in literature: customers and retailers. The research is aimed to identification of changes in demand and customer behaviour concerning point of shopping. Using multiple channels has been known before pandemic. Research question was how COVID-19 influenced customer choice of shopping channel, and was this behaviour different across different segments of the population..

Keywords: COVID-19, shopper behaviour, retail, e-commerce.

1. Introduction

COVID-19 pandemic has had a strong influence on both global and local supply chains. Disruptions have affected all members of marketing channels from primary producers to retailers. Furthermore, during COVID-19 situation. a great number of small and medium farmers, agricultural producers and other small businesses were faced with broken supply chains. Fulfilling orders and satisfying customer needs have been seriously endangered.

E-commerce has seemed as solution to the problem of how to reach stay-at-home consumers, which is why several researchers and even more practitioners have suggested it. Some attempts to install an e-market and e-commerce on both the national (state) and enterprise levels have been made in Serbia. Poor functioning of these new institutions indicates that additional optimisations are needed, especially concerning logistic issues. Changes in both customer and corporate behaviour have been identified within the contemporary literature. Literature review included scientific papers and studies, cases and practical experiences from business magazines.

The main research goal was aimed at investigating the effect of COVID-19 pandemics on changes in shopping behaviour. Changes in channel choice, as well as shopping habits, was analysed both theoretically, through the relevant contemporary literature, and empirically. In order to investigate specific effects on shopping behaviour, an online survey was conducted in 2020, during August and September. In total, 164 responses from individual shoppers were gathered from the Serbian market. The survey helped us to better understand shopper behaviour in omnichannel environment during COVID-19 pandemic in Serbia. In addition, some research insights are consistent with findings from other countries. Trade policy measures for overcoming market gaps have been proposed in the paper as well.

2. The effects of covid-19 – the intensified expansion of e-commerce

COVID-19 has forced retailers to adapt their business models and accept new market reality. Modern scientific literature has observed COVID-19 market phenomenon and there is a significant body of literature which analyses, estimates and predicts the effects of pandemic. However, it should be pointed out that many scientific journals require time in order to publish papers, therefore we can expect much more articles that cover this topic.

E-commerce has been a way to ensure companies' flexibility and the means of adapting to new market reality. There are claims that e-commerce saved many businesses over the world (Pejić-Bach, 2021), as they would have otherwise surely gone bankrupt because of COVID-19.

COVID-19 pandemic has changed the importance of marketing channels in many sectors. Some traditional stores had to be closed because of stay-at-home policy, whereas for some retailers the online channel has become the most important one (Burroughs and Burroughs, 2020). This has caused significant changes in logistic aspect of retail business as well.

Editorial of Journal of retailing (2020) has pointed out that COVID-19 influence on e-commerce has following consequences:

- Changes in customers' behaviour (Varade et Makhija, 2020). COVID-19 has motivated customers to adopt new ways of shopping because of the fear of going into retail stores. However, customers still want to have goods and services like before COVID-19 i.e. fitness classes now become online fitness classes and instead of going to the gym they buy in house exercise equipment. Consumers adapt and change their behaviour.
- Changes in retailers' behaviour. Retailers of non-essential goods has felt much stronger negative COVID-19 influence than food retailers. Therefore, they have to adapt their business models and find the way to reach customers who are not shopping in the stores any more i.e. they need to launch strong e-commerce initiatives. Luxury goods retailers need strong online presence not only to sell to their usual target groups but also to sell middle and even lower-class consumers which started to buy certain luxury brands.

Other authors have emphasised that online grocery shopping has significantly increased because of COVID-19 (Pantano et al., 2020). Number of confirmed COVID-19 cases is positively correlated with the possibility of purchasing food online (Gao et al., 2020). In addition, online grocery shopping has penetrated rural areas of Germany due to COVID-19, but only for a short period of time (Dannenberg, 2020).

Interesting research question is the longevity of changes that COVID-19 has caused. For example, COVID-19 has forced older population to engage in online shopping (Pantano et al., 2020). It is reasonable to expect that older consumers will continue to buy online because they have acquired new set of skills and broken trust barriers that prevented them from buying online earlier. As for online grocery shopping, adoption curve has moved up more quickly compared to the period before the pandemic and these effects are probably here to stay for the foreseeable future (Hobbs, 2020).

Statista research has shown that in some countries, such as India, China and Vietnam, the number of customers buying online is greater by half compared to the pre-COVID-19 period, while in the most developed countries such as Japan, Germany, France, USA, Canada, UK and Australia, this figure varies from 12% to 23% (Pantelimon et al., 2020).

Hobbs (2020) researched both the growth of online grocery sales and prioritisation of local food supply chains, as consequences of the pandemic. Online grocery sales have increased for both pure-click retailers and brick & click retailers alike. However, this growth was followed by significant logistical problems (Hobbs, 2020).

Gao et. al (2020) have proposed that government policy measures for strengthening e-commerce under pandemic conditions should take into consideration the following:

- Safety of food sold on the Internet (cold chain, proper handling, etc.);
- Protection of the food carriers from infection especially couriers;
- Financial support to the poor that could have problems to buy food especially in the small urban settlements;
- Helping those who lack technical skills and consequently are unable to buy food online - for examples elderly people.

All these measures should provide both safer and more efficient food e-commerce and larger population of online food customers. However, excessive and unprepared e-commerce boom could cause strong disturbances in the supply chain, which happened in many countries. Panic stockpile behaviour is more likely to be associated with online than offline channels (Hao et al., 2020). Government measures should take this into considerations and help online marketers to develop more efficient supply chains. It is very important to use all the advantages of e-commerce in the crisis situations like COVID-19 pandemic but to be aware that there are disadvantages which need to be minimised.

3. COVID-19 as a factor influencing overall retail markets

The impact of the pandemic on various areas of life and the economy is complex and practically inconceivable in such a short period of time. In the next section, only some key changes in retail will be highlighted, namely in the behaviour of customers and the behaviour of retailers, as it was announced above, using published reports and papers.

3.2. Changes in customers' behaviour

A few studies about recent consumer behaviour emerged showing recurring patterns of behaviour. The early study from China showed the change of the preferred place of shopping (supermarkets and farmers markets declined being outperformed by online channels and small shops) as well as new factors influencing the choice of shopping place like trust i.e. hygiene and usefulness impersonal online shopping (Junxiong, Hallsworth, & Coca-Stefaniak, 2020).

Evolution of behaviour was observed, from the search for immunity, to purchasing of protection products, then accumulation of supplies, then life under restrictions and finally return to "new normal" (Stanciu, Radu, Sapira, Bratoveanu, & Mirel, 2020). Preference to cook at home instead to eat in restaurants was expected and sensibility to reduce spending depending on education and occupation, but not depending on gender, was identified (Vijai & Nivetha, 2020). However, expected influence of "stay at home" protocol on replacement of store with online shopping, although recorded, did not influenced German food retailers, for example, with an explanation that the stores are close, good and that online grocers suffer particularly in their "cold chain" performances (Dannenberg, Fuchs, Riedler, & Wiedemann, 2020).

Citizens suffer different fears during the COVID-19 pandemic, but it is noticeable that fears manifest differently in different countries. USA research shows fear from unavoidable contacts in stores: 78% of women would not feel safe while testing cosmetics and around two thirds are reserved to try clothes in dressing room or consult with sales assistants (Salpini, 2020). Customers who do not want (or cannot) leave their homes, are increasingly using services of home delivery offered by joined effort of retailers (e.g. Walgreen or 7-eleven) and delivery company Door Dash (Walk-Morris, 2020), or even with the support of shopping support software (Hero by Shopify) enabling chat of the customers with sales associates in nearby stores (Williams, 2020).

Study from SEE region reports that citizens of Serbia and Croatia are much more concerned about the family (68%) than citizens of Slovenia (44%). On the other hand, Slovenians are most concerned about the economic consequences (69%). BiH citizens have evenly distributed their fears, and despite sociological similarities, even they are more concerned about losing their jobs (14%) than Serbian citizens (10%) (Valicon, n.d.).

These different reactions to the threat will also cause different reactions in consumption. Fear for family can be expected to cause increased spending on stocks especially of medicines and hygiene materials, while fear for workplace is likely to induce savings and abstinence from consumption and investment. Also, it can be noticed that according to the same research, the first good news at the beginning of June caused a significant number of responses (40%) about the intentions for undiminished family investment.

There are different changes in customer behaviour emerged as the consequences of pandemic influences on supply chain. Disloyal moments in shopper's behaviour is one of the most obvious changes: due to the irregular replenishment of stocks, shoppers faced with the dilemma either to buy some new brand or to skip the purchase. Most of them have chosen to try something new, which posed strategic challenges to brand owners and retailers (Cua, 2020). Producers are urged to monitor tightly marketing channels trying to avoid stockouts while retailers are advised to focus on SKUs providing incrementality. It means that retailers further streamline assortment leaving brands with low cannibalization.

The desire and willingness to track orders existed even before the COVID-19, when 70% of respondents stated that the top three reasons for choosing an online shopping place include the ability to track the order, while 56% said it was the main reason for choosing when buying expensive items (RetailDive, 2020). During the pandemic, this tendency only intensified due to excess time, nervousness and limited other shopping opportunities, as well as delays in deliveries.

3.2. Changes in retailers' behaviour

On the macroeconomic level it observed that stock market reacts, with the lag of 5-7 days on the Corona virus mentions in official company reports (Stephany, et al., 2020) with the different influence over the sectors. Survey from Serbia reports that 74% of businesses had lower performance than planned in first half of 2020, pointing out major barriers categorized as operative (short working hours, transport of employees etc.) and supply chain barriers (cost of transport, international sourcing, local sourcing and ever price increase) (CEVES, 2020). According to official estimates recession in Serbian economy is expected in 2020 with, according to Survey I, from April 2020, 60,5% of firms drastically reducing productive capacities and 91% of them expecting problems to meet liabilities (OECD, 2020). Although, according to quoted CEVES report, food sectors were less influenced, production and wholesale suffered more than retail, while tourism and hospitality industry were badly damaged.

Major influence of the pandemic on retail sector is ever growing list of closed stores and business entities. The process is accelerating since retail companies even before COVID-19 pandemic suffered from e-commerce pressure. As the result, in USA, 17 companies filed for bankruptcy in 2019 and something like 9,500 stores were closed. Just in the first six months of 2020, however, 21 USA retail company filed for bankruptcy and some of them directly for liquidation (Retail Dive, 2020). Many of them close stores or even branches like PVH closing 162 Heritage Brand outlets, cutting 450 jobs by mid-2020 (Howland, 2020). Most of them are selling goods like apparel – Neiman Marcus which is closing stores or New York & Co which filed for Chapter 11 (Unglesbee, RTW Retailwinds files for bankruptcy, 2020), or are selling gifts like Paper Stores (Unglesbee, The Paper Store files for Ch. 11, plans to sell itself, 2020) joining to the others like Pierre 1 or Stage Stores who are trying but failing to find buyers for their retail operations.

Retail businesses react in different ways on pandemic challenge. Walmart is introducing self-checkouts stations replacing regular checkouts, not aiming as it could be expected, to reduce face-to-face contacts, but in order to free employees to be on disposal to serve customers (Silverstein, 2020). The others are developing apps for mobile checkouts reducing face to face contact in less than minute check-out time, but still with need for cashier to compare digital receipt from smartphone to bagged goods (Bustos, 2020). Kroger is speeding up checkout time avoiding to return change coins to customers who pay by cash, offering instead to support their Zero Hunger or Zero Waste initiative, or to add the change to their loyalty card (Dumont, 2020).

Pick up of orders emerged as convenient before coronavirus (Heany, 2020), but in one of the reports on grocery retail it was suggested that it is top ranked as the adopted practice planned to be performed for a long period of time – curbside pickup (73% of surveyed retail executives), barriers between cashiers and customers (59%) or cleaning cart after each use (50%) (Agilence & Data Check, 2020). According to the same survey of grocery retailers, top three planned IT investments until 2021 are again curbside pickup (71%), POS systems (43%) and contactless payment (34%). However, new modus operandi spillover quickly through sectors so curbside pickup is emerging in electronic retailing like Best Buy, clothing (Nordstrom), discount stores (Target) and all other sectors of retailing (Ro, 2020), including even shopping malls (Parton, 2020).

When reconsidering retail offer, one of the most visible changes is spotted in the assortment management: retail executives express strong intention to remove slow moving SKUs (Agilence & Data Check, 2020) and CPG producers reduce their offer, like Frito Lay (PepsiCo) reducing 21% of SKUs during Corona pandemic (Doering, 2020). In the same time, after years of innovations and search for new tastes, consumers switched back to the traditional brands and products, causing 24/7 working hours in Kraft Heinz factories (Poinsky, 2020).

Some retailers. Like Walmart, try to persuade shoppers to wear masks (Wells, 2020), joining finally to the already numerous groups of retailers like Kroger, CVS, Best Buy, Kohl's and BJ's Wholesale Club and initiating others (Publix and Target) to do the same. On the contrary, Winn Dixie announced quite late in July 2020 that masks are not necessary in their stores, but switched quickly to mandatory mask policy after fiery public reaction (Thakker, 2020). Pioneer in obligatory mask wearing policy for customers and employees was Costco starting very early May 4th (Murphy, 2020). Many retailers are searching for contactless (no-friction) shopping solutions (Vargas, 2020). RFID is mentioned as the technology promising the most comprehensive no-friction shopping (Dennison, 2020) comparing with video technologies and machine-readable codes (MRC) systems. According to the same report, 40% of retailers surveyed are prompted by COVID-19 to change supply chain systems.

Supply chains, already challenged with climate change, floods and new consumer behaviour (22% increase of meet-free food in 2013-2018 period), finally are about to collapse during COVID-19 pandemic since 46% of procurement professionals admit to make decisions without needed insights (MINTEC, 2020). Solutions capable to integrate great number of global carriers, selling companies and customers in different countries became a “need” in order to enable cross-border shopping and smooth delivery to the client (RetailDive, 2020). Warehouses, confronted with increase in volume turnover but also with uncertainty concerning future, are advised to adjust strategy immediately, to be innovative in re-tooling the operations and to preserve long-term relationships, with partners and experienced professionals (OpenDock, 2020). With more than 2000 parcels shipped each second and 26% customers ready to abandon shopping cart if delivery is not fast enough, supply chain companies are forced to deploy machine learning systems with capability to learn and improve themselves, cutting the costs as well as the time of delivery (Manhatten Associates, 2020).

4. Gaps in Serbian shoppers' behavior identified during COVID-19

In order to analyse the shopping behaviour during COVID-19 pandemics in Serbia, an online survey was conducted in 2020 during August and September. In total, 164 responses were gathered. Women accounted for 69.51% of all respondents, while the average age of respondents was 40.31 years. These numbers roughly adhere to the demographic situation in Serbia. Of all respondents, 96.34% possessed higher education (remaining had secondary education). This distortion is mainly caused by the surveying method and approach, as the academic network was used as the basis for contacting potential respondents and distributing the questionnaire.

4.1. Shopper behaviour in omnichannel environment during COVID-19

One aspect of the conducted empirical research was aimed at understanding shopping behaviour in multiple channel environment and how specific COVID-19 conditions influenced the change in established shopping habits. In this regard, the use of offline and online channels in the observed sample was analysed. The data shows that physical stores remain undisputed go-to channel for the majority of shoppers in Serbia, closely followed by websites and e-stores. This implies that e-commerce is gaining a strong foothold in transitioning markets, such as Serbia. The fact that every third respondent purchases via mobile apps implies very high effects of ICTs influx, both on corporate, as well as individual level. On average, respondents used 2.45 channels for shopping, which indicates significant shift in customer behaviour. These findings are presented in Figure 1.

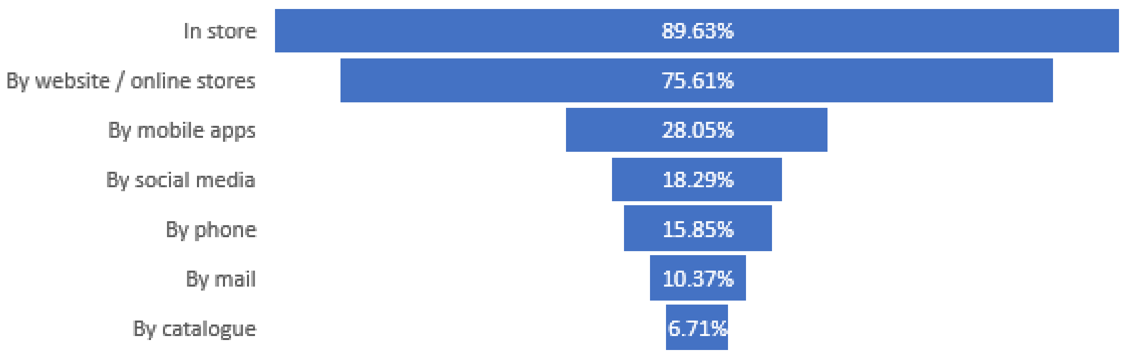

Fig 1: Frequency of specific channel usage in the sample (N=164)

In order to further the understanding of multiple channel shopping behaviour, specific channel combinations were identified and analysed. In total, 36 different shopping patterns, in terms of channels used, were identified. Most common ones are depicted in Table 1.

Within observed patterns, we can distinguish between three specific categories. Shoppers using both offline and online channels are by far the most frequent. As almost two thirds of these shoppers combine offline shopping with two or more online channels, we can conclude that the development of omnichannel retail is present and significant on Serbian market. This can be only increased as more and more shoppers start to widen their channel scopes. Interestingly, more than 10% of all respondents refrain from offline shopping. This interesting and unexpected figure is a reassuring sign for e-businesses and digital startups from Serbia, as pure-click shoppers have become a significant and viable market segment, rather than a specific market niche. However, this conclusion must be tested after official end of COVID-19 crisis, in order to check whether the commitment to online shopping is the result of fear of infection or a long-term commitment.

Table 1: Identified shopping patterns

Channel combinations	**Respondents**	**Share**
Store	27	16.46%
Respondents combining offline channels	27	16.46%
Store + website/e-store	45	27.44%
Store + website/e-store + mobile apps	17	10.37%
Store + website/e-store + social media	8	4.88%
Store + website/e-store + mobile apps + social media	7	4.27%
Store + website/e-store + mail	5	3.05%
Store + website/e-store + mobile apps + phone	5	3.05%
Other offline and online channel combinations	33	20.12%
Respondents combining online and offline channels	*120*	*73.17%*
Website/e-store	6	3.66%
Website/e-store + mobile apps	5	3.05%
Other pure online channel combinations	6	3.66%
Respondents combining online channels	*17*	*10.37%*
Total	*164*	*100.00%*

To comprehend identified shopping patterns, a detailed understanding of shopper profile is required. In this sense, we focused on observing specific socio-demographic and psychological parameters. These are presented in Table 2.

The survey showed that almost half of respondents who shop exclusively online think they are under heightened risk during COVID-19 pandemics, which is significantly higher than in the other two groups. This implies that external conditions have a profound influence on shopping behaviour, especially on specific market segments. This is the case of shoppers with endangered health, who are utilizing the benefits of online shopping to reduce the overall risk, this time during shopping activities. When it comes to strict offline shopping, this shopper segment is notably different compared to two other observed profiles in terms of average respondents' age. This was somewhat expected, as the older members of the population are more internet and technology aversive, thus also less likely to shop online (Lian & Yen, 2013). Interestingly enough, women constitute three quarters of respondents refraining from online purchasing.

Table 2. Shopper profiles regarding their channel choice

Channel combination	**Share of shoppers feeling under heightened risk during COVID-19**	**Share of male shoppers**	**Average age**	**Average household size**
Online channels only	42.9%	35.7%	35.79	3.57
Offline channels only	11.4%	25.7%	45.14	3.17
Offline and online combined	15.7%	31.3%	39.95	3.23

In order to examine how the COVID-19 directly influenced shopping behaviour in terms of channel use, we drew upon aforementioned results and analysed whether specific COVID-19 conditions caused significant changes in our respondents' behaviour (Table 3).

Table 3. Shopping behaviour in relation with the outbreak of COVID-19 pandemics

Behaviour	**Respondents**	**Share**
Share of respondents shopping online	129	78.66%
Share of respondents shopping only offline	15	9.15%
Share of respondents shopping online, but not during COVID-19 pandemics	20	12.20%
Share of respondents who usually do not shop online, but did so during COVID-19 pandemics	0	0.00%

The analysis showed that 12.2% of respondents who used to shop online ceased to do so during COVID-19 pandemics. This unexpected behavioural change can be explained by the emphasized weak points in e-tailers supply chains, which were stressed to the breaking point during the period of march-august 2020. Customers ceased to shop online either because of the logistic issues, such as queuing, long waiting and arrival times, irregular supply causing product shortages, as well as problems with deliveries in certain remote areas. The dependence on other supply chain members, such as couriers, indicates the relatively vulnerable position of e-tailers, especially in developing markets, with lacking infrastructural support. Low capacity of e-tailers' capacity to process and fulfil orders is also a significant issue. It is also to be explored in some further research whether the prevailing online shopping goods in period before COVID-19 (e.g. travel services) which significantly fell on the shopping rank list caused this discontinuation of online shopping.

For small group of traditional shoppers, the outbreak of COVID-19 was not a strong enough driver to change their habits and overcome e-commerce aversiveness, as none of our respondents exhibited such a behaviour. Since this was online survey, it is to be reminded that those respondents obviously do have internet access.

4.2 Generation gaps as a shopping behaviour driver

To complete the picture of sales channel usage is Serbia, channel shopping choices were combined with generation group affiliation. In analysed sample, Baby Boomers accounted for half of the respondents (50.63%), whereas members of the generation X formed 40.63%. Generation Y and generation Z formed 4.38% of the sample, each.

Initially, we focused on how many channels an average representative of the generation uses, to understand the omni channel potential amongst different generation groups (Figure 2). The analysis showed that Baby Boomers are most willing to combine different channels when shopping, whereas the youngest generation group is the most reserved in this sense. This can be explained by the fact that older generation are caught in the intersection between traditional, offline channels and new modern, digital ones. Lingering habits are combined with the tendency to modernize shopping behaviour in certain segments.

Fig 2: Number of channels used per average generation member

On the other hand, members of the generation Z have been under the heavy influence of modern ICTs and consequent digitalization of every aspect of the life. Therefore, they are mentally predetermined towards digital channels and maybe have no such a developed offline channel awareness, like the members from other generation groups.

To understand this phenomenon in deep, a detailed analysis of the usage of each observed channel within the generation group was performed (Figure 3).

Survey results point out that all generation Z members do their shopping via websites and e-stores, far more than any other generation group. On the other hand, they do not shop by phone, nor by catalogue. Very important to notice is that Baby Boomers are most inclined to shopping via mobile apps, compared to all other group. In terms of buying via social media, Baby Boomers and generation Z have the same share. However, the findings in this analysis of generations should be taken with reserve, as the two subsamples (generations Y and Z) are significantly smaller compared to the other two remaining generation groups.

5. What can be done to overcome challenge?

Basic operational measures developed during SARS in 2004, were mainly repeated during COVID-19 pandemic: hygiene preventive measures (isolation, physical distance, frequent disinfection of busy areas) and restrictions in movement imposed by public authorities (limited border crossing, monitoring of isolation directives and new regulations or even suspension of regular medical services) (Siu & Wong, 2004). COVID-19 brought new operative procedures related to public circulation of new hygienic and safety standards, trainings and other forms of regular knowledge update (OECD, 2020).

Economic and financial measures that are usually applied to all economic sectors are financial measures to support liquidity and to deal with labour supply shortages on the level of retail companies and most important economic measure was to support maintaining competition in retail sector (OECD, 2020). Many of measures were combined, so that financial support was directed to support wages in Italy (500 EUR) or in France. In West Balkan region, governments of Serbia and North Macedonia introduced support to wages but with of employer to keep employees for certain period of time after support expires (Horwath, HTL, 2020).

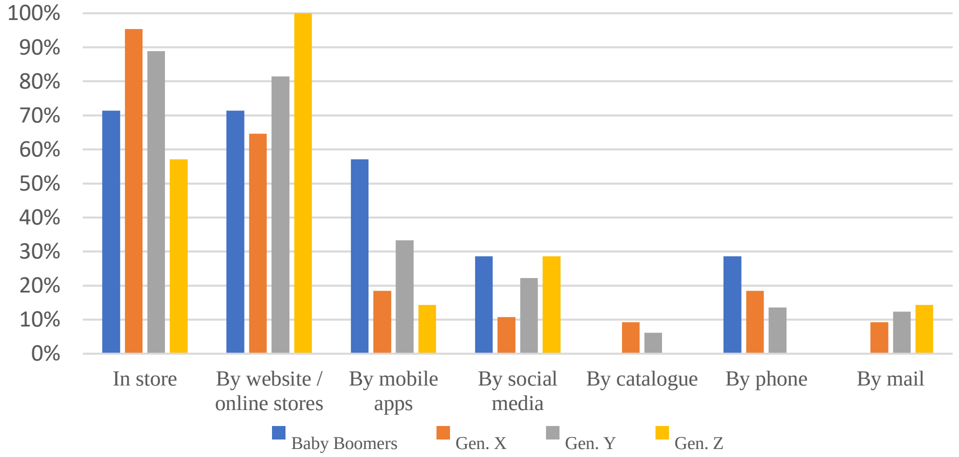

Figure 3. Channel usage share per generation

Global impact measures are promoted by the international organizations like World Health organization and Food and Agriculture Organization warning that millennial goals are closely connected with the non-desirable impacts of COVID-19 (WHO, 2020).

Road to recovery measures in post-COVID period are: VAT rate reduction supporting consumer spending, further rescheduling of obligations (social security, VAT), further utility cost control (rent) and more extensive support for frequent testing of employees (EY, 2020). Other important post-COVID activities of new business model introduction will for sure ask for further digitalization of retail companies (Horwath, HTL, 2020), but also help to (older) citizens to learn how to shop online.

6. Conclusion

A long list of reports from international organisations and consulting companies has already been published in a very short period of time, which indicates the great impact of the COVID-19 pandemic on society and the economy. This research represents a contribution to the overall COVID-19 literature based on the primary online research conducted on the Serbian market. The main conclusions obtained by researching the reactions of Serbian consumers during the pandemic are:

- High percentage of surveyed citizens reported the feeling of fear of shopping during pandemic, and they react predominantly by switching in larger extent to online shopping;
- Shopping in-store is still the most wide-spread way of shopping in Serbia. However, results indicate that vast majority of customers combine channels, implying that in-store shopping is becoming part of complex experience;
- Online shopping was present before COVID-19 and use of this channel was accelerated by pandemic. Use of multiple channels was present and it is amplified in under the influence of COVID-19;
- There is emerging new segment of shoppers who perform only online shopping. There are indications that young population, belonging to Z generation prevails in this segment.

The presented research examined specific external influences on value chains and effects on local supply, revealing that numerous variations were taken, especially in retail, of the same measure, namely the adoption of new health and hygiene standards. The justification of the assumption that customer behaviour in a multichannel environment changed during the COVID-19 pandemic in Serbia has been confirmed, and this assumption can be tested in a more rigorous analysis.

This research had certain limitations. The most important is certainly connected with the online method of data collection. Sample deviations (high share of higher educated) stem from obvious correlation between level of education and use of internet. Also, desire to keep attention of respondents limited number of questions, so some insights are missing, like impact of type of category on online shopping during pandemic. These, and other limitations are actually guideline for further research, which for sure will be needed.

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