



Print ISSN: 1738-3110 / Online ISSN 2093-7717
 JDS website: <http://www.jds.or.kr/>
<http://dx.doi.org/10.15722/jds.19.11.202111.69>

Global Changing of Consumer Behavior to Retail Distribution due to Pandemic of COVID-19: A Systematic Review

Elkana TIMOTIUS¹, Gilbert Sterling OCTAVIUS²

Received: July 08, 2021. Revised: September 06, 2021. Accepted: November 05, 2021.

Abstract

Purpose: Consumers have unique behaviors that are classified based on their interests and considerations before buying. They are predicted will change due to the pandemic of COVID-19. This study provides insights for retailers about the dynamic of consumer behavior before and during the pandemic, including future predictions. **Research design, data and methodology:** The Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) statement was applied in this study. Seven studies that were selected from five databases meet the criteria for cohort and cross-sectional analyses of gender, age, store types, and environmental concerns. **Results:** Consumer's gender and age contribute to consumer behavior change. Both offline and online stores can be integrated as omnichannel rather than substitute each other. Product distribution and consumer budget need to be reevaluated by retailers, while internet security is the most essential factor when developing their online transactions. **Conclusions:** COVID-19 pandemic has a significant impact on changing consumer behavior in most countries. Retailers are encouraged to adapt to the changes by modifying their business model with technology. However, it is still speculated and cannot be generalized due to different cultural and contextual factors. Future studies are always needed to synchronize along with the transition of consumers' behavior.

Keywords: Purchase Intention, Consumer Behavior, Retail Store, Gender, Store Types, Cross-Generational Behavior, Product Distribution

JEL Classification Code: D01, M31, L81

1. Introduction

Without a doubt, 2020 was an extremely volatile year for the economy around the world. Lockdowns, job losses, and supply-chain disruptions were only some of the adversities that resulted from the pandemic of COVID-19. Non-essential stores were closed for a long time before some finally reopened, while some others permanently closed. Essential stores stayed, albeit with limited capacity and health protocol applied.

Retail stores play a very strategic role in distributing manufactured products to the public. At the beginning of the pandemic, there was panic buying, empty store shelves, out of stocks, and a large increase in online sales because of unpredictable customer needs. Harahap, Ferine, Irawati, Nurlaila, and Amanah (2021) found customers who are an economically capable community made sporadic purchases in large quantities for certain products. In this condition, retail stores were the determinant to balance supply and demand through effective supply chain management to

¹ First and Corresponding Author. Assistant Professor, Department of Industrial Engineering, Faculty of Engineering and Computer Science, Universitas Kristen Krida Wacana, Indonesia. Email: elkana.timotius@ukrida.ac.id, mr.elkana@gmail.com

² Second Author. Graduate student. Executive Education Center, Universitas Pelita Harapan, Indonesia. Email: sterlinggilbert613@hotmail.com

© Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

avoid negative phenomena such as illogical selling prices, stock unavailability, and social inequalities.

The sudden global pandemic for more than a year has forced changes to occur much more rapidly. The consumer behavior will not be the same as pre-pandemic, it is rapidly changing and hard to predict (Tyagi & Pabalkar, 2021). Svajdova (2021) believes that companies can better manage the business if they understand how consumers behave and what aspects influence them. Theoretically, many elements have a role in consumer behavior. Global changes in consumer behavior to retail distributions due to the pandemic were indicated based on the role of gender, age, store types, while also considering other related factors in general.

2. Methods

The outbreak of the coronavirus began in early 2020 and, at least until this study is being conducted in mid-2021, the pandemic still occurs. This study compares consumer behavior before and during the pandemic, then predicts the changes after the pandemic. Therefore, a systematic review is one of the appropriate research methods for this objective. It identifies and evaluates various papers related to the research questions, problem to be solved, or a particular phenomenon. Quantitative techniques (meta-analysis) and qualitative techniques (meta-synthesis) were applied to find more comprehensive and balanced facts for making a strategic policy.

To obtain relevant papers, it is necessary to search through several databases. The more databases used, the greater opportunity to get papers that are relevant to the study. Because of this consideration, this study searched for papers through popular databases that excel in publishing multidisciplinary scientific papers, such as EBSCO, Web of Science (WoS), Google Scholar, and Science Direct. They are considered representative and able to increase the chances of getting papers that meet the eligibility criteria. In addition, the PubMed database, which is more focused on biomedical and life science, was used in the papers searching process because this study is related to the outbreak of coronavirus which may affect psychological changes in consumer behavior.

The systematic literature search was conducted on April 1st, 2021 using keywords from Table 1 in five databases, only for literature that was published in 2011-2021 and is limited to English-language publications only.

Table 1: Keywords Used in Each Database

Database	Keywords
EBSCO	"retail consumer behavior", "retail consumer", "retail purchase OR buying", "consumer behavior"
Web of Science	"retail consumer behavior", "retail consumer", "retail purchase OR buying", "consumer behavior"
Google Scholar	retail AND consumer AND behavior, retail AND consumer, retail AND purchase OR buying, consumer AND behavior
PubMed	"retail consumer behavior", "retail consumer", "retail purchase OR buying", "consumer behavior"
Science Direct	"retail consumer behavior", "retail consumer", "retail purchase OR buying", "consumer behavior"

The Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) statement was applied to conduct the systematic review on retail consumer behavior. It includes cohort and cross-sectional analyses of variables such as gender, age, store types, and environmental concerns. The exclusion criteria are studies that are articles in the form of books, unpublished works, and conference papers.

3. Results and Discussion

In the identification stage, this study obtained a total of 16,555 papers that have related keywords from five databases. Having checked the title and abstract, there are 2,031 eligible papers. However, 1,002 papers were listed in more than one database so only 1,029 papers were valid. Unfortunately, some papers had to be ignored because not written in English (174 papers), not a research paper (186 papers), consumer behavior was an antecedent variable (365 papers), only investigated a retail inventory (116 papers), and have irrelevant topics with the objective of this study (181 papers). Having removed duplicates and checked in the previous stages, seven papers met the inclusion and exclusion requirements of this study. The PRISMA framework for this study is shown in Figure 1.

The studies by Ainsworth and Foster (2017), Sychov and Bakaev (2020), Herhausen, Binder, Schoegel, and Herrmann (2015), Shamim, Ahmad, and Alam (2021), Pascual-Miguel, Agudo-Peregrina and Chaparro-Peláez (2015), Lissitsa and Kol (2016), and Wu, Zhou, and Song (2015) are eligible studies to be assessed qualitatively. Table 2 summarizes their studies.

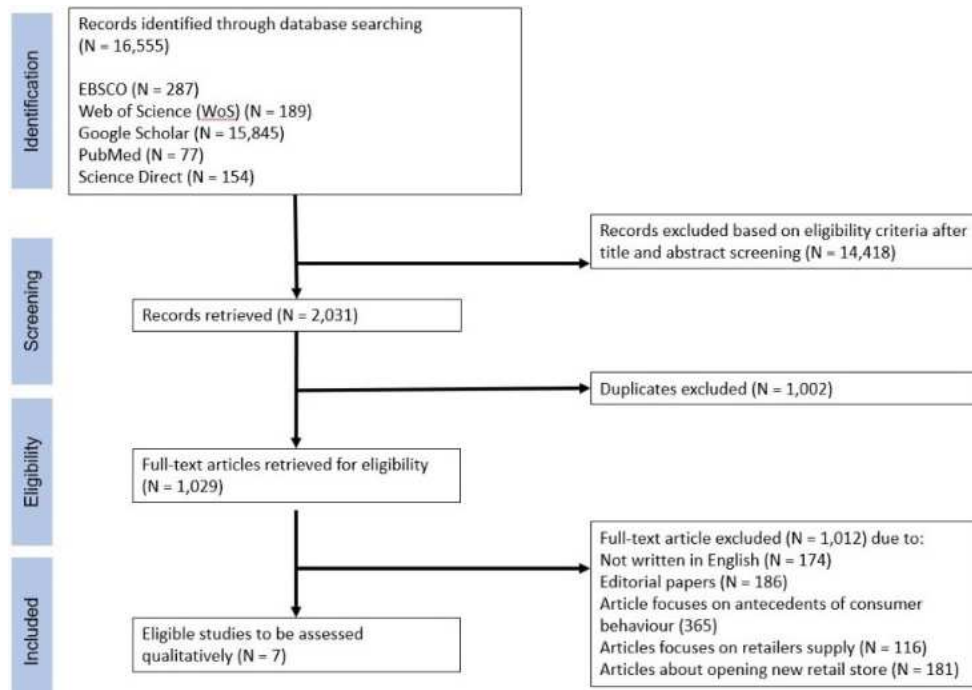


Figure 1: PRISMA Flowchart of Study Selection

Table 2: Summary of Baseline Characteristics and Outcomes of Included Studies

Authors	Type of Study	Study Location	Age Group (mean $\pm$ SD)	Sample Size		Outcomes Studied		Findings
				Total	M/F (%)	Questionnaire used	Component assessed	
Ainsworth and Foster (2017)	Cross-sectional Study	New Zealand	25 $\pm$ 19.65	250	49.6/50.4	1. Consumer comfort scale 2. Hedonic and utilitarian motivation scales 3. Likert type general attitude items	1. Atmospheric elements contribution to consumer comfort 2. The impact of comfort on shopping values 3. The impact of environment familiarity on consumer comfort 4. The functionality of consumer comfort	1. Positive attitudes of the layout have a significant influence on comfort 2. Familiarity had a positive effect on comfort 3. Familiarity had a positive effect on utilitarian value 4. Comfort positively influences the utilitarian value and hedonic value.
Sychov and Bakaev (2020)	Cross-sectional Study	Russia, but samples obtained internationally	N/A	1. Online Shopper's Intentions dataset = 12,330 2. Linear Regression E-commerce dataset = 500	N/A	1. Yearly amount spent 2. Time on the website 3. Time duration in administrative, informational, and product-related page 4. Purchasing decision	1. Effect of time spent on the mobile app on sales 2. Time spent on the website on sales	1. Time spent on the mobile app has a moderate effect on sales. 2. Using logistic regression on the online shopper's intentions dataset, F1-score was found to be low. 3. Time on the app is found to be considerably higher in comparison to time on the website, albeit not significant.

Authors	Type of Study	Study Location	Age Group (mean $\pm$ SD)	Sample Size		Outcomes Studied		Findings
				Total	M/F (%)	Questionnaire used	Component assessed	
								4. Time on the app is more likely to result in a purchase than time spent on a website.
Herhausen et al. (2015)	Cross-sectional Study	Germany	43.92 $\pm$ N/A	107	50/50	A developed questionnaire assessing consumer's satisfaction, perceived risks, purchase intention, search intention, and willingness to pay.	1. Satisfaction 2. Perceived risks 3. Purchase intention 4. Search intention 5. Willingness to Pay (WTP)	1. Offline-Online Integration has a positive effect on perceived service quality and a negative effect on perceived risk. 2. An increase in perceived service quality increases overall search intention, overall purchase intention, and overall WTP.
Shamim et al. (2021)	Cross-sectional Study	India	18 years and older $\pm$ N/A	212	66/34	1. Consumer's demographics 2. Rank order scale for precautionary steps taken to stay safe during grocery shopping. 3. Grocery shopping behavior and adoption of healthier foods since the COVID-19 pandemic	1. Consumer safety practices 2. Consumer concerns about grocery shopping 3. Consumer grocery shopping behavior 4. Consumer adoption of healthier food	1. Females were ahead compared to males in pursuing health safety practices during grocery shopping 2. The most important concern about grocery shopping was fear of unavailability of stocks and fear of getting infected by grocery storekeepers. 3. People had reduced their frequency of grocery shopping and tried to shop quickly and efficiently meanwhile bought more packaged foods
Pascual-Miguel et al. (2015)	Cross-sectional study	Spain	N/A	817	62.2/37.8	46 items adapted from UTAUT, UTAUT2, and other e-commerce adoption studies: 1. effort expectancy 2. performance expectancy 3. social influence 4. facilitating conditions 5. hedonic motivations 6. product risk 7. perceived risk 8. perceived trust 9. purchase intention	1. Factors influencing intention to purchase based on gender 2. Factors influencing the intention to purchase digital goods 3. Factors influencing the intention to purchase non-digital goods	1. Facilitating conditions, performance expectancy, perceived trust, and perceived risk are the four significant predictors of male shoppers' purchase intention. 2. Perceived risk, effort expectancy, performance expectancy, social influence, and facilitating conditions predict female shoppers' purchase intention. 3. Hedonic factors have a positive influence on male shoppers' intention to purchase digital goods. Perceived risk exerts a negative influence

Authors	Type of Study	Study Location	Age Group (mean $\pm$ SD)	Sample Size		Outcomes Studied		Findings
				Total	M/F (%)	Questionnaire used	Component assessed	
								on purchase intention. For females, hedonic motivations and perceived product risk significantly influence purchase intention. 4. The main predictor of non-digital goods shopping by male shoppers is performance expectancy. For females, performance expectancy and perceived risk are purchase intention's stronger predictors.
Lissitsa and Kol (2016)	Cross-sectional study	Israel	20 and older	75,523	N/A	CBS questionnaire covering: 1. socio-demographic characteristics of household members 2. employment, economic situations, health, skills 3. internet access 4. the frequency of internet use for purchasing goods	1. The number of internet access over time 2. Purchasing products and services online over time 3. Generations X and Y adoption of the internet 4. The purchasing behavior of each generation	1. In both generations, males were more likely than females to purchase online. Males are more likely to purchase electronics online 2. Among Gen X, the probability of online shopping decreases with age, while among Gen Y, the probability of online shopping increases with age.
Wu et al. (2015)	Cross-sectional study	China	N/A	4,201	N/A	Questionnaires covering: 1. demographic measures 2. attitude towards environmental protection and resource conservation 3. the influence factors of sustainable consumption behavior 4. the lifestyle of sustainable consumption and resource	1. The opinion of resources conservation and environment protection 2. The attitude to resource conservation 3. The attitude to environment protection 4. The daily performance of environment protection	1. Sustainable consumer behavior is affected by variables including two-type attitude, two-type knowledge, and skills, life values, age, gender, etc. 2. There exists a significant correlation between two-type knowledge and skills and two-type attitude. 3. The relationship between two-type attitudes and sustainable consumer behavior is regulated by contextual factors such as social norms and so on. 4. The individual's sustainable consumption behaviors are greatly diverse owing to various demographic factors

3.1. Gender

Gender plays a major role in determining how customers behave during the buying process. Several studies commonly found that females tend to be more impulsive, flexible, and emotional-driven when buying products (Nayebzadeh & Jalaly, 2014; Gandhi, Vajpayee, & Gautam, 2015; Rahmiati, 2016). Meanwhile, male consumers are more straight-forward and utilitarian-motivated (Ling & Yazdanifard, 2014) but their buying value is more than females (Melović, Šehović, Karadžić, Dabić, & Ćirović, 2021).

Chen, Yan, Fan, and Gordon (2015) observed that females purchase more frequently than males but tend to target lower prices. They are more price-sensitive and show a high level of hedonic motivation (Koch, Frommeyer, & Schewe, 2020). Female consumers often compare goods and undergo detailed research before purchasing the desired item, but are more likely to repurchase (Bae & Lee, 2011).

Males are more time-saving oriented so they perceive shopping as a regular activity (Tifferet & Herstein, 2012). On contrary, females enjoy adventure, sociality, fashion, and value (Ling & Yazdanifard, 2014), so their shopping habits are accompanied by mates or spouses (Savaşkan & Çati, 2021). According to Audrain-Pontevia and Vanhuele (2016), men and women are similarly loyal to a retail store but men are more loyal to the retail chainstore. Men make the majority of decisions for themselves, while women make the majority of decisions for their significant other, children, and even parents (Kraft & Weber, 2012).

Although everyone is interested in receiving lower prices, females more tend to avoid shipping costs and concern with refundable policy, especially when buying online (Valentine & Powers, 2013). Females also utilize more discounts, rewards, coupons, and loyalty cards (Kraljević & Filipović, 2017). They consider store attributes (Jackson, Stoel, & Brantley, 2011) and environmental aesthetics (Mohan, Sivakumaran, & Sharma, 2013; Kim & Kim, 2012) which able increase their impulsive purchase behavior.

3.2. Store Types

In the digital era, consumers perceive internet shopping as many advantages of being able to buy anywhere and at any moment, more convenient, price competitive, and offer superior items (Veronika, 2013). Personal information protection, confidentiality, missing deliveries, and low product quality are all risks and problems associated with online shopping (Jan, 2012). Customers choose smartphone apps for online shopping over websites because they are easier to use, find, and navigate (Sychoy & Bakaev, 2020).

Online shopping is also affected by the COVID-19 pandemic situation (Memon, Dehraj, Mallah, Solangi, & Dars, 2021). Bhatti, Akram, Basit, Khan, Naqvi, and Bilal (2020) found that e-retailers were forced to provide goods that consumers typically purchased in superstores before the pandemic. Meanwhile, consumer behavior was shifted towards depending more on e-payment methods during lockdown and quarantine conditions (Hashem, 2020).

The changes due to the pandemic occur so rapidly. Milaković (2021) found that 83.5% of consumers were not adaptable to online shopping, but they are motivated to get the best bargain so they do comparison-shop by visiting several stores by internet searching (Aw, Kamal, Ng, & Ho, 2021). It means purchases may not only be made at the retailer's online site but also at competitors' sites (Rapp, Baker, Bachrach, Ogilvie, & Beitelspacher, 2015). Although the majority did not plan to continue to buy online after the pandemic, but when consumers engage with merchandise in a store, they immediately go online to make their final purchase decision (Cruz & McKenna, 2011; Rapp et al., 2015).

E-commerce's effect on shopping does not simply imply that traditional stores are falling behind. Many brick-and-mortar stores will be compelled to pursue an omnichannel strategy and accelerate their technology adoption due to this. In these tough times, Nithya and Chirputkar (2020) persuade retail stores to switch from traditional selling techniques by creating an omnichannel experience that creates favorable customer behavior and increases customer loyalty. Online-offline channel integration would bring about synergies rather than cannibalization, thus positively supporting each other (Herhausen et al., 2015). Lorenzo-Romero, Andrés-Martínez, and Mondéjar-Jiménez (2020) and Wiederhold (2021) believe that nowadays, retail stores must come to consumers in the form of having a digital presence, such as online shopping, omnichannel delivery, and consumer support, rather than getting consumers coming to them, including home-bound services. Moreover, Vinerean (2020) advised retailers to follow purchase budgetary limitations of the consumer even after the COVID-19 pandemic subsides.

An online survey conducted by Koch et al. (2020) during the COVID-19 pandemic recorded the most attractive online shopping things for consumers because of exclusive products that are not available in a physical store, all-time accessibility, money and time efficiency, the versatility of the product, customization of products and services, and ease of use compared to traditional shopping. The quality of content on social media and users' interactions have a significantly positive impact on brand awareness and purchase intentions (Dabbous & Barakat, 2020). Regretfully, Brandtner, Darbanian, Falatouri, and Udokwu (2021) noticed a general and significant decrease in retail consumer satisfaction as a result of the pandemic, which will reduce

the repurchase intention (Milaković, 2021). Therefore, Dirgantari, Hidayat, Mahphoth, and Nugraheni (2020) convinced retailers to ensure the quality of the system, information, and service that have proven to affect consumer satisfaction, particularly during pandemics.

3.3. Cross-Generational Behavior

Nowadays, Generation X and Generation Y are the two generations with the most impactful power on the market with their financial peak. Generation X, born between 1961 and 1980, grew up during the emergence of technology into their daily lives (Ferdoko, Bačik, Oleárová, & Rigelský, 2020). Generation Y or Millennials, born between 1981 and 1995, were introduced to the digital world at a young age. They are first-generation digital natives who have never learned anything else (Moreno, Lafuente, Carreón, & Moreno, 2017).

Generation Y is considered more consumptive and more prone to consume for status (Eastman & Liu, 2012) as a means of lifestyle, regardless of their income (O'Cass & Siahtiri, 2013). Online shopping for them, according to

Melović et al. (2021), has beneficial compared to traditional shops but very risky, so they decide to buy online mostly for inexpensive products. They have less brand loyalty (Ordun, 2015) and prefer to seek out customized or personalized products (Kraljević & Filipović, 2017). However, a study by Gurău (2012) revealed that married, both Generation X and Generation Y, will be more loyal to a certain brand, especially high-value products and continuous services, than single.

3.4. COVID-19 Pandemic Effects

The global COVID-19 pandemic had a significant impact on cultures and economies worldwide. Consequently, customers' daily lives, as well as how companies and consumers interact, have been changed (Donthu & Gustafsson, 2020; Pantano, Pizzi, Scarpi, & Dennis, 2020). Table 3 shows the empirical conditions of retail consumer behavior during the pandemic in several countries. It convinces that the changes happened globally and indicates the similarities.

Table 3: Retail Consumer Behavior during the Pandemic in Several Countries

Country	Researcher(s)	Empirical Condition
Canada	Sayyida, Hartini, Gunawan, and Husin (2021)	Despite the pandemic, Canadians prefer to shop in physical stores after gathering digital information (webrooming). However, the number of online purchases has increased as well.
Croatia	Herceg (2021)	In Croatia, consumers admit to shopping online during the pandemic because of restriction of movement (60%), saving time (50%), and fear of the coronavirus (32%).
France	Sayyida et al. (2021)	In France, consumers prefer to use digital media to find information about products and services, and they place more trust in online consumer reviews.
Germany	Sayyida et al. (2021)	The pandemic has shifted consumer behavior in Germany to the digital world although still tends to shop at physical stores.
India	Khaled, Alabsy, Al-Homaidi, and Saeed (2020)	The pandemic in India has an impact on customer and brand protection, as well as the use of technology. Customers are more concerned about these issues when they shop in retail stores, whether online or in-store.
Indonesia	Sunarjo, Nurhayati, and Muhandono (2021)	The relationship between user characteristics and technology adoption behavior reveals changes in the behavior of Indonesian customers during the pandemic.
Kosovo	Prebreza and Shala (2021)	The empirical research on the market in the Republic of Kosovo found convenience, pricing and quality, website design, saving time, security and socialization affect consumers' internet shopping behavior during the pandemic.
Romania	Baicu, Gârdan, Gârdan, and Epuran (2020)	The pandemic in Romania affects consumers' lifestyle to the online transaction, which is mediated by internet security.
Saudi Arabia	Alessa, Alotaibie, Elmoez, and Alhamad (2021)	Although the pandemic negatively impacted business productivity and profits in Saudi Arabian, female entrepreneurs do not perceive a change in consumer behavior.
Spain	Romeo-Arroyo, Mora and Vázquez-Araújo (2020)	People's eating habits in Spain during quarantine time change towards higher frequencies and snacking more between meals.
United Kingdom	Sayyida et al. (2021)	Online shopping increased significantly due to pandemics in the UK. However, consumers still need to ensure products directly at physical stores. They search product information on digital media to reduce the duration of face-to-face when making purchases physically.
USA	Ahmed, Streimikiene, Rolle, and Duc (2020)	The pandemic is a significant moderating factor influencing the impulse buying behavior of US citizens, which is mediated by social media fake news.
Vietnam	Pham, Thi and Le (2020)	Pandemic in Vietnam moderated consumer benefit awareness, which encourages customers to shop online. However, the sympathy of society may have been a factor in customers' hesitation to shop online.

Grashuis, Skevas, and Segovia (2020) found that there has been a significant shift from 3~4% online grocery spending before the pandemic to 10~15% during the pandemic. It was led by a rapid digital transformation driven by consumers (Abbu, Fleischmann, & Gopalakrishna, 2021). Sharma and Jhamb (2020) found that 46% of users admitted that social networks are important for information sharing and making product choices. According to Wang, Xu, Schwartz, Ghosh, and Chen (2020), consumers now have higher expectations for in-store safety, they reduced the frequency of going into the store while spending more per visit with shorter shopping duration. Not surprisingly, Mehta, Saxena, and Purohit (2020) advise retailers to reconsider a spiritual approach in understanding consumer behavior by keeping drivers such as economies of consumption, saving, and health in mind.

Studies from Addo, Jiaming, Kulbo, and Liangqiang (2020), Kim (2020), and Wiranata and Hananto (2020) reported that in the context of the fear-inducing COVID-19 phenomenon, impulse buying behavior had increased significantly across the world. Medicines, drugstores, and food are increasingly bought in brick-and-mortar stores (Eger, Komárková, Egerová, & Mičík, 2021), meanwhile, sporting goods and hobbies-related product purchase frequencies are getting lower along with electronics and household equipment. According to Shamim et al. (2021), consumers prefer packaged items and tend to avoid unpackaged items, quick and efficient shopping, and shifting towards online shopping and utilizing digital payments.

3.5. Sustainable Behavior

Sheth (2020) found that new habits will emerge as a result of the blurring of work, leisure, and education boundaries during the pandemic. According to Gordon-Wilson (2021), there is increased awareness of environmental hazards and the responsibility that society holds to saving the planet so it had changed their shopping behavior in the pandemic. Bhutto, Zeng, Soomro, and Khan (2019) argue that sustainable products are preferred by some consumers due to both considering social and emotional factors despite the higher prices. On the other hand, Vega-Zamora, Torres-Ruiz, and Parras-Rosa (2019) found that consumers lack trust in and knowledge about sustainable products. In doubtful consumers, proper and trustworthy communication should be the primary concern for retail marketers (Adialita & Sigarlaki, 2021). Sustainable marketing practices are recommended to build a company's brand image (Jung, Choi, & Oh, 2020).

4. Conclusions

Consumer behavior changes dynamically along with technological developments, shifting needs, and consumer spending patterns. This was shown when customers have to stay at home during the pandemic, they become accustomed to using technology by shopping online. In addition to basic needs, customers also buy several products to support their activities while at home. Consumers who usually buy goods for monthly needs shift to daily spending with a smaller basket value but more frequently. Because this pandemic is happening globally, these changes also have the potential to occur globally. These changes indicate consumer behavior in the new normal era.

Gender differences arise because of biological that impact how consumers behave in buying a product. While males are utilitarian-motivated, less critical in buying products, and view shopping as a task, females view shopping as a relaxing and adventurous activity. Therefore, females are more impulsive, flexible, and emotionally driven. This foundation of consumer behavior results in males buying goods at higher prices since they do not compare to other products as females did during the buying process. Consequently, females tend to process slowly by surfing and comparing products before finalizing their purchase as leisure, with the additional advantage of finding lower prices. Considering this motive, a shopping environment such as background music, cleanliness, and comfortable facilities is critical when the retailer's primary consumers are females. Moreover, due to their behavioral window-shopping, females are more likely to buy goods that are not in their primary intention to buy and results in a higher frequency of shopping. The intention to repurchase is higher in females who have trust propensity to a product when compared to males; this can be linked to females' previous more intensive search for information on a product before buying that made them perceived what they bought was the most suitable product, and therefore tend to have greater brand loyalty.

Both online and offline way of shopping has their benefits. While online retails are convenient for one-click-away accessibility and competitive price, they are prone to fraud, delivery errors, and privacy issues. On the other hand, Brick-and-mortar stores are advantageous, particularly in showing the authentic product in front of the consumers, gaining trust quickly from consumers, but prone to difficulty in reaching consumers, since they need to get consumers to come physically to make a purchase. Nowadays, consumers are more sophisticated; they put many considerations before buying a product, especially when they are of high value.

Generation X and Generation Y are now comprising most of the market population. Most of them are utilizing online shopping, especially those occupied with work and

have little time to go to offline stores. Generation Y's consumptive behavior may result from higher technology fluency than older generations and further push retailers to get their presence online. Generation X, who is now in the family-providing stage, tends to be more conscious about spending on risky products, and one way to tackle this is to give precise and complete product information.

In summary, to get consumers' interest, retailers must consider combining offline and online stores, with social media presence being ever more critical to introduce brands, build trust, and gather attention to their products. Retailers are advised to increase utilization of goods and services via digital channels without ignoring data security and privacy which still more important than convenience. The Theory of Planned Behavior can be implemented in marketing strategies for sustainable products while also paying attention to consumers' cost-saving considerations and sustainable products.

The current situation of the COVID-19 pandemic drastically changes consumers' behavior in a way nobody has predicted. Panic buying and stockpiling can be observed in many countries after the declaration of the global pandemic. Several sectors experienced an increase in demands, such as food supply, medicines, and drugstore products. Meanwhile, products of tertiary needs demands are decreasing. Offline stores are often only visited for planned buying. To counter the decreased interests of tertiary needs, an online presence can be deployed since people have more spare time to surf the internet and do online purchasing. The raised expectations for increased in-store safety must be considered in offline stores to satisfy consumers' demands, such as cleanliness, temperature checking, and limiting the number of visitors at a time.

This systematic review may provide new scope for retailers and marketers in understanding the various and dynamic ways of consumer behavior, including the pattern of retail distribution. However, consumer behavior in a retail store cannot be generalized due to different cultural and contextual factors. Retail distribution may be adjusted refer to local characteristics. Therefore, future studies are always needed to synchronize along with the transition of consumers' behavior.

References

- Abbu, H. R., Fleischmann, D., & Gopalakrishna, P. (2021). The digital transformation of the grocery business-driven by consumers, powered by technology, and accelerated by the COVID-19 Pandemic. *Advances in Intelligent Systems and Computing*, 1367(1), 1-12. https://doi.org/10.1007/978-3-030-72660-7_32
- Addo, P. C., Jiaming, F., Kulbo, N. B., & Liangqiang, L. (2020). COVID-19: Fear appeal favoring purchase behavior towards personal protective equipment. *The Service Industries Journal*, 40(7-8), 471-490. <https://doi.org/10.1080/02642069.2020.1751823>
- Adialita, T., & Sigarlaki, F. F. (2021). Consumers' green purchase behavior in West Java, Indonesia: Applying the Theory of Planned Behavior. *International Conference on Science, Technology, and Environment 2020*, 361-370. <https://doi.org/10.2139/ssrn.3803703>
- Ahmed, R. R., Streimikiene, D., Rolle, J., & Duc, P. A. (2020). The COVID-19 pandemic and the antecedents for the impulse buying behavior of US citizens. *Journal of Competitiveness*, 12(3), 5-27. <https://doi.org/10.7441/joc.2020.03.01>
- Ainsworth, J., & Foster, J. (2017). Comfort in brick and mortar shopping experiences: Examining antecedents and consequences of comfortable retail experiences. *Journal of Retailing and Consumer Services*, 35(1), 27-35. <https://doi.org/10.1016/j.jretconser.2016.11.005>
- Alessa, A. A., Alotaibie, T. M., Elmoez, Z., & Alhamad, H. E. (2021). Impact of COVID-19 on entrepreneurship and consumer behaviour: A case study in Saudi Arabia. *Journal of Asian Finance, Economics and Business*, 8(5), 201-210. <https://doi.org/10.13106/jafeb.2021.vol8.no5.0201>
- Audrain-Pontevia, A., & Vanhuele, M. (2016). Where do customer loyalties really lie, and why? Gender differences in store loyalty. *International Journal of Retail and Distribution Management*, 44(8), 799-813. <https://doi.org/10.1108/IJRDM-01-2016-0002>
- Aw, E. C., Kamal, B., Ng, S. I., & Ho, J. A. (2021). Searching online and buying offline: Understanding the role of channel, consumer, and product-related factors in determining webrooming intention. *Journal of Retailing and Consumer Services*, 58(1). <https://doi.org/10.1016/j.jretconser.2020.102328>
- Bae, S., & Lee, T. (2011). Product type and consumers' perception of online consumer reviews. *Electronic Markets*, 21(4), 255-266. <https://doi.org/10.1007/s12525-011-0072-0>
- Baicu, C. G., Gărdan, I. P., Gărdan, D. A., & Epuran, G. (2020). The impact of COVID-19 on consumer behavior in retail banking: Evidence from Romania. *Management & Marketing*, 15(Special Issue), 534-556. <https://doi.org/10.2478/mmcks-2020-0031>
- Bhatti, A., Akram, H., Basit, H. M., Khan, A. U., Naqvi, S. M. R., & Bilal, M. (2020). E-commerce trends during COVID-19 pandemic. *International Journal of Future Generation Communication and Networking*, 13(2), 1449-1452.
- Bhutto, M. Y., Zeng, F., Soomro, Y. A., & Khan, M. A. (2019). Young Chinese consumer decision making in buying green products: An application of Theory of Planned Behavior with gender and price transparency. *Pakistan Journal of Commerce and Social Sciences*, 13(3), 599-619.
- Brandtner, P., Darbanian, F., Falatouri, T., & Udokwu, C. (2021). Impact of COVID-19 on the customer end of retail supply chains: A big data analysis of consumer satisfaction. *Sustainability*, 13(1), 1-18. <https://doi.org/10.3390/su13031464>
- Chen, Y., Yan, X., Fan, W., & Gordon, M. D. (2015). The joint moderating role of trust propensity and gender on consumers' online shopping behavior. *Computers in Human Behavior*, 43(1), 272-283. <https://doi.org/10.1016/j.chb.2014.10.020>

- Cruz, B., & McKenna, J. (2011). *How smartphones are changing the retail shopping experience?* Cadwick Martin Bailey.
- Dabbous, A., & Barakat, K. A. (2020). Bridging the online offline gap: Assessing the impact of brands' social network content quality on brand awareness and purchase intention. *Journal of Retailing and Consumer Services*, 53(1). <https://doi.org/10.1016/j.jretconser.2019.101966>
- Dirgantari, P. D., Hidayat, Y. M., Mahphoth, M. H., & Nugraheni, R. (2020). Level of use and satisfaction of e-commerce customers in Covid-19 pandemic period: An Information System Success Model (ISSM) approach. *Indonesian Journal of Science & Technology*, 5(2), 261-270. <https://doi.org/10.17509/ijost.v5i2.24617>
- Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, 117(1), 284-289. <https://doi.org/10.1016/j.jbusres.2020.06.008>
- Eastman, J. K., & Liu, J. (2012). The impact of generational cohorts on status consumption: An exploratory look at generational cohort and demographics on status consumption. *Journal of Consumer Marketing*, 29(2), 93-102. <https://doi.org/10.1108/07363761211206348>
- Eger, L., Komárková, L., Egerová, D., & Mičík, M. (2021). The effect of COVID-19 on consumer shopping behavior: generational cohort perspective. *Journal of Retailing and Consumer Services*, 61(1). <https://doi.org/10.1016/j.jretconser.2021.102542>
- Ferdoko, R., Bačík, R., Oleárová, M., & Rigelský, M. (2020). ROPO effect in gender-generational characteristics. *11th Global Conference on Business and Social Sciences*. [https://doi.org/10.35609/gcbssproceeding.2020.11\(43\)](https://doi.org/10.35609/gcbssproceeding.2020.11(43))
- Gandhi, A., Vajpayee, A., & Gautam, D. (2015). A study of impulse buying behavior and factors influencing it with reference to beverage products in retail stores. *The International Journal of Management*, 8(1), 1-17. <https://doi.org/10.53739/samvad%2F2015%2Fv8%2F98282>
- Gordon-Wilson, S. (2021). Consumption practices during the COVID-19 crisis. *International Journal of Consumer Studies*, 2021(00), 1-14. <https://doi.org/10.1111/ijcs.12701>
- Grashuis, J., Skevas, T., & Segovia, M. S. (2020). Grocery shopping preferences during the COVID-19 pandemic. *Sustainability*, 12(13), 53-69. <https://doi.org/10.3390/su12135369>
- Gurău, C. (2012). A life stage analysis of consumer loyalty profile: Comparing generation X and millennial consumers. *Journal of Consumer Marketing*, 29(2), 103-113. <https://doi.org/10.1108/07363761211206357>
- Harahap, D. A., Ferine, K. F., Irawati, N., Nurlaila, & Amanah, D. (2021). Emerging advances in e-commerce: Panic and impulse buying during the Covid-19 pandemic. *Systematic Reviews in Pharmacy*, 12(3), 224-230.
- Hashem, T. N. (2020). Examining the influence of COVID 19 pandemic in changing customers' orientation towards e-shopping. *Modern Applied Science*, 14(8), 59-76. <https://doi.org/10.5539/mas.v14n8p59>
- Herceg, K. T. (2021). Impact of COVID-19 pandemic on online consumer behavior in Croatia. *International Journal of Marketing Science*, 4(1), 131-140.
- Herhausen, D., Binder, J., Schoegel, M., & Herrmann, A. (2015). Integrating bricks with clicks: Retailer-level and channel-level outcomes of online-offline channel integration. *Journal of Retailing*, 91(2), 309-325. <https://doi.org/10.1016/j.jretai.2014.12.009>
- Jackson, V., Stoel, L., & Brantley, A. (2011). Mall attributes and shopping value: Differences by gender and generational cohort. *Journal of Retailing and Consumer Services*, 18(1), 1-9. <https://doi.org/10.1016/j.jretconser.2010.08.002>
- Jan, P. (2012). Security and trustworthiness as drivers of e-shop competitiveness: Opinions of young customers. *Journal of Competitiveness*, 4(1), 83-89. <https://doi.org/10.7441/joc.2012.01.07>
- Jung, H. J., Choi, Y. J., & Oh, K. W. (2020). Influencing factors of Chinese consumers' purchase intention to sustainable apparel products: Exploring consumer' attitude-behavioral intention gap. *Sustainability*, 12(5), 1-14. <https://doi.org/10.3390/su12051770>
- Khaled, A. S. D., Alabsy, N. M., Al-Homaidi, E. A., & Saeed, A. M. M. (2020). The impact of the COVID-19 pandemic on retailer performance: Empirical evidence from India. *Innovative Marketing*, 16(4), 129-138. [https://doi.org/10.21511/im.16\(4\).2020.11](https://doi.org/10.21511/im.16(4).2020.11)
- Kim, B. (2020). Effects of social grooming on incivility in COVID-19. *Cyberpsychology, Behavior, and Social Networking*, 23(8), 519-525. <https://doi.org/10.1089/cyber.2020.0201>
- Kim, J., & Kim, J. (2012). Human factors in retail environments: A review. *International Journal of Retail & Distribution Management*, 40(11), 818-841. <https://doi.org/10.1108/09590551211267593>
- Koch, J., Frommeyer, B., & Schewe, G. (2020). Online shopping motives during the COVID-19 pandemic: Lessons from the crisis. *Sustainability*, 12(24), 1-20. <https://doi.org/10.3390/su122410247>
- Kraft, H., & Weber, J. M. (2012). A look at gender differences and marketing implications. *International Journal of Business and Social Science*, 3(21), 247-253.
- Kraljević, R., & Filipović, Z. (2017). Gender differences and consumer behavior of millennials. *Acta Economica Et Turistica*, 3(1), 5-13.
- Ling, L. P., & Yazdanifard, R. (2014). Does gender play a role in online consumer behavior? *Global Journal of Management and Business Research*, 14(7), 49-56.
- Lissitsa, S., & Kol, O. (2016). Generation X vs. Generation Y: A decade of online shopping. *Journal of Retailing and Consumer Services*, 31(1), 304-312. <https://doi.org/10.1016/j.jretconser.2016.04.015>
- Lorenzo-Romero, C., Andrés-Martínez, M., & Mondéjar-Jiménez, J. (2020). Omnichannel in the fashion industry: A qualitative analysis from a supply-side perspective. *Heliyon*, 6(6), 1-10. <https://doi.org/10.1016/j.heliyon.2020.e04198>
- Mehta, S., Saxena, T., & Purohit, N. (2020). The new consumer behaviour paradigm amid COVID-19: Permanent or transient? *Journal of Health Management*, 22(2), 291-301. <https://doi.org/10.1177/0972063420940834>
- Melović, B., Šehović, D., Karadžić, V., Dabić, M., & Čirović, D. (2021). Determinants of millennials' behavior in online shopping: Implications on consumers' satisfaction and e-business development. *Technology in Society*, 65(1). <https://doi.org/10.1016/j.techsoc.2021.101561>

- Memon, S., Dehraj, F. U. H., Mallah, G. A., Solangi, A. B., & Dars, A. M. (2021). The impact of attitude and consumer buying behavior towards online purchasing in Pakistan after Covid-19: A case study of SBBU, Campus Naushahro Feroze. *Elementary Education Online*, 20(5), 3855-3860. <https://doi.org/10.17051/ilkonline.2021.05.422>
- Milaković, I. K. (2021). Purchase experience during the COVID-19 pandemic and social cognitive theory: The relevance of consumer vulnerability, resilience, and adaptability for purchase satisfaction and repurchase. *International Journal of Consumer Studies*, 2021(00), 1-18. <https://doi.org/10.1111/ijcs.12672>
- Mohan, G., Sivakumaran, B., & Sharma, P. (2013). Impact of store environment on impulse buying behavior. *European Journal of Marketing*, 47(10), 1-33. <https://doi.org/10.1108/EJM-03-2011-0110>
- Moreno, F. M., Lafuente, J. G., Carreón, F. Á., & Moreno, S. M. (2017). The characterization of the millennials and their buying behavior. *International Journal of Marketing Studies*, 9(5), 135-144. DOI:10.5539/ijms.v9n5p135
- Nayebzadeh, S., & Jalaly, M. (2014). Investigating Iranian female Muslim consumer impulse buying behavior used as a form of retail therapy. *Journal of Islamic Marketing*, 5(2), 302-320. <https://doi.org/10.1108/JIMA-05-2012-0029>
- Nithya, S., & Chirputkar, A. (2020). The analysis of impact of Covid-19 on retail consumer behavior and business models. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(6), 4384-4401.
- O'Cass, A., & Siahtiri, V. (2013). In search of status through brands from Western and Asian origins: Examining the changing face of fashion clothing consumption in Chinese young adults. *Journal of Retailing and Consumer Services*, 20(6), 505-515. <https://doi.org/10.1016/j.jretconser.2013.05.005>
- Ordun, G. (2015). Millennial (Gen Y) consumer behavior, their shopping preferences and perceptual maps associated with brand loyalty. *Canadian Social Science*, 11(4), 40-55. <https://doi.org/10.3968/6697>
- Pantano, E., Pizzi, G., Scarpi, D., & Dennis, C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, 209-213. <https://doi.org/10.1016/j.jbusres.2020.05.036>
- Pascual-Miguel, F., Agudo-Peregrina, Á., & Chaparro-Peláez, J. (2015). Influences of gender and product type on online purchasing. *Journal of Business Research*, 68(7), 1550-1556. <https://doi.org/10.1016/j.jbusres.2015.01.050>
- Pham, V. K., Thi, T. H. D., & Le, T. H. H. (2020). A study on the COVID-19 awareness affecting the consumer perceived benefits of online shopping in Vietnam. *Cogent Business & Management*, 7(1), 1-16. <https://doi.org/10.1080/23311975.2020.1846882>
- Prebreza, A., & Shala, B. (2021). The trust in online shopping during COVID-19: Case study from Kosovo. *Open Access Library Journal*, 8(4), 1-15. <https://doi.org/10.4236/oalib.1107288>
- Rahmiati, F. (2016). The impact of fast fashion elements on female consumer buying behavior: A study case of H&M Grand Indonesia Shopping Town. *Journal of Marketing and Consumer Research*, 23(1), 38-45.
- Rapp, A., Baker, T. L., Bachrach, D. G., Ogilvie, J., & Beitelspacher, L.S. (2015). Perceived customer showrooming behavior and the effect on retail salesperson self-efficacy and performance. *Journal of Retailing*, 91(2), 358-369. <https://doi.org/10.1016/j.jretai.2014.12.007>
- Romeo-Arroyo, E., Mora, M., & Vázquez-Araújo, L. (2020). Consumer behavior in confinement times: Food choice and cooking attitudes in Spain. *International Journal of Gastronomy and Food Science*, 21(1). <https://doi.org/10.1016/j.ijgfs.2020.100226>
- Savaşkan, A. G., & Çati, K. (2021). Investigation of consumer behavior in market shopping in the gender context. *Electronic Journal of Social Sciences*, 20(77), 255-272. <https://doi.org/10.17755/esosder.767017>
- Sayyida, S., Hartini, S., Gunawan, S., & Husin, S. N. (2021). The impact of the Covid-19 pandemic on retail consumer behavior. *Aptisi Transactions on Management*, 5(1), 79-88. <https://doi.org/10.33050/atm.v5i1.1497>
- Shamim, K., Ahmad, S., & Alam, M. A. (2021). COVID-19 health safety practices: Influence on grocery shopping behavior. *Journal of Public Affairs*, 2624(1), 1-11. <https://doi.org/10.1002/pa.2624>
- Sharma, A., & Jhamb, D. (2020). Changing consumer behaviours towards online shopping: An impact of COVID 19. *Academy of Marketing Studies Journal*, 24(3), 1-10.
- Sheth, J. (2020). Impact of Covid-19 on consumer behaviour: Will the old habits return or die? *Journal of Business Research*, 117(1), 280-283. <https://doi.org/10.1016/j.jbusres.2020.05.059>
- Sunarjo, W. A., Nurhayati, S., & Muhandono, A. (2021). Consumer behavior toward adoption of mobile payment: A case study in Indonesia during the COVID-19 pandemic. *Journal of Asian Finance, Economics and Business*, 8(4), 581-590. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0581>
- Svajdova, L. (2021). Consumer behaviour during pandemic of COVID-19. *Journal of International Business Research and Marketing*, 6(3), 34-37. <https://doi.org/10.18775/jibrm.1849-8558.2015.63.3005>
- Sychov, V., & Bakaev, M. (2020). Stay some more and buy? Modeling the effects of visit time on online shopping purchases. *International Workshop on Data Mining and Knowledge Engineering*, 111-118.
- Tifferet, S., & Herstein, R. (2012). Gender differences in brand commitment, impulse buying, and hedonic consumption. *Journal of Product & Brand Management*, 21(3), 176-182. <https://doi.org/10.1108/10610421211228793>
- Tyagi, P., & Pabalkar, V. (2021). Impact of COVID-19 over purchasing behaviour of the consumers. *European Journal of Molecular & Clinical Medicine*, 8(2), 561-571.
- Valentine, D. B., & Powers, T. L. (2013). Online product search and purchase behavior of Generation Y. *Atlantic Marketing Journal*, 2(1), 76-91.
- Vega-Zamora, M., Torres-Ruiz, F.J., & Parras-Rosa, M. (2019). Towards sustainable consumption: Keys to communication for improving trust in organic foods. *Journal of Cleaner Production*, 216(1), 511-519. <https://doi.org/10.1016/j.jclepro.2018.12.129>
- Veronika, S. (2013). Motivation of online buyer behavior. *Journal of Competitiveness*, 5(3), 14-30. <https://doi.org/10.7441/joc.2013.03.02>

- Vinerean, S. (2020). Understanding consumers' online shopping behavior during the Covid-19 pandemic: Empirical research. *Expert Journal of Marketing*, 8(2), 140-150.
- Wang, Y., Xu, R., Schwartz, M., Ghosh, D., & Chen, X. (2020). COVID-19 and retail grocery management: Insights from a broad-based consumer survey. *IEEE Engineering Management Review*, 48(3), 202-211. <https://doi.org/10.1109/EMR.2020.3011054>
- Wiederhold, B. K. (2021). Purchasing in a pandemic? Virtual consumerism in 2021. *Cyberpsychology, Behavior, and Social Networking*, 24(2), 77-78. <https://doi.org/10.1089/cyber.2020.29206.editorial>
- Wiranata, A. T., & Hananto, A. (2020). Do website quality, fashion consciousness, and sales promotion increase impulse buying behavior of e-commerce buyers? *Indonesian Journal of Business and Entrepreneurship*, 6(1), 74-85. <https://doi.org/10.17358/ijbe.6.1.74>
- Wu, C., Zhou, X., & Song, M. (2015). Sustainable consumer behavior in China: An empirical analysis from the Midwest regions. *Journal of Cleaner Production*, 134(1), 147-165. <https://doi.org/10.1016/j.jclepro.2015.06.057>