

# A study to identify the impact of Covid-19 on the trust and risk perceptions of online buying behaviour

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## Abstract

Coronavirus has become a global emergency and has left a strong impact on people all over the world. It has altered the way we live, the way we work, and the way we see the world around us. Ever since the virus escalated and with lockdown in place, a significant change has been reported in consumer's online buying behavior. This research aims to provide implications from a consumer's perspective, thereby helping brands to gain insight into this vulnerable and unreal environment. This change in consumer mindset is investigated with respect to the risk and trust perceptions of online buying behavior. During a lockdown, an increased purchase with regards to non-perishable items was observed. The lockdown has brought about positive changes in consumers in terms of food wastage. To test the proposed hypothesis, data was collected from 200 respondents through an online survey. The results provided strong evidence that was independent of the pandemic. However, COVID-19 has acted as an element that made consumers opt for the online channel.

## Keywords

COVID-19, Coronavirus, Pandemic, Online buying behaviour, New normal, Social distancing, Lockdown

## Imprint

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## 1 Introduction

### 1.1 The corona outbreak

The 2019-2020 Coronavirus disease, commonly known as COVID – 19, has sent shock waves across nations not only medically but economically as well. The disease came into existence in December 2019 in Wuhan, Hubei Province, China. Experts are still racking their brain over the question, how did a health crisis like COVID – 19 bring the global economy to its knees, how has it reconstructed people's ideologies and beliefs.

The virus aggravated at a tremendous rate inflicting fear in the health and hygiene factors amongst the population. All the Nations are working hard to contain the spread of the disease by following stringent quarantine rules and health precautions. Russia came with the vaccine for the virus, and reports suggest that the second vaccine 'EpiVacCorona' is showing favorable results [1].

Firstly, big companies, businesses, financial markets, and major events got postponed, halted, and some even shut down to adhere to the social distancing norms. The exponential transmission of COVID-19 led to an intense lockdown across Countries, which led to a negative impact on the economic activities of nations [2]. The lockdown also modified the social behavior of people. Consumer packaged goods, apparel, food and beverages, automotive, and several other industries ' demands and supply have also been impacted severely [3]. The severity of the virus has significantly altered the behavioral patterns of consumers [4]. This change that has been observed will last for a longer time in consumer buying behavior.

### 1.2 Impact on consumer buying behavior

Despite the lockdown, a rapid spread of the virus began surfacing. To stop the severity of the virus and to protect its people, the government came up with more stringent policies and intense lockdown norms. This led to people staying indoors. Initially, people came out to buy essentials. However, seeing the severity of COVID-19, many opted for door delivery services. COVID-19 created a decline in domestic consumption and altered people's lifestyle and spending habits [5].

Quarantining and reducing the social interaction of people on a large-scale has, therefore, given rise to

good hygiene practices, which not only controlled the spread of the virus but also reduced social and economic costs [6]. Due to the closure of malls, cinema halls, restaurants, and other such outlets, people are now compelled to stay indoors. It is also revealed that 23.6% of households purchased only shelf-stable grocery items [7]. During the lockdown, an increased purchase with regards to non-perishable items was observed. In Britain, it was observed that there was a significant spike in grocery spending in the first two weeks post the announcement of an intense lockdown [8]. The spending on groceries, however, has seemed to decline at the onset of the lockdown period stockpiling behavior [9].

Due to the lockdown imposed across China, there was an evident decline in the sales of digital and electronic goods, where consumption was reduced by 32% in the Chinese markets [10]. A survey conducted in the US markets revealed that the consumers were more concerned about their financial and personal safety [11]. This has caused a positive wave of modifying their consumption pattern.

As more and more consumers purchase from the local retailers, a lot of Brick-and-Mortar stores adapted to the online mode of service. Consumers have started spending more on essentials and stay-at-home necessities rather than over non-essentials. There is a significant reduction in the purchase of non-essentials that are brought online, which is affecting the E-Commerce business [12]. Consumers have lowered their buying behavior pattern as far as online purchases are concerned, and this, in turn, has lowered the turnover for E-Businesses in Malaysia. Studies suggest that males spend more than females, and younger populations spend more than the older population [13]. Manufacturers and retailers, to sustain the business and contain the negative effects of an epidemic outbreak, end up developing e-commerce as an alternative shopping solution [14].

Though the restaurants guaranteed a hygiene check, consumers were skeptical about buying outside food. Across the globe, restaurants saw a reduction in their sales. For example, poultry sales reduced in German, Italy, Sweden, and Switzerland during the Avian Influenza Virus [15]. Consumer response to the flu had a large impact on the poultry industry. Consumers reduce their purchases when there is a perceived risk [16].

People respond to a pandemic situation by altering their behavior. Some people chose to cancel their

flight travel which is an expensive decision, and this happened even before the government mandates came into place. People respond to a pandemic by self-inflicted changes in their behavior [17]. People across the globe have seen a decline in their income and hence, have cut down their money spend [18].

As far as an epidemic's impact on a consumer's health behavior is concerned, it is seen that the difference between the educational levels of people does not guarantee a positive impact on the change in health aspects [19]. This was the case during the H1N1 pandemic in Malaysia. Also, a majority of consumers felt that the pandemic had left them with the stress of a perceived risk about the future, and they considered the situation as a public burden [20]. This has made them reduce their expenses concerning non-essential purchases.

Though the impact of COVID – 19 observed in consumers varied to different degrees amongst various nations, the pandemic affected Consumer psychology to a higher level. Consumer spending behavior is evolving through the crisis [21].

### 1.3 Shift to online buying

As is very clear, the pandemic has brought about major technological disruptions. The outbreak has created an evident paradigm shift in consumer behavior. Studies reveal that:

- 9 out of 10 consumers have changed their traditional ways of buying.
- 60% of the consumers are driven by the fear of visiting the physical stores to make a purchase.
- A study conducted by Accenture reveals that 64% of the consumers fear their health while 81% feared the health of others.
- Half of the consumer population has made a purchase online for all the normal or essential purchases they make in the physical store.
- 30% of the US population shifted to online grocery delivery options.

The demand for internet and mobile network services increased after the lockdown was imposed. E-Commerce supply of goods and services has proved to be an important tool/solution for consumers during the crisis (World Trade Organization, 2020) [22]. Before the lockdown, not many of them have used online services to make grocery purchases, but now grocery shopping online has seen a boom [23]. This is mainly because people try to avoid coming in contact with

others and avoid crowded places to maintain distance. The sudden surge in the number of consumers using online services has given rise to both the suppliers and telecommunication operators of these businesses to adapt to better network services [24].

Retailers are seeing an influx of indoor delivery options right now. Supermarkets and various other retailers are trying to adapt to the Click and Collect model to keep up with the changing situation [25]. The offline store can't be called off completely, but an online option is much needed for the retailers. Retailers circulated their contact numbers for home delivery services with WhatsApp messaging facility to deliver goods [26]. Switching to online payment modes to avoid the exchange of physical cash is also a major change observed.

During the SARS pandemic, a similar shift was observed in e-commerce businesses. The world is still evolving and learning to cope with new changes posed by COVID-19 every day [27]. Those businesses which viewed digital means as a secondary option are slowly changing their mindset. Not adapting to an Omnichannel strategy and embracing offline and online channels will result in a huge loss of revenues going forward [28].

The fear appeal has a positive impact on the relationship between buyer and seller in terms of live-streaming platforms. This is because the information gained by a consumer plays a major role in deciding their activity online [29]. There have been various pandemics in the past that changed human behavior. The change in consumption patterns and behavior during the pandemic has a considerable effect on the economic factors than the disease's impact. Thus, the impact is likely to be high during the pandemic and might reduce once the pandemic subsides. However, returning to the old behavior is highly impossible even if the situation resumes back to normal [30].

Starting an online channel and increasing traffic wasn't even a major business strategy for many retailers. Going forward, as consumers change, retailers will start depending on online channels to drive sales and attract new customers. The Post Pandemic world will see people being more hygienic and convenience-conscious. Studies reveal that even post COVID-19, consumers would be apprehensive about making physical purchases and prefer to maintain social distance. In-store shopping experiences will change. Businesses may adapt to AI-VR means to offer customers the best in-store experience [31].

Reports suggest that the World after COVID will see a lot of innovation in voice-based services, Chabot's, and many such automated services. Online processes with more customer interaction and maximized experience are expected to pop in the future to provide a wholesome value [32]. There are more growth opportunities in the pipeline with regards to self-service solutions and digital businesses. Hence, it is evident that there is no going back to life as before. The 'New Normal' is going to be the future ahead. Consumer attitudes, once changed, will be enduring; therefore, understanding the changes and dealing with their beliefs will help companies thrive.

## 2 Methodologies

Research Methodology is the road the researcher takes to conduct the research. The methodology followed is one of the crucial factors that determine the results of the specified research. The research will take an exploratory approach that will help answer the underlying what, how, and why surrounding the research question. E-Commerce businesses have a huge potential, especially in situations like these. For marketers to leverage this opportunity, understanding the online buying patterns of customers is requisite. This research study is aimed at the population members who have been using the online channel and those that are new to online buying to understand how their risk perceptions are altered.

## 3 Research design

Research Design is a master plan that provides a framework or course of action for the research. To understand the questions in place, data is collected through a questionnaire administered online.

The central questions that arise are:

RQ1: Has corona had a positive impact on online buying? How much of a shift has the situation brought on online buying behavior?

RQ2: What is the percentage of consumers who shifted to online shopping?

RQ3: How has it altered the risk and trust perceptions of consumers?

RQ4: How many of these changes are going to be retained in the future?

A similar research design is followed in a research study that investigated the Omnichannel buying patterns of consumers.

Due to social distancing norms, customers opt for more digital and door delivery services to avoid com-

ing into contact with others. The shift to home delivery and online shopping has saved consumers' time and provided them with convenience, but the idea of maintaining physical distance from others has instilled a sense of relief as well. The severity of the virus spread has left a positive change on the perceived risk of consumers.

Following the research questions alongside the findings from the literature review, the following hypotheses have been formulated:

H10: Consumer's intention to shop online is independent of the corona outbreak.

H11: Consumer's intention to shop online is dependent on the corona outbreak.

Perception is a consumer's awareness and interpretation of their surroundings and marketing stimuli acting as a foundation upon which consumer learning occurs.

H20: Reduction in transactional risks is independent of familiarity with the sites.

H21: Reduction in transactional risks is dependent on familiarity with the sites.

Consumers are said to develop trust over online platforms when they are familiar with the sites. Also, a secured transaction increases a customer's trust over an online platform.

H30: Consumer's intention to purchase online is independent of the fear of health and hygiene.

H31: Consumer's intention to purchase online is dependent on the fear of health and hygiene.

The fear appeal has a strong influence over the intention to purchase online. More than the concerns of their health and safety, consumers' avoidance behavior was attributed to the concern of a loved one getting the virus.

H40: The recurrence of a customer's online purchase is independent of the pandemic.

H41: The recurrence of a customer's online purchase is dependent on the pandemic.

To test the hypothesis, the research framework is based on an intensive literature review. A survey was designed that focused on the shift to online shopping during the corona times.

### 3.1 Data collection methods

Data collection includes together the primary as well as the secondary means of data collection. "To understand the nature of the problem and research objectives, a quantitative approach is undertaken to collect and analyze the hypothesis."

#### 3.1.1 Primary Research

Primary Research involves acquiring first-hand data personally from the respondents of the study. The data collected here is original and is gathered through the distribution of questionnaires via online means. As stated above, the research follows a quantitative approach. 'New Normal' buying patterns that are being observed in the consumers. It will identify the extent of shift to other channels that have been seen and the spending intentions of the consumers providing insights highlighting the reasons behind the shift.

#### 3.1.2 Sampling technique

Sampling is how the respondents for the study are selected. Also, the demographic profiles of these cities closely match that of the population. 96% of Millennials and Gen have altered their purchase pattern due to the pandemic, and 34% of Gen X have shifted to online mode due to COVID-19. Baby Boomers show high interest in digital modes, and they can be considered a growing segment of internet users. The sample will, therefore, comprise males and females between the ages group of 23–55.

The members of the population are selected based on purposive sampling, where the researcher selects the sample basis his or her judgment that matches the characteristic requirement of a sample member". Selection of sample size is one of the crucial decisions to be made while planning the research methodology. According to a sample size within the range of 101 to 200 is considered adequate. This, being an academic research paper and considering the respondent errors that might arise, the sample size is taken to be 200.

#### 3.1.3 Questionnaire

The questionnaire will be rolled out to respondents through online means. It covers E-Commerce sites' perceived risk and trustworthiness amongst the consumers alongside their attitude towards shopping online. Researchers widely suggest 5 points Likert scale over 7 points Likert as it reduces respondents' irritation level, thereby increasing the response quality. The data collected will include the respondent's age, gender, and geography to analyze the data more accurately.

#### 3.1.4 Secondary research

Secondary research involves intense literature review and online research. The bibliographic docu-

mentation used for the literature review was sourced from various journals and databases. The articles that are cited are from the reports and findings of various companies and government organizations. The articles helped in understanding the shifts that have taken place, and these are from the reports of various market research companies. The conclusion will compare and contrast the results from both approaches to obtain accurate implications for brands and businesses.

## 4 Data analysis

### 4.1 Profile of the respondents

The survey questionnaire was rolled out to the respondents through online means, and solely 167 of them were used for analysis purposes, while the other 33 questionnaires were eliminated considering the missing values and respondent errors. The sample consisted of 61.4% of men and 38.6% of women across the major cities of Tamil Nadu, Maharashtra, Kerala, etc. The percentage of different age groups of respondents is mentioned in Table 1.

Table 1  
Respondent profile

Age Range	No. of Participants	Percentage (%)
23 (Gen Z)	42	25.1
24 – 39 (Millennial)	95	56.8
40 – 55 (Gen X)	30	17.9

### 4.2 Statistical tools and analysis

The proposed hypothesis was all tested using Regression and Correlation Analysis through SPSS.

### 4.3 Findings

#### 4.3.1 Correlation analysis

Table 2 shows it can be seen that the Pearson Correlation between gender and pandemic impact is -0.1 indicating a weak negative relationship. It can be, hence, interpreted that buyer's intention to shop online due to the pandemic is irrespective of gender. Similarly, the Pearson Correlation between age and pandemic impact is 0.08, indicating a weak linear relationship. Hence, the consumer's intention to purchase online due to the pandemic has a slight effect overage of the consumer.

Table 3 shows that the frequency of purchase during the pandemic is irrespective of the impact of the corona outbreak as the Correlation value is -0.1 indicating

a weak negative relationship. Similarly, consumer's intention to continue purchasing online in the future is impacted by their frequency of purchase during the pandemic as the Correlation value is 0.3 indicating a weak positive relationship.

Table 2  
Correlations

Correlations				
		Gender	Age	Pandemic_Impact
Gender	Pearson Correlation	1	0.066	-0.107
	Sig. (2-tailed)		0.395	0.172
	N	167	167	164
Age	Pearson Correlation	0.066	1	0.082
	Sig. (2-tailed)	0.395		0.296
	N	167	167	164
Pandemic_Impact	Pearson Correlation	-0.107	0.082	1
	Sig. (2-tailed)	0.172	0.296	
	N	164	164	164

Table 3  
Correlations 2-tailed

Correlations				
		Future Intention	Frequency of Purchase	Pandemic_Impact
Future Intention	Pearson Correlation	1	.342**	0.031
	Sig. (2-tailed)		0.000	0.693
	N	167	167	164
Frequency of Purchase	Pearson Correlation	.342**	1	-.186*
	Sig. (2-tailed)	0.000		0.017
	N	167	167	164
Pandemic_Impact	Pearson Correlation	0.031	-.186*	1
	Sig. (2-tailed)	0.693	0.017	
	N	164	164	164

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Coefficient of determination (R<sup>2</sup>)

From Table 4, it is clear that the variable pandemic impact has an R-value of 0.016. It can be interpreted that the independent variable, the impact of

COVID-19 over online shopping, has a low correlation with the decision for 1.6%, and from the R2 value, which is equal to 0.000 that is 0% of variation occurs in the consumer's intention to buy online.

Table 4  
Model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.016 <sup>a</sup>	0.000	-0.006	1.004

a. Predictors: (Constant), Pandemic\_Impact

Similarly, Table 5 shows that the R-value of the variable secure shopping is 0.425. It can, hence, be interpreted that there exists a moderate correlation of 42.5%, and the R2 value is equal to 0.180. That is, 18% of variation occurs with the familiarity of online platforms.

Table 5  
Model summary secure shopping

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.425 <sup>a</sup>	0.180	0.175	0.783

a. Predictors: (Constant), Secure\_Impact

Table 6 shows an R-value of 0.108 for the independent variable of health and hygiene factors. It can be said that there is a weak correlation of 10.8%, and the R2 value is equal to 0.012, which is 1.2% of the variation that only occurs with respect to consumer's intention to purchase online.

Table 6  
Model summary health and hygiene

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.016 <sup>a</sup>	0.000	-0.006	1.004

a. Predictors: (Constant), Health\_and\_Hygiene

From Table 7, it is seen that the R-value for the variable impact of the pandemic is 0.031. Therefore, there is a low correlation of 3.1% and the R2 value being 0.001, which is 0.1% of variation, arises with respect to the future intention to shop online.

Table 7  
Model summary pandemic impact

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.031 <sup>a</sup>	0.001	-0.005	0.895

a. Predictors: (Constant), Pandemic\_Impact

#### 4.3.2 Regression analysis

H10: Consumer's intention to shop online is independent of the corona outbreak.

H11: Consumer's intention to shop online is dependent on the corona outbreak.

From Table 8, it can be seen that the P-value is equal to 0.842, which is higher than the considered alpha value of 0.05.

Table 8  
Anova and coefficients (purchase intension)

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	166.477	1	166.477	218.303	.000 <sup>b</sup>
	Residual	164.721	216	.763		
	Total	331.197	217			

a. Dependent Variable: Purchase\_Intention

b. Predictors: (Constant), Pandemic\_Impact

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	3.555	0.255		13.940	0.000
	Pandemic_Impact	0.031	0.157	0.016	0.199	0.842

a. Dependent Variable: Purchase\_Intention

H20: Reduction in transactional risks is independent of familiarity with the sites.

H21: Reduction in transactional risks is dependent on familiarity with the sites.

Table 9 shows a P value of 0.000, much smaller than the value of 0.05. Therefore, the correlation between transactional risks and familiarity with the sites is weak, as discussed above. Hence, we conclude that familiarity with the sites does not reduce the transactional risks.

H30: Consumer's intention is independent of the fear of health and hygiene.

H31: Consumer's intention is dependent on the fear of health and hygiene.

Table 10 shows the P-value of health and hygiene is 0.166, which is larger than the alpha value of 0.05.

H40: The recurrence of a customer's online purchase is independent of the pandemic.

H41: The recurrence of a customer's online purchase is dependent on the pandemic.

Table 9  
Anova and coefficients (Transactional risks)

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.255	1	22.255	36.322	.000 <sup>b</sup>
	Residual	101.098	165	0.613		
	Total	123.353	166			
a. Dependent Variable: Transactional_Risks						
b. Predictors: (Constant), Familiarity_with_Sites						
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	1.716	0.258		6.651	0.000
	Familiarity_with_Sites	0.371	0.062	0.425	6.027	0.000
a. Dependent Variable: Transactional_Risks						

Table 10  
Anova and coefficients (shopping online)

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.899	1	1.899	1.932	.166 <sup>b</sup>
	Residual	162.220	165	0.983		
	Total	164.120	166			
a. Dependent Variable: Shopping_Online						
b. Predictors: (Constant), Health_and_Hygiene						
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	3.219	0.284		11.328	0.000
	Health_and_Hygiene	0.105	0.075	0.108	1.390	0.166
a. Dependent Variable: Shopping_Online						

From Table 11, it is seen that the P-value is equal to 0.693 is higher than the alpha value of 0.05. Hence, we fail to reject the null hypothesis. Thus, the frequency of a consumer's online shopping is independent of the pandemic.

Figure 1 clearly shows that a significant percentage of both males and females agreed that their online shopping frequency increased due to the corona outbreak.

Table 11  
Anova and coefficients (future purchase intention)

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.125	1	0.125	0.156	.693 <sup>b</sup>
	Residual	129.655	162	0.800		
	Total	129.780	163			
a. Dependent Variable: Future_Purchase_Intention						
b. Predictors: (Constant), Pandemic_Impact						
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	3.878	0.227		17.059	0.000
	Pandemic_Impact	0.055	0.140	0.031	0.395	0.693
a. Dependent Variable: Future_Purchase_Intention						

Figure 2 shows that the consumers have shown interest in continuing shopping online in the future, too, even after the pandemic subsides.

From the results of the analysis, Due to the pandemic, consumers have adopted online buying, but it is apparent that many other factors have not been studied in this research that has influenced consumers' intention to purchase online. COVID-19 has had a positive yet minimalistic influence over online buying behavior. Aforementioned, there exists a weak positive relationship between amidst corona outbreak and the shopping frequency. Thus, it can be concluded that online shopping frequency is influenced by many other factors other than corona. However, because of the weak positive relationship, their frequency of shopping online during corona and lockdown is a factor that increased their intention to shop online in the future too.

69.4% of respondents agreed to the fact they opted for online shopping due to social distancing norms. With social distancing norms and lockdown in place, online shopping became a consumer's go-to option to buy groceries and other essentials. But it is clear from the research findings that it is not influenced by the fear factor in Figure 3.

Figure 4 shows that 55.5% of consumers opted to buy groceries online, and 46% of them said that they would prefer to buy these products online even after the pandemic subsides, while 44.9% of them said they

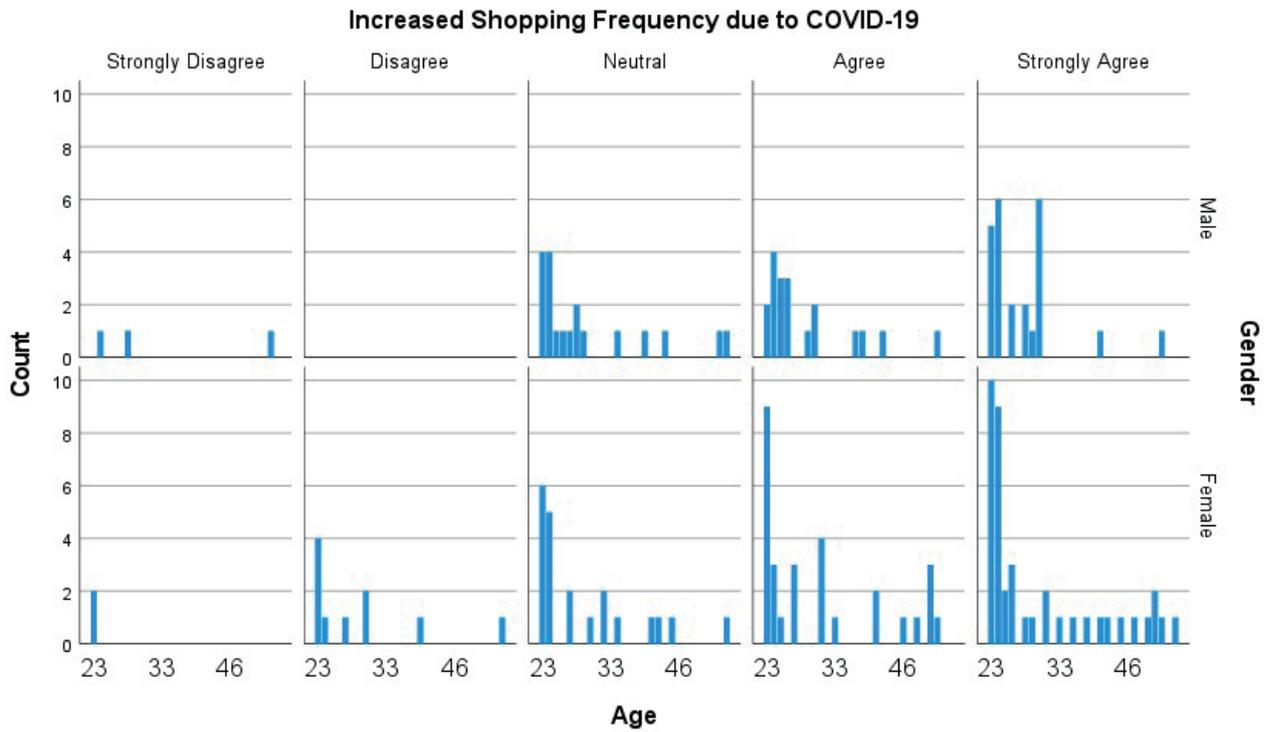


Fig. 1. Significant percentage of both males and females

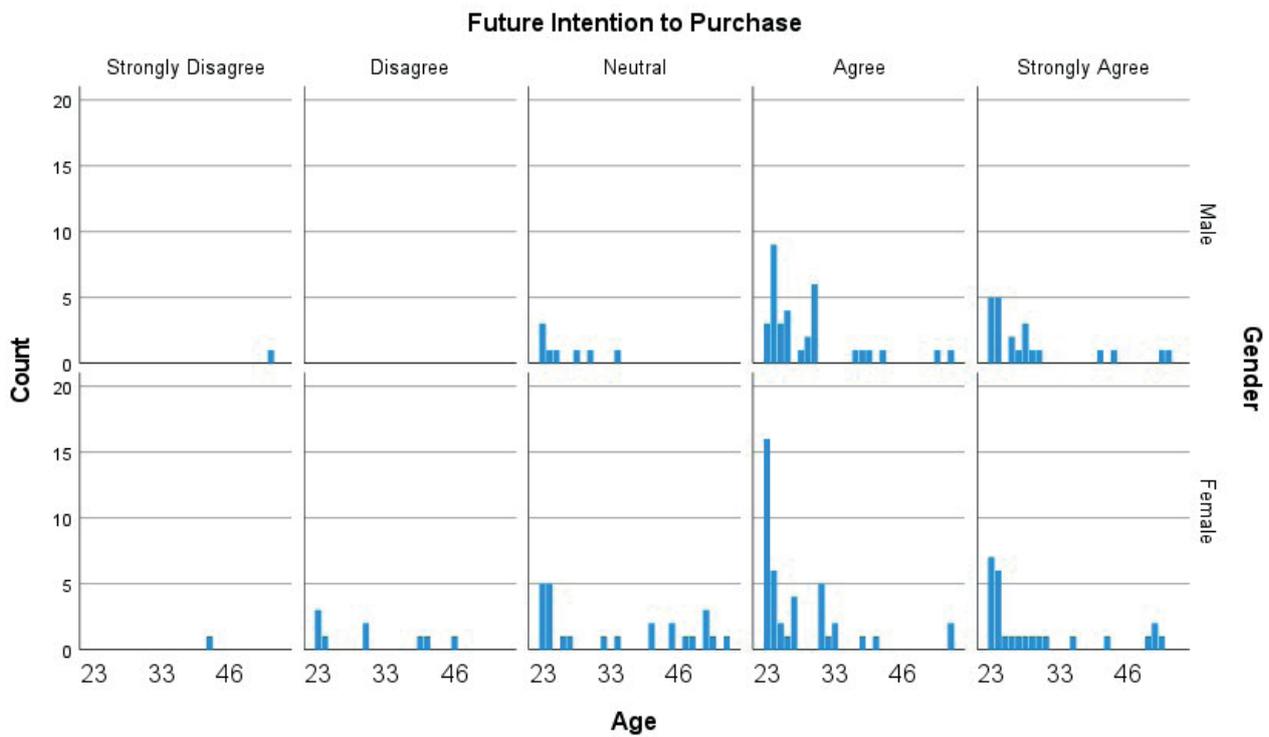


Fig. 2. Consumers have shown interest

might continue buying these products online even after the pandemic.

74.2% of them preferred to make an online purchase with their local retailer considering the familiarity with the vendor shown in Figure 5. This would also reduce their risk and trust perceptions with on-

line shopping as the purchase are made with their local retailers.

The results provided significant insights that would help E-commerce businesses draft better strategies to improve their business and attract new customers. The more aware they become of the situation,

## Opted to Online Shopping Due to Social Distancing Norms

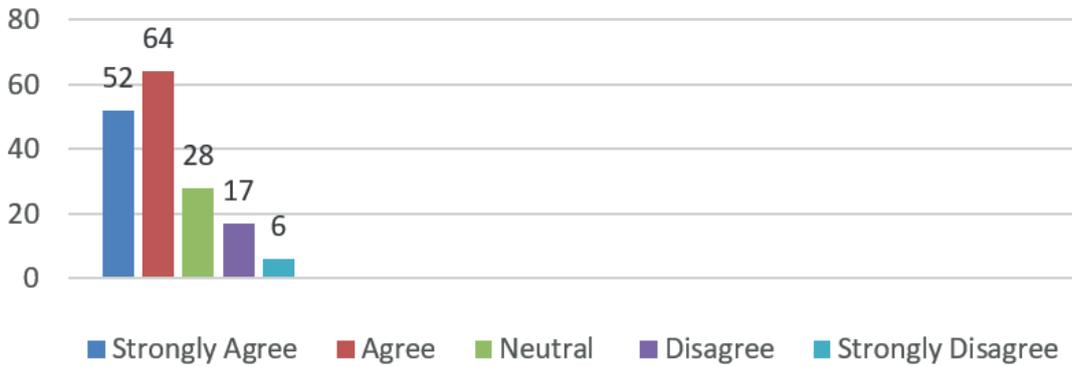


Fig. 3. Social distancing norms and lockdown in online shopping

## The percentage of products purchased due to the Pandemic online

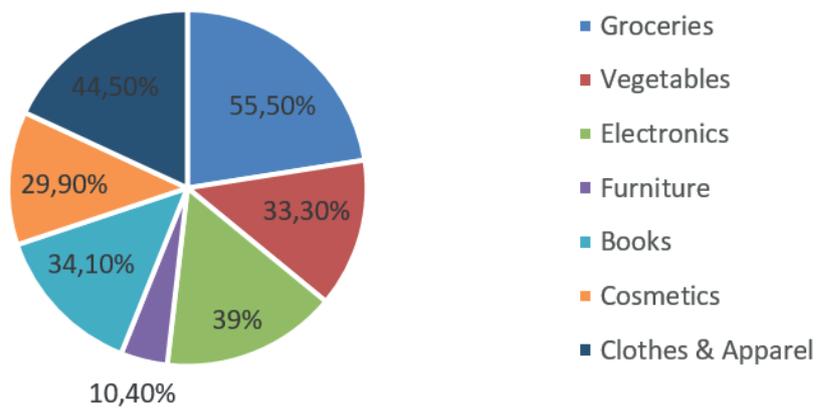


Fig. 4. Consumers opted to buy

## Preference of making an online purchase from local retailers

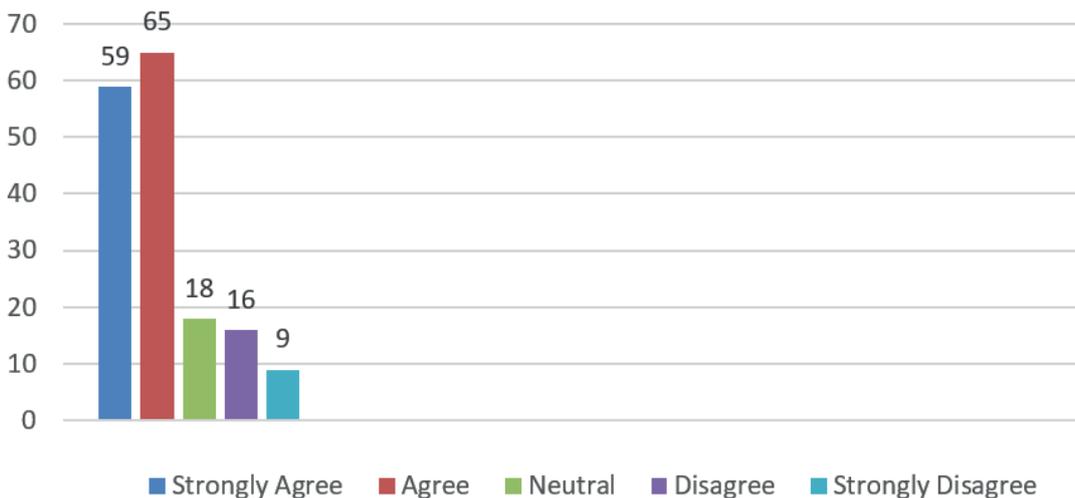


Fig. 5. local retailer considering

the more they avoid physical contact with others. COVID-19 acted as a trigger for consumers to opt for E-Commerce services. Though there was a significant increase in shopping frequency during the lockdown amongst the younger population, it cannot be ignored that even consumers above 40 have shared an important space in online shopping. The respondents from Gen X agreed to the fact that their shopping frequency increased due to the pandemic. Often ignored segment when it comes to digital services is gradually rising and are changing their buying patterns. This shift is evident, and the research findings also prove such. This trend signals a shift that cannot be ignored.

## 5 Limitations of the research

Although the research findings provided some rich insights, they should be viewed under the light of some limitations. It is better to restrict the discussions of this research in accordance with the limitations. Since it's an academic research paper, the sample size selected was small as statistical tests require a large sample representing the population to yield more accurate and statistically significant results. Also, the respondents consisted of 17.9% of Gen X while there was 56.8% of Millennial. Hence, the research findings aren't typically enough to break down Gen X's online buying behavior.

## 6 Recommendations

Few suggestions are made for businesses to better strategize their online services. A novel coronavirus enters the world and sets a reset button and has had a major effect on consumer's online shopping behavior. According to the reports from WHO and the Health Ministry, COVISHIELD, the vaccine to fight against COVID-19 will be launched in India by Dec 2020.

Online shopping comes with its own risk and fear factors that make most consumers refrain from purchasing online. However, the research that 69.4% of consumers opted for online purchasing in order to guard themselves against the spreading virus. Due to the corona outbreak, 54.8% of consumers who have not used online shopping before chose to make use of the online buying platforms. Therefore, it becomes important for businesses to adapt to online shopping to enhance customer loyalty.

The findings of the research suggest that 55.5% and 33.3% of consumers started buying groceries and vegetables, respectively, online due to the pandemic.

Also, 74.2% of them prefer to make a purchase online with their local retailers. Hence, retailers can adapt to an Omnichannel strategy leveraging all the touch-points between them and the consumers. As more and more consumers buy groceries and vegetables online, if their local retailer builds an online channel, that would not only increase their shopping experience but also reduce some of the risk factors of purchasing online. This would also reduce their transactional risks as they can make a payment in the physical store through digital payment modes that would refrain them from physical contact with the shopkeeper. As far as large retail chains are concerned, they can work on their convenience and inventory optimization, thereby delivering products from the closest store to the customer instead of from a far-away store. The closer the store, the lesser will be delivery charges which will increase a consumer to make more purchases with the same retailer.

## 7 Conclusions

The findings suggest that those consumers who shifted to online shopping due to the pandemic have a future intention to continue shopping online. Therefore, E-Commerce businesses can attract new customers as well as retain their existing customers by providing incentives and other attractive promotional activities that will enhance customer value. It becomes important to plan policies and strategies for the next few months to keep up with the evolving online buying behavior of consumers. Establishes E-Commerce sites can revisit previous sales strategies to come up with an accurate operational plan. Apart from groceries and vegetables, 44.5% of consumers frequently purchased clothes and apparel online due to the pandemic.

Similarly, 34.1% of consumers purchased books online due to the pandemic. It is recommended that large E-Commerce platforms with a tie-up with the local retailers sell clothes, books, and other frequently purchased products during the pandemic at the consumer's doorstep. Aforementioned, this will increase consumers' trust perceptions towards the online platform due to the familiarity with the local retailers.

The post-pandemic world will see few customers returning to their old habits, but most will stick to their online consumption as they would've found ease of shopping and a better consumer experience in the online services.

## 8 Scope for further research

As the research comes with few limitations, few recommendations are made for further research over the topic to better understand consumers' online buying behavior in corona times, thereby enhancing their online shopping experience. The study can be broadened to further elaborate on the effect of COVID-19 over Gen X as well as amongst some of the baby boomers. Concerning purchasing online, Gen X purchase more online than Baby Boomers, but Baby Boomers also contribute to E-Commerce Sales (Dhanapal et al. 1, 2015). Though the regression analysis yielded results that stated that the reduction in transactional risks is related to familiarity with the sites, the correlation analysis results proved otherwise. Previous studies indicate that all three generations consider credit card transactions as one main challenge while making an online purchase (Dhanapal et al. 1, 2015). Hence, the factors that reduce the transactional risks can further be studied.

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### Conflict of interest

Nil

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