



The impact of covid-19 on online business: The role of customer behavior

Sami Hamad ^{1*}, Dr. Tarana Azimova ²

¹ Istanbul Aydin University, Turkey

² Assistant Professor, Istanbul Aydin University, Turkey

* Corresponding Author: Sami Hamad

¹ ORCID ID: 0000-0002-5606-7859

² ORCID ID: 0000-0001-6951-5844

Article Info

ISSN (online): 2582-7138

Volume: 03

Issue: 04

July-August 2022

Received: 29-05-2022;

Accepted: 14-06-2022

Page No: 34-42

Abstract

Since the beginning of the epidemic caused by Coronavirus, there has been a discernible rise in the number of online companies. Even in Turkey, COVID19 virus has disrupted almost all commercial and financial transactions that take place throughout the globe. Consumers now purchase differently than before the pandemic outbreak due to this shift. A significant number of businesses have, in recent times, built and launched their own online storefronts, driving the majority of their revenue via the online channels. The only option left to customers is to purchase online from their homes. The purpose of this paper is to investigate the effect of COVID-19 on online business practices in Turkey, taking into account the moderating role of customer behavior. In the area of consumer behavior, e-business and COVID-19, the theory of acceptance model has been used as a major component of the suggested research model.

To investigate the relationship between the research variables, SPSS software was used. According to the findings of this research, COVID-19 had a substantial impact in Turkey; not only on online enterprises, but also on consumers' purchasing habits. This study offers suggestions for future research, particularly about cultural and other barriers, such as the slow adoption of digital payment methods in some developing economies. It also offers an overview of current e-commerce trends and a discussion of the expanding opportunities available to online businesses.

Keywords: Consumer behavior, COVID-19, Online business, Pandemic, Perceived risk.

Introduction

Before the outbreak in the Chinese city of Wuhan in December 2019, no one knew what was causing the pandemic, COVID-19. The World Health Organization designated it a Public Health Emergency of International Concern on January 30, 2020, and it is still in effect (Zhang, Qin, Li, Wang, Zhao, Xu, & Zhang, 2020) [6, 21, 45]. Because of this movement, the COVID-19 for the most vulnerable people is still a moving wave that may possibly come crashing down. Coronavirus pandemic has caused huge losses to the world economy in general and international commerce in particular, and these losses continue to mount. Additional aspects contribute to the uncertainty in which businesses and their end consumers find themselves. Income decrease, cross-border travel restrictions, altering consumer demand, and the changing conduct of market participants are only a few examples (Marklund, *et al.*, 2020) [8]. The worldwide shutdown, social isolation, and other measures used to prevent the spread of the COVID-19 virus have prompted consumers to spend more money on online marketplaces (Alessa *et al.* 2021) [7].

Because of revenue losses, limited transportation alternatives, and pandemic mitigation measures, B2B manufacturers and sellers have been driven to reduce production and marketing costs, discover new suppliers both locally and globally, and accelerate decision-making. International trade agreements provided national enterprises with the option to develop their product lines in order to achieve the goals of import substitution and delivering critical resources to other businesses and branches of international organizations (Wanasida *et al.* 2021; Borodin, Shash, Panaedova, Frumina, & Mityushina, 2019) [9, 10]. Purchase power and

cross-border mobility in business-to-consumer marketplaces, on the other hand, have decreased. Consumers have also turned their attention away from price and toward health and safety, while still favoring affordable products and services (Guthrie, Fosso-Wamba, & Arnaud, 2021) ^[11].

Comfort and coziness-enhancing products that enhance the comfort and cosines of a living area gained more attention than they would have otherwise received. Overall, consumers were forced to postpone some of their requests due to the uncertainty and unpredictability of the current scenario (Abid, & Jie, 2021) ^[12].

Increasing digitization in both the industrial and consumer markets, as well as making it easier to identify and buy things online, were priorities for both industries (Huynh *et al.*, 2021) ^[13]. COVID-19 has had a tremendous influence on individual lives, social relationships, culture, economic activities, and government policies, to name a few. In addition, it has had an impact on company and has compelled them to find new ways of doing business (Puriwat & Tripopsakul, 2021) ^[14].

Humans have faced numerous crises throughout history, which have later proven to be necessary for the advancement of society. For instance, these types of crises push governments to focus on establishing and strengthening healthcare systems, in addition to using a broad variety of contemporary technology, in order to counteract the consequences of sickness Katsiki, & Ferrannini, 2020) ^[15].

This study is being undertaken today in order to assess how Turks would behave during COVID-19 in terms of consumer behavior. The outbreak has led to a substantial spike in online sales. Due to restricted access to physical stores and the financial constraints of many consumers, an increase in online purchases, which has continued to climb, was inevitable as people resorted to the internet to do their shopping (Dannenberg *et al.* 2020) ^[16].

As a consequence of the COVID-19 pandemic, a great number of people's behaviours and goals in life have been redirected, which has resulted in changes in their shopping patterns. The purpose of the current research is to evaluate these modifications. In order to accomplish this goal, the researchers investigated the impact that the pandemic had on e-commerce across different companies in order to have a better understanding of the priorities of online consumers in general. Specifically, the purpose of this research is to put into practice the suggested technique for measuring the impact of COVID-19 on online companies and how customer purchase behavior has changed, which will aid in the identification of emerging trends and patterns of online shopping during pandemics. So it may form part of a complete toolset for the development of e-commerce strategies, which can be utilized both at the state level and by individual enterprises.

Literature Review

After reporting COVID-19, it was discovered that the virus was being spread from person to person, such as being one of the most infectious viruses (Chen *et al.*, 2020; Lai, Shih, Ko, Tang, & Hsueh, 2020) ^[20, 21]. COVID-19 has had a profound influence on international economies, and researchers all around the globe have expressed their growing alarm about this fact. Companies in Tokyo were forced to close their doors, as witnessed by Inoue and Todo (2020) ^[25], causing production to suffer. Bullard (2020) ^[18] investigated the potential impact on the US economy and concluded that the quick introduction of COVID-19 in the United States would

have a negative impact on half of the country's GDP. The French economy, according to a poll conducted by Baldwin and Mauro (2020) ^[19] in the final week of March, is operating at its usual level in 65 percent of cases. Meanwhile, Muellbauer (2020) ^[24] looked at the influence of COVID-19 on GDP in the aftermath of the disaster. Meanwhile, McKibbin and Fernando (2020) ^[23] said that a scarcity of labor supply is caused by morbidity as a result of an illness outbreak in the United States. Several earlier studies have observed similar findings (Bartik *et al.*, 2020; Cajner *et al.*, 2020; Coibion *et al.*, 2020) ^[17, 22, 20]. In addition to that, throughout such a pandemic consumer's buying behaviors have altered in various aspects and ways.

Corona Virus

It is believed that Coronavirus is one of the most infectious viruses, and that it primarily manifests itself after infecting a person with a severe acute respiratory crisis. Because of its widespread spread throughout a large number of countries, the illness has been classified as a pandemic public health problem. A large amount of time is being saved by the COVID-19 program, which is hastening the country's move to electronic commerce. It is projected that the clients of the country would engage in social distancing behavior. A major effect on both the national and global economies may be traced back to COVID-19, which has been designated as an independent variable. In response to this specific epidemic, the citizens of the country have put more restrictions on both persons and companies. This virus has caused a great number of tragedies in the global economy as a result of its spread. COVID-19 has been designated as the independent variable in this specific research because it has a higher impact on the whole economy and the overall well-being of the entire population than any other pandemic (Balkrishna *et al.*, 2017) ^[27].

When the Covid-19 outbreak broke out, people's consumption habits and purchasing habits changed dramatically, and they started to depend more and more on online platforms to suit their needs (Alaimo *et al.*, 2020) ^[28]. A major movement in people's views and behavior has occurred as a consequence of new legislation, which has indicated a considerable shift in people's trust, social integration, and social consciousness (Hassan & Soliman, 2021) ^[29].

Customer Behavior

"Consumer behaviour is the mental, emotional and physical activities that people engage in when selecting, purchasing, using and disposing of products and services so as to satisfy needs and desires" (Priest, *et al.*, 2013) ^[30]

It is important to note that the phrase "customer buying behaviour" refers to the activities that consumers engage in before and during their purchases. These activities include the process of product selection and purchase (Rita *et al.*, 2019) ^[31]. When it comes to predicting the activities of consumers and future purchases, customer behaviour is a crucial component in the retailing sector. For better understanding of client behaviour throughout the purchase process, it is essential to grasp their psychological buying component (Srivastava & Barmola, 2010) ^[1]. Purchases are made by customers via a variety of channels, including buying and shopping. In purchasing, the consumer has prior knowledge of the desired product, has specifically targeted it, and has acquired it with the purpose of meeting a particular need.

Shoppers like and want products they do not need, which is referred to as shopping. Shopping is a phrase that refers to the delight and desire that comes from browsing for a product that the consumer does not need (Choura, & Abou Jeb, 2021) [2].

Consumer Behavior during COVID-19

Residents are being encouraged to maintain social distance from one another and stay inside their homes as societies all around the globe have been placed under lockdown. Because we are social creatures, being alone may be detrimental to our well-being and productivity (Cacioppo & Hawkley, 2009) [3]. In addition to worse cognitive function, negativity, despair, and increased vulnerability to social dangers have all been linked to feelings of loneliness. There are signs that this is occurring during the present pandemic, as shown by a surge in domestic violence, quarrels among neighbours, and an increase in the purchases of weapons during this time period (Campbell, 2020) [4]. Although not previously documented, we have seen an increase in other, more positive sorts of behavior that are a result of social separation. Increasingly, people are building nests and learning new skills, as well as taking better care of their surroundings. For example, people could learn how to bake, strive to become more fit, complete a puzzle, or read more books in general. Purchases of cleaning goods have also increased, as has the amount of waste that is being repurposed.

Meanwhile, we are consuming more fast food and cleansing ourselves less often. In preparation for the imminent catastrophe, people are stockpiling essential items, making hasty purchases, and moving to more isolated areas. This is a sign that what is occurring to us and our actions is complicated, and it would be intriguing to do additional research into this issue. The lockdowns have had a number of unanticipated consequences, one of which has been a major increase in the usage of the Internet and social media platforms, in particular Facebook and Twitter. Previous research has indicated that human beings who feel lonely are more likely to use social media, and in some circumstances, they may even prefer using social media above having a genuine relationship (Nowland, Necka, & Cacioppo, 2018) [5]. Social media has the potential to bring out the worst in us, particularly via the practise of trolling and the propagation of fake news. The fact that "real life" is experienced in the actual world and that the Internet is merely a "add-on" that has, in the majority of cases, very little influence on the actual world helps to mitigate the adverse effects, at least to some degree. After all, "real life" is experienced in the actual world. We may compartmentalize and differentiate between what is important, and what is not important, in this way.

E-Business and COVID-19

To communicate company information, manage business networks, and conduct transactions online, e-commerce is used. Electronic data interchange, often known as the computer-to-computer transfer of standardised electronic transaction records, had its beginnings as a practise in 1993, when the Berlin Airlift took place (Zwass, 1999) [33]. Because of its ability to convey products, organise, and maintain network linkages, electronic commerce has altered the definition of a company. Previously, a company was described as one that manufactured a product and offered a service to customers (Steinfeld, Wigand, Markus, & Minton, 2006). The combination of technological advancement and effective database administration drives the growth of

electronic commerce. Businesses all over the world have had their competitive potential shifted as a result of advancements in technology and other forms of communication, which have brought about changes in organisational structures and commercial operations (Steinfeld *et al.*, 2006). By using computers and the internet on a large scale, consumers and businesses may now conduct paperless transactions and conduct economic operations via online connections. The success of an e-commerce company is heavily influenced by the use of information technology. Therefore, it enhances the ability to coordinate commercial transactions between buyers and sellers inside a firm or across businesses in the same industry (Steinfeld *et al.*, 2006).

The COVID-19 epidemic is exerting tremendous strain on the e-commerce industry, resulting in substantial limits. The e-commerce industry is designated as the dependent variable since the increase or decrease in demand for a certain online platform is greatly influenced by the broad implementation of COVID-19 as well as by the behaviour of customers in response to this worldwide problem, respectively (Ahmad, Haroon, & Hui 2020) [34]. The internet company is heavily reliant on these two aspects, both of which have an impact on the general demand for it in the marketplace. Customers have turned their attention away from traditional retail techniques and toward ecommerce approaches as a result of this. This is the only way the nation's population will be able to survive a pandemic, according to experts. More and more people are attempting to take advantage of the conveniences offered by internet grocery stores. Tracking data from Apptopia shows that popular grocery apps like Walmart Grocery, Instacart, and Shiip have seen a large increase in daily downloads since the end of February, according to Apptopia (Mehraeen, et.al., 2020) [35].

Financial Risk

One of the most prominent concerns linked with internet buying is the perception of financial risk. In order to avoid the risk of accumulating credit card fraud, identity theft, and other cybercrime, most internet consumers prefer to purchase in an old-fashioned manner, rather than risk their personal information being hacked or leaked by the sellers. Fear of losing money due to internet buying is a financial concern (Jacoby & Kaplan, 1972) [36]. Consumers fear that their credit card numbers will be stolen, their bank accounts will be hacked, and their personal accounts will be traumatized as a result of this danger.

The perceived security concern is that internet firms may obtain personal information about people and utilize it without their permission or knowledge. It has a detrimental impact on purchasing behavior because it leads buying impulses or intentions to go awry. Despite the rise in the number of people purchasing online, this remains the most dreaded danger. Arshad, Zafar, Fatima, & Khan, (2015) [37], however, found that although while security concerns were often mentioned as a reason for avoiding purchasing online, they did not have a significant impact on the frequency of online transactions. The impact of perceived security risk on purchasing intention is still a bit of an open question.

Since the Internet genes owned by e-commerce companies are always affected by the changing factors of mobile Internet technology iteration and business model innovation, the risks will always exist objectively. Coupled with the uncertainty of the unknown factors, it is easy to cause financial risks. Can be roughly divided into the following categories.

Conceptual Model

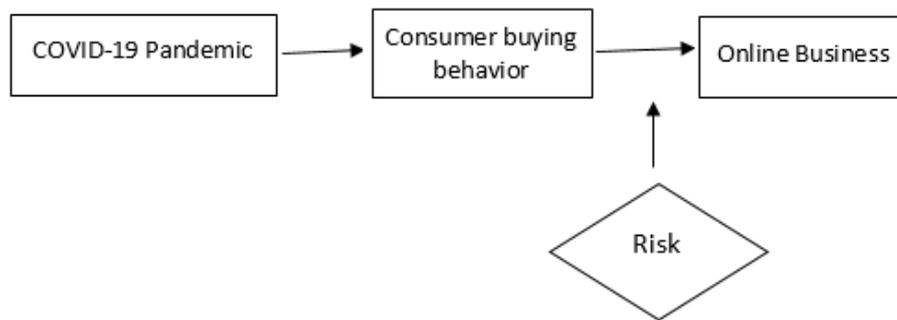


Fig 1: Conceptual Model

Research Hypothesis of the Study

H1: The covid-19 pandemic has a significant impact on the purchasing behavior of consumers.

H2: The Covid-19 has a significant effect on online business in Turkey.

H3: Consumer behavior mediates the relationship between COVID-19 and online business.

H4: Financial risk moderate the relationship between consumer buying behavior and online business.

Methodology

To achieve this goal, the objective of this research is to investigate the link between three major factors in this study, namely, the COVID-19 effect, e-business, and customer behavior. Quantitative methods are used in this investigation. One of the objectives of this study is to determine whether or not the COVID-19 epidemic has had an impact on the purchasing consumers.

Population and Sampling Technique

The studies demographic is made up of Istanbul residents who are acquainted with the digital world and like shopping online, particularly in Beşiktaş, Istanbul. About 700 people use it, and their buying decisions are influenced by such factors as their age, gender, marital status, and educational attainment. For the purpose of the research, a sample size was selected that was made up of consumers who performed the majority of their shopping online and were knowledgeable about the tactics that are used by internet marketing firms. There were a total of $n = 332$ people included in the sample, which is equivalent to 31.7% of the overall population under consideration in the research.

Data Collection

The primary goal of this thesis is to determine how the pandemic influenced the customer behavior of the Turkish fashion sector, specifically. The majority of the primary data was gathered using an online self-administered survey. The poll was sent out using the company's email distribution tool. The survey was carried out in English alone. The data for the empirical portion of the study was gathered over the course of 20 days, from March 23rd, 2022, to April 13th, 2022.

Questionnaire Design

We modified the questionnaire and selected the questions based on the data that we obtained from earlier research and operational definitions. Before being sent to respondents, the questionnaires were put through a reliability test. The results

of this test indicated whether or not the questions posed on the questionnaires were reliable. An online Google form was used to distribute a questionnaire to a variety of respondents so that their thoughts on the behavior of online shoppers could be gleaned from the responses.

In order to collect information for the purpose of the research, a survey questionnaire was designed as a device to assist in the process of data gathering. It included both open-ended and closed-ended questions. Two separate sections of the questionnaire had the same information in different order. In the first part of the survey, known as Section A, the respondent was prompted to submit demographic information such as age and gender. In the second part, known as Section B, the respondent was presented with 18 closed-ended questions that were based on the demographic information. A modification was made to the Likert Scale such that it now includes choices ranging from 1-Strongly Disagree to 5-Strongly Agree. The total number of questions asked was 26.

Data Analysis

In the course of the research, the version 23 of SPSS was used for the purpose of doing calculations involving numerical percentages. Amongst other methods, SPSS analytical processes such as analysis related regression, correlation, and descriptive statistics were implemented.

Results and Analysis

Descriptive Analysis

There were a total of 332 respondents, from whom information was obtained on their experiences. The data from the respondents has been put into the Statistical Packages for Social Science (SPSS) for analysis, specifically for the descriptive demographic analysis of the respondents. The accompanying Table contains descriptive information on the genders of the participants, as well as other information. When it comes to gender, 55.7 percent ($n=185$) of the 332 persons are male, and 44.3 percent ($n=147$) are female when the variable is considered. According to the conclusions of this survey, males constitute the vast majority of those who took part in this study. Similarly for the age variable, which shows the highest respondent rate at the age group 26-35 and make 42.2% with 140 respondents. Second highest percentage of group at the age of 18 to 25 which constitute 33.4% with 111 respondents. The third highest respondent age group from 36-45 and above from 45 with percentage 5.4% and 18 respondent. Table also shows the education level of respondents from which 31.6% respondents are graduated

and 30.1% have master degree. While the lowest degree is under graduation and only 10% respondents are involved. The frequency of online consumers is seen in below Table. All respondents shopped on the internet.

Table 1: Demographics Variable

Variable	Sub-Category	Frequency	Percentage
Gender	Male	147	44.3
	Female	185	55.7
	Total	332	100.0
Age	18-25	111	33.4
	26-35	140	42.2
	36-45	63	19.0
	46-55	18	5.4
	Total	332	100.0
Education	Under graduation	35	10.5
	Graduation	105	31.6
	Masters	100	30.1
	Ph.D.	92	27.7
	Total	332	100.0
Have you ever bought anything online	Yes	332	100.0
	No	0	0
	Total	332	100.0

Reliability Test

Since the Cronbach alpha values for each variable fall within

the acceptable range—that is, between 0.5 and 0.6—it is logical to conclude that the dataset and the questionnaire can be relied upon. This conclusion was reached as a result of the fact that the acceptable range for this range is 0.5 to 0.6. We were able to have our questionnaire approved since it was considered trustworthy.

Table 2: Reliability Test of Variables

Sr #	Variable	Cronbach Alpha	Items
1	Consumer buying behavior	0.881	6
2	Online Business	0.614	3
3	Covid-19	0.611	4
4	Financial Risk	0.872	5

Descriptive Statistics

There are four variables constructions shown in the table below, each with a minimum, maximum, mean, and standard deviation. The lowest value for all of the constructions is 1 and the maximum value for all of them is 5. Another interesting result is the average score of all constructions (which is between $M=3.63$ and $M=3.15$), which is between $M=3.63$ and $M=3.15$. In the same way, if the standard deviation were used, the highest and minimum scores would be 0.90 and 0.59, respectively.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Consumer buying behavior	332	1.00	5.00	3.1591	.90234
Online Business	332	1.00	5.00	3.4056	.80373
Covid_19	332	1.00	5.00	3.6378	.72427
Financial Risk	332	1.00	5.00	3.2108	.59839
Valid N (listwise)	332				

Correlation

Correlation coefficients of -1.00 and +1.00 show a completely negative association, respectively. A positive correlation exists between two variables if the growth of one variable can be shown to be predicted by the growth of the

other variable. On the other hand, a negative link is stated to exist when one variable increases while the other variable decreases. A value of 0.00 is not related to anything else in any way, and there is no connection between the two.

Table 4: Correlations

		Consumer buying behavior	Online Business	Covid_19	Financial Risk
Consumer buying behavior	Pearson Correlation	1	.641**	.542**	.426**
	Sig. (2-tailed)		.000	.000	.000
	N	332	332	332	332
Online Business	Pearson Correlation	.641**	1	.448**	.436**
	Sig. (2-tailed)	.000		.000	.000
	N	332	332	332	332
Covid_19	Pearson Correlation	.542**	.448**	1	.340**
	Sig. (2-tailed)	.000	.000		.000
	N	332	332	332	332
Financial Risk	Pearson Correlation	.426**	.436**	.340**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	332	332	332	332

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

Regression Analysis

For the present study, to test the main hypotheses, multiple linear regression was used. For the analysis, we have used mean values of the variables. Mean values provide a single standardized value for the consolidated measurement of the variable and all the dimensions of the variable. The results of Table 5 illustrate the impact of COVID-19 Pandemic on

Online Business and Consumer Buying Behavior. The coefficient of correlation ($R=0.448$) suggests a modest positive association between the independent variables (COVID-19 Pandemic) and the dependent variable (online business). The adjusted R square is 0.198, which indicates that the independent variables can predict 19.8 percent of the variance in the model, or, to put it another way, that the

independent variables can explain 19.8 percent of online business. The threshold of significance is less than 0.05 in this instance. As a result, our hypothesis is supported.

Table 5: Regression Analysis

	Model 1	Model2
	Online Business R ² = .201 F= 82.954	Consumer Buying Behavior R ² = .294 F= 137.279
COVID-19 Pandemic	β = 0.497***	β = 0.512***

Table 6: Mediation Analysis

Relationship of Variable	Direct Relation		Indirect Effect		Total Effect	VAF	Mediation Type
	Beta	P Values	Beta	P Values	Beta		
COVID-19 -> Consumer buying behavior -> online business	0.548	0.021	-0.245	0.026	0.303	-81%	Partial Mediation

Moderating Analysis

The Hayes approach, which produces standardized values of explanatory factors repeatedly, is used to establish a moderation variable in order to test the moderation connection. In the case of communication variables, it generates product factors. The hypothesis H4 is Financial risk

moderate the relationship between consumer buying behavior and online business. The direct impact of financial risk on Consumer Buying Behavior and online business is represented by value of = 0.278, $p = 0.006$.

Table 7: Moderation Analysis

Hypothesis	Path Coefficient	Coeff.	Stand. Dev	T-value	P- values	Decision
	Financial Risk -> Online Business	0.278	0.107	2.605	0.006	Agree
H4	Financial Risk * Consumer Buying Behavior -> Online Business	-0.02	0.044	0.447	0.030	Not-agree

Discussion

This research was conducted with the intention of investigating and putting into practise the approach that was recommended for assessing the effect of COVID-19 on online enterprises and how consumer purchasing behaviour has altered in relation to online shopping. By using R code (data) and prop, we were able to determine both the frequency and the relative frequency. According to the descriptive statistics of the demographic characteristics, there are 185 males, which accounts for 55.7 percent of the total population of 332, while there are 147 females, which accounts for 44.3 percent. Similarly for the age variable, which shows the highest respondent rate at the age group 26-35 and make 42.2% with 140 respondents. Second highest percentage of group at the age of 18 to 25 which constitute 33.4% with 111 respondents. The third highest respondent age group from 36-45 and above from 45 with percentage 5.4% and 18 respondent. It also shows the education level of respondents from which 31.6% respondents are graduated and 30.1% have master degree. While the lowest degree is under graduation and only 10% respondents are involved.

This research may be comparable to the models described in the Literature Review, with an emphasis on price sensitivity and perceived quality as the stimulus that influences purchasing behaviour. Customers' purchasing behaviour has been shown to shift in times of crisis, such as the recent financial and health care crises, as buyers become more price sensitive and quality conscious (Sans *et al.*, 2008; Miller *et al.*, 2012; Kosicka-Gebaska & Gebski, 2013) [38, 39, 40].

Since the beginning of the COVID-19 pandemic, Nielsen investigations have discovered that consumers' purchasing patterns have shifted (Nielsen, 2020a; Nielsen, 2020b). Furthermore, this study discovered in particular that consumers' purchasing patterns have shifted as a result of consumers' price sensitivity as well as their concern for

perceived quality. Taking into account the purpose of this research is to put into practice the suggested technique for measuring the impact of COVID-19 on online companies and how customer purchase behavior has changed, which will aid in the identification of emerging trends and patterns of online shopping during pandemics. So it may form part of a complete toolset for the development of e-commerce strategies, which can be utilized both at the state level and by individual enterprises

Despite the fact that the COVID-19 pandemic is unlike any other crisis that has occurred in the past, such as with regard to the preventative measures taken by each nation, the global spread of the virus, and the level of risk that is perceived, similarities to the earlier crises can still be found in relation to shifts in purchasing behaviour. The results show that the lessons learned from prior studies in crises might be valuable for anticipating changing purchase behaviour in the present crisis and most likely in subsequent crises as well. In addition, existing models of purchasing behaviour may be utilised for the purpose of attempting to comprehend the nature of purchasing behaviour, as well as for the purpose of creating new and modified models. Consumer purchasing behaviour is still founded on attitudes, motives, culture, and intents, despite the fact that the conditions surrounding the global financial crisis in 2008, for example, and the present pandemic are quite different from one another (Ajzen, 1985; Blackwell *et al.*, 2006). But the present COVID-19 issue is different from prior crises in a number of ways, one of which is that it does not largely fit into the category of a financial crisis, and it extends beyond just being a health catastrophe (Rolandberger, 2020). As a result, the results encourage a debate between earlier research and current data on altered patterns of consumer purchasing behaviour.

The findings, which provide credence to Hypotheses 1 and 2, indicate that there is a constructive connection between the

epidemic and the spending patterns of consumers and online business in Turkey. Nielsen (2020b) has previously provided suggestions for this tendency, but they have not been tied to particular product categories. The study that was carried out allows for the data from Nielsen to be broken down for specific product categories. The fact that people prioritise (Vancic, & Pärson, 2020) ^[41] and their own danger above all other characteristics explains why consumers' changing meat-buying habits may be attributed to previous disasters (Sans *et al.*, 2008) ^[38]. It was discovered that the perceived quality of an item has a higher effect on the modified purchasing behaviour than the price sensitivity of an item does when it comes to shopping online. It is also important to point out that the prices of items may vary quite a bit, which is another possible explanation for why price sensitivity is a less important factor than the way something is viewed (Vlontzos *et al.*, 2017). It is also essential to point out the growing significance of goods over the last several years, since this topic is now being discussed.

The third hypothesis, which posits that the influence of customer behaviour might act as a mediator between COVID-19 and online business, is one that has been shown to be correct. This research looked at new elements associated to Covid-19 limits that are impacting consumer purchase behaviour, and it did so by addressing those issues. The Covid-related issues that are discussed in this research are focused with the limitations that the Covid-19 epidemic presents. The results of this research mirror those of Bhatti *et al.* (2020) ^[46], who investigated the worldwide patterns of e-commerce during the COVID-19 season and discovered that there was an increase in the amount of people purchasing online around the world. Pantano *et al.* (2020) discovered that customers reacted favourably as retailers explored methods to meet the demands of consumers via online buying. These researchers found that consumers responded positively as retailers sought ways to accommodate the needs of consumers through online shopping. A number of other research have linked COVID-19 to an increase in the amount of money spent online (e.g., Nguyen *et al.* 2020; Kim 2020; Bounie, Camara, & Galbraith, 2020) ^[45, 46].

Hypothesis H4, where perceived risk moderate the relationship between consumer buying behavior and online business and this hypothesis also accepted. During the pandemic, the enjoyment that may be had from shopping at a store is diminished due to the perception of an increased risk of infection (Szymkowiak *et al.*, 2021) ^[42]. Previous study (Grashuis *et al.*, 2020) ^[44] shown that as the number of COVID19 infections rises in a certain region, customers have a decreased desire to spend inside of grocery stores due to their anxiety over the virus. It's possible that perceived danger is connected to the possibility of sickness or a scarcity of goods (Naeem, & Bhatti, 2020) ^[46]. According to the findings of the most recent research, perceived danger is made up of the risk associated to the possibility of an infection spreading, and as a result, informants do not want to go into crowded locations.

Conclusion

After shutting down nation after country, the pandemic coronavirus has altered the course of history in the last several months in profound ways. Businesses, on the other hand, will almost certainly suffer a significant economic setback. As a result of the lockdown, technology is trying its best to allow people to stay in contact online. In recent years,

the use of social media and other online activities has increased dramatically. In the period January to March 2020, retail online platforms had a 6% growth in worldwide traffic. Statista.com reports that 14.34 billion users visited the website in March. Increased activity has been seen as a result of the worldwide COVID-19 epidemic, which has forced millions of individuals to remain at home in order to prevent further spread of this disease. For consumers, there is little else they can do except shop online for their everyday necessities such as food and other necessities (www.statista.com).

Customers now check several search engines, i.e. websites, and even marketplaces before making a final decision to buy. In addition, various e-commerce platforms carry items of the same kind with varied pricing possibilities, resulting in a hunt for the best price, which many people fail to find. 13.6 percent of those who answered the survey were dissatisfied with the payment alternatives. This may be due to concerns about the security of online transactions and payments, which is one potential explanation. While the reality is that the vast majority of Turks do not even have a bank account, this is not the case in the United States. On the other hand, according to current figures, just 3% of internet users in Turkey have made purchases via digital channels, compared to 72% of internet users in the United States, who are digital shoppers. 12.5 percent of respondents are concerned about counterfeit items, which shows that this is the least statistically significant but most frightening consumer-facing problem.

In order to protect its customers from becoming victims of fraud, e-commerce platforms should have a robust set of guidelines. For example, Alibaba pioneered a method of reducing the selling of counterfeit goods. The covid-19 pandemic has had an effect on internet businesses all around the globe. According to a survey published by Research and Markets, internet shopper penetration rises during a pandemic. However, owing to significant losses in the in-store and travel categories, it is predicted that the total number of payments would fall in 2020. The findings of this research, based on the data analysis, demonstrate the well-documented favourable effect of COVID-19 on Turkish internet business. The established positive COVID-19 has a bigger influence on both other variables, i.e. consumer purchasing behaviour and e-business, than the established negative COVID-19. COVID-19, on the other hand, poses a danger to the Turkish economic climate. Retailers are facing the most challenging scenario and obstacles, which is resulting in a decrease in client purchasing behaviour. The inventory is thus reduced as a consequence of the inability to transport and provide goods.

According to the findings, online firms have a variety of challenges during the lockdown, which has an effect on sales and output. Because to inconsistent supplies of intermediate products and raw materials, as well as supply chain distortion, businesses have experienced revenue losses and a scarcity of money to carry out their operations.

Limitations

The findings of this research are significantly limited as a result of the low number of people that participated in the survey; the total number of survey answers that are relevant is (332). The survey's dissemination was restricted to those who knew the authors and their network of contacts. More accurate data may have been gathered if the poll was made available to a wider spectrum of people throughout Turkey.

Due to the limited funds available, the distribution of the survey could not be contracted out to survey providers.

References

- Barmola KC, Srivastava SK. Role of Consumer Behaviour in Present Marketing Management Scenario. *Productivity*. 2010; 51(3):268.
- Choura A, Abou Jeb S. The Impact of Covid-19 on the Change of Customer Buying Behavior.: A study on the change of Swedish millennials' buying behaviour for fashion products with respects to selecting between online and offline retail channels, 2021.
- Cacioppo JT, Hawkey LC. Perceived social isolation and cognition. *Trends in cognitive sciences*. 2009; 13(10):447-454.
- Campbell AM. An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic science international: reports*. 2020; 2:100089.
- Nowland R, Necka EA, Cacioppo JT. Loneliness and social internet use: pathways to reconnection in a digital world?. *Perspectives on Psychological Science*. 2018; 13(1):70-87.
- Zhang Y, Li M, Zhang L, Li Q, Yang P, Kong X, *et al.* Association between comorbidities and extraglandular manifestations in primary Sjögren's syndrome: a multicenter cross-sectional study. *Clinical Rheumatology*. 2020; 39(9):2677-2688.
- Alessa AA, Alotaibie TM, ELMOEZ Z, ALHAMAD HE. Impact of COVID-19 on entrepreneurship and consumer behaviour: A case study in Saudi Arabia. *The Journal of Asian Finance, Economics and Business*. 2021; 8(5):201-210.
- Marklund E, Leach S, Axelsson H, Nyström K, Norder H, Bemark M, Gisslén M. Serum-IgG responses to SARS-CoV-2 after mild and severe COVID-19 infection and analysis of IgG non-responders. *PloS one*. 2020; 15(10):e0241104.
- Wanasida AS, Bernarto I, Sudibjo N, Purwanto A. The role of business capabilities in supporting organization agility and performance during the Covid-19 pandemic: An empirical study in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(5), 897-911.
- Borodin A, Shash N, Panaedova G, Frumina S, Mityushina I. The impact of the publication of non-financial statements on the financial performance of companies with the identification of interpeccoral features, 2019.
- Guthrie C, Fosso-Wamba S, Arnaud JB. Online consumer resilience during a pandemic: An exploratory study of e-commerce behavior before, during and after a COVID-19 lockdown. *Journal of Retailing and Consumer Services*. 2021; 61:102570.
- Abid A, Jie S. Impact of COVID-19 on agricultural food: A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. *Food Frontiers*. 2021; 2(4):396-406.
- Huynh G, Tran TT, Nguyen HTN, Pham LA. Covid-19 vaccination intention among healthcare workers in Vietnam. *Asian Pacific Journal of Tropical Medicine*. 2021; 14(4):159.
- Puriwat W, Tripopsakul S. Explaining an adoption and continuance intention to use contactless payment technologies: during the COVID-19 pandemic. *Emerging Science Journal*. 2021; 5(1):85-95.
- Katsiki N, Ferrannini E. Anti-inflammatory properties of antidiabetic drugs: a "promised land" in the COVID-19 era?. *Journal of Diabetes and its Complications*. 2020; 34(12):107723.
- Dannenberg P, Fuchs M, Riedler T, Wiedemann C. Digital transition by COVID-19 pandemic? The German food online retail. *Tijdschrift voor economische en sociale geografie*. 2020; 111(3):543-560.
- Bartik AW, Bertrand M, Cullen ZB, Glaeser EL, Luca M, Stanton CT. How are small businesses adjusting to COVID-19? Early evidence from a survey (No. w26989). National Bureau of Economic Research, 2020.
- Bullard JB. The impact of COVID-19 on the well-being of division III student-athletes. *The Sport Journal*. 2020; 22(5):1543-9518.
- Baldwin R, Di Mauro BW. Economics in the time of COVID-19: A new eBook. *VOX CEPR Policy Portal*, 2020, 2-3.
- Coibion O, Gorodnichenko Y, Weber M. Labor markets during the COVID-19 crisis: A preliminary view (No. w27017). National Bureau of economic research, 2020.
- Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, Zhang L. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *The lancet*. 2020; 395(10223):507-513.
- Cajner T, Crane LD, Decker RA, Grigsby J, Hamins-Puertolas A, Hurst E, *e al.* The US labor market during the beginning of the pandemic recession (No. w27159). National Bureau of Economic Research, 2020.
- McKibbin WJ, Fernando R. Global macroeconomic scenarios of the COVID-19 pandemic, 2020.
- Muellbauer J. The coronavirus pandemic and US consumption, 2020.
- Inoue H, Todo Y. The propagation of economic impacts through supply chains: The case of a mega-city lockdown to prevent the spread of COVID-19. *PloS one*. 2020; 15(9):e0239251.
- Lai CC, Shih TP, Ko WC, Tang HJ, Hsueh PR. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. *International journal of antimicrobial agents*. 2020; 55(3):105924.
- Balkrishna A, Pokhrel S, Singh J, Varshney A. Withanone from *Withania somnifera* may inhibit novel coronavirus (COVID-19) entry by disrupting interactions between viral S-protein receptor binding domain and host ACE2 receptor, 2020.
- Alaimo LS, Fiore M, Galati A. How the COVID-19 pandemic is changing online food shopping human behaviour in Italy. *Sustainability*. 2020; 12(22):9594.
- Hassan SB, Soliman M. Covid-19 and repeat visitation: Assessing the role of destination social responsibility, destination reputation, holidaymakers' trust and fear arousal. *Journal of Destination Marketing & Management*. 2021; 19:100495.
- Priest J, Carter S, Statt DA. *Consumer behaviour*. Edinburgh Business School, Harington-Watt University, UK, 2013.
- Rita P, Oliveira T, Farisa A. The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*. 2019; 5(10):e02690.
- Steinfeld C, Wigand R, Markus ML, Minton G. Promoting e-business through vertical information

- systems standards: Lessons from the US home mortgage industry. Standards and Public Policy, Cambridge, England: Cambridge University Press, forthcoming, 2006.
33. Zwass V. Structure and macro-level impacts of electronic commerce: from technological infrastructure to electronic marketplaces. Emerging Information Technologies. Thousand Oaks, CA: Sage Publications, 1999, 289-315.
 34. Ahmad T, Haroon MB, Hui J. Coronavirus disease 2019 (COVID-19) pandemic and economic impact. Pakistan journal of medical sciences. 2020; 36(Covid19-S4):S73.
 35. Mehraeen E, Karimi A, Barzegary A, Vahedi F, Afsahi AM, Dadras O, *et al.* Predictors of mortality in patients with COVID-19—a systematic review. European journal of integrative medicine. 2020; 40:101226.
 36. Jacoby J, Kaplan LB. The components of perceived risk. ACR special volumes, 1972.
 37. Arshad A, Zafar M, Fatima I, Khan SK. The impact of perceived risk on online buying behavior. International Journal of new technology and research. 2015; 1(8):13-18.
 38. Sans P, De Fontguyon G, Giraud G. Value-based labels for fresh beef: an overview of French consumer behaviour in a BSE crises context. International Journal of Consumer Studies. 2008 ; 32(5):407-413.
 39. Miller G, Zhu G, Wright MJ, Hansell NK, Martin NG. The heritability and genetic correlates of mobile phone use: A twin study of consumer behavior. Twin research and human genetics. 2012; 15(1):97-106.
 40. Kosicka-Gebska M, Gebski J. Impact of economic crisis on consumer behaviour towards meat. Acta Scientiarum Polonorum. Oeconomia, 2013, 12(3).
 41. Vancic A, Pärson GFA. Changed Buying Behavior in the COVID-19 pandemic: the influence of Price Sensitivity and Perceived Quality, 2020.
 42. Szymkowiak A, Melović B, Dabić M, Jeganathan K, Kundi GS. Information technology and Gen Z: The role of teachers, the internet, and technology in the education of young people. Technology in Society. 2021; 65:101565.
 43. Bounie D, Camara Y, Galbraith JW. Consumers' mobility, expenditure and online-offline substitution response to Covid-19: Evidence from French transaction data, 2020. Available at SSRN 3588373.
 44. Grashuis J, Skevas T, Segovia MS. Grocery shopping preferences during the COVID-19 pandemic. Sustainability. 2020; 12(13):5369.
 45. Nguyen LH, Drew DA, Graham MS, Joshi AD, Guo CG, Ma W, Zhang F. Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study. The Lancet Public Health. 2020; 5(9):e475-e483.
 46. Naeem SB, Bhatti R. The Covid-19 'infodemic': a new front for information professionals. Health Information & Libraries Journal. 2020; 37(3):233-239.