

FACTORS INFLUENCING THE RAPID GROWTH OF ONLINE SHOPPING DURING COVID-19 PANDEMIC TIME IN DHAKA CITY, BANGLADESH

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ABSTRACT

COVID-19 has great impact on global marketing as well as on consumers' behavior and attitude. In Bangladesh, the effect of COVID-19 also brought some major changes in consumers' lifestyle, purchasing and consumption pattern. People are now avoiding in-store purchase and looking for alternative channel of product sources. The purpose of the study is to explore the factors influencing the rapid growth of online shopping during COVID 19 pandemic time in Dhaka City, Bangladesh. Retail marketing of Dhaka city has been significantly narrowed due to unexpected lockdown and restriction on human movement. Therefore change in buying behavior of consumers is comprehended due to the influence of COVID 19. The factors those are encouraging consumers to go for online shopping and to ensure contactless purchase and payment are examined in this research. Specifically, the research explores how mass consumers of Dhaka city preferred online shopping over in-store purchase during this pandemic. A structured questionnaire was used to collect data from September 15, 2020 to October 29, 2020. Data was collected from 154 Bangladeshi online consumers who live in Dhaka city through google form. Judgmental sampling technique was used to select the sample. Descriptive statistics analysis and principle component factor analysis were used to analyze the data. Result of this research revealed that online shopping by the mass consumers has increased significantly during the pandemic time. After conducting principal component factor analysis, it is found that three major factors labelled as Benefits of Online Shopping, Technological Supports and Convenience influenced consumers of Dhaka city to go for online shopping. Among these factors, the first factor which is Benefits of Online Shopping found the most significant factor to explain the rapid acceptance of online shopping by the consumers of Dhaka city. This study has some implications for online marketers regarding e-marketing strategies and importance of online retail marketing.

Keywords: Online Shopping, Judgmental Sampling, Factor Analysis, Covid-19

INTRODUCTION

The epidemic of Corona Virus has seriously affected the world's economy which has already been affected by lots of factors. The impact of this pandemic reached Bangladesh a bit late compared to other countries, but the impact was so much intense from both the health and economic viewpoint. However, because of the globalization, the developing economy like Bangladesh has faced the effect of this pandemic along with the rest of the world. The COVID-19 pandemic has deeply changed the world. In response to this pandemic Bangladesh also has taken a good number of protective measures adopted

by the other countries around the world such as social distancing and restriction on the human movement or lockdowns. Moreover, the country was forced to partial closedown of businesses specially the 'non-essential businesses'. During this pandemic people of Bangladesh has been living differently, purchasing differently and also changing the consumption pattern in many ways. From marketing perspective 'shopping goods' retailers incurred huge financial loss during March, 2020 to July, 2020. Supply chain of most of the industries is now changed. Consumers over the world including Bangladesh are looking for products and services from different viewpoint.

During this COVID-19 pandemic in Bangladesh the in-store purchase restrictions affected essential and non-essential product retailers as well as buying habits of the consumers. After the COVID-19's effects on in store purchase and buying habits, consumers in Dhaka city has radically changed their lifestyle in response to the pandemic. Most of the consumers in Dhaka city faced new personal and social situations, changes in income and leisure time, which has eventually influenced the consumer attitudes and behaviors. Now consumers are shopping with much more awareness about the health safety, environment and cost. Consumers now prefer locally available products and neighborhood retail stores. The huge rise in online shopping, especially in Dhaka city, is likely to continue post- pandemic days.

This study provides a summary of the inefficiencies of in-store purchase during this pandemic time and how the retail brands are now compelled to think differently and adopting some sort of online shopping convenience for their target customers. In response to lockdown situation many stores are shuttered, consumers demanded for contactless payment, home delivery, virtual consultations and availability of necessity goods in the product line of online businesses. This is a new behavior which consumers are planning to continue.

RATIONALE OF THE STUDY

Most of the consumers of Dhaka city have reduced their consumption of non-essential goods and services to preserve for essential product purchase. Consumers in Dhaka city are deeply concerned about the impact of COVID-19, both from a health and economic perspective. People are responding in a variety of ways and have differing attitudes, behaviors and purchasing habits. As the shopping goods are mostly non-essential products, this industry suffered a huge loss in this pandemic. People were buying only the essential products, and become more connected with online shopping which has created a great impact on in-store retail marketing. Marketing leaders of various sectors have expressed that the Covid-19 pandemic will impact the behavioral patterns of consumers and businesses in many ways. Bangladeshi people usually like to visit a store personally to browse, pick up items and talk to the staffs. Since many of them have decided to shop from home following the risk of getting infected by the virus, they are leaning towards ordering products by calling the store. This is a new behavioral change that has been noticed among the consumers during the pandemic time. The recent lockdown during Covid-19 pandemic has influenced consumers' purchase decisions such as higher spends on daily necessity products, adapting to limited product availability and preferring home deliveries over store visits.

PROBLEM STATEMENT

The COVID-19 global pandemic is having a serious impact on consumers' lives. As stay at home orders and country wide lockdowns have started to be eased, consumer behavior continues to be driven by new personal situations. Changes are found in family income and spare time, values and priorities. Physical stores especially the stores which deal with non-essential products, have seen a huge drop in

sales in the pandemic. Fashion and clothing industry are in serious trouble. Many people are not spending on things like clothes and shoes like before. The pandemic has already hit the economy hard and nobody knows what their personal financial situations will be in future. People are figuring out how to purchase items, such as clothes, cosmetics, ornaments, mobile/laptop or furniture online. Once what was a physical trip to the store may now change as consumers have realized how easy it is to purchase things they need with the click of a button. These businesses are running with their suppliers to evaluate their products and figure out how to sell things they had ordered before. COVID-19 may provide some non-essential businesses consider carefully when it comes to exploring different purchasing options for the future.

Research Aims

The aim of this research is to gather knowledge about changing attitudes, behaviors and habits of consumers in Dhaka city during the pandemic time (March, 2020 to October, 2020), as they have adopted different buying habits and preferring contact less purchasing and payment alternatives. This research also tried to explore the type of product they used to buy from online and how much change came in this selection of product category during pandemic time online shopping. Frequency of online shopping before pandemic and how much it increased during pandemic time is also one of the major focus of this research. Finally the research will try to find out the existing problem of in-store purchase on Dhaka City and the benefits of online shopping during pandemic time which influenced consumers to prefer online shopping over in-store purchase.

Literature Review

This research is carried out on the basis of two theoretical model of technology adoption; Theory of Planned Behavior (Ajzen, 1991) and Technology Acceptance Model (TAM) (Davis et al., 1989). These two are the most relevant theory for explaining online shopping intention during COVID-19 pandemic in Bangladesh. TAM and TPB both have been used in many researches to evaluate the intention to use technology (Gefen et al., 2003; Hsu & et al., 2006; Wu & Chen, 2005). The strengths of (Ajzen's, 1991) 'Theory of Planned Behavior' (TPB) are explored to improve TAM by integrating external independent variables which significantly influence a consumer's technology adoption decision making process. TAM does not include the influence of social and interpersonal variables on technology adoption decisions (Ukoha & al., 2011), TPB complemented TAM's constructs with subjective norms and perceived behavioral control to describe perceptions of comfort or difficulty of performing an act given resource limitations. Other researchers also modified, extended, validated and improved TAM under different circumstances to make for broader applicability in the novel knowledge economy (Venkatesh & al, 2000). The intension to shop online and sum of the attitudes from the peoples surrounding them, these two factors influences consumers toward online shopping (Orapin, 2009). Besides, these changes completely shifted the consumers' purchase behavior, instead of usual brick and mortar options of shopping for goods, online shopping would be better alternative for customers. According to Nachit & Belhacen (2020), the COVID-19 pandemic causes a dramatic change in the behavior of consumers in Morocco. There, purchasing priorities shifted, tension increased for the availability of certain necessity products on the market, especially the panic buying of hygiene products, revealed that Moroccans are willing to spend more than before for their hygiene purchases as well as for certain food products. On one hand, this behavior can be perceived as new motivation that encourage purchasing. On the other hand, it also creates several obstacles, mainly the decrease of the purchasing

power and risk of contamination in supermarkets or pharmacies. Lim, et al., (2016) suggested that subjective norm, perceived usefulness and purchase intention are basic issues for online shopping. Conformation, regret, external information, alternative attractiveness, and loyalty are the factors affecting online shoppers (Liao, Lin, Luo & Chea, 2017).

Recent researches on the consumers' digital transformation readiness during the COVID-19 pandemic time in Bangladesh showed that COVID-19 and measures taking by the government have affected the public and private sectors knowledge, attitude and perception about digital transformation. Both innovatively made or were compelled to make, some steps to launch digital tools to ensure adequate products and services availability and reach the customers (Nachit & Belhcen 2020). The research can provide researchers as well as retail marketers an augmented understanding of consumers' perceptions of online shopping intention during the health safety crisis of COVID-19. The findings from this research also can be used to develop marketing strategies and value additions to encourage online shopping.

Objectives of the Research

- **Broad objective**

The broad objective of this study is to identify the factors influence consumers' rapid adoption of online shopping either individually or collectively.

- **Specific objectives**

- To understand the impact of COVID-19 on consumers' preference of online shopping over in-store purchase
- To find out the change in frequency of online shopping before and after pandemic time in Dhaka city.
- To find out the change in product category consumers used to purchase online before and after pandemic time in Dhaka city.
- To explore the factors which individually or collectively influenced mass consumers to adopt online shopping?

RESEARCH METHODOLOGIES

This research used quantitative method to analyze sixteen variables (factors) which determining consumers' intention to prefer online shopping over in-store purchase during COVID-19 pandemic time in Dhaka city, Bangladesh. At first the previous literatures were reviewed to find out relevant independent variables relevant to the research purpose. Then quantitative technique was conducted to collect, analyze the data and test the hypothesis. The survey was conducted on 170 samples relevant to the research purpose and received 154 completed survey data. Descriptive research including frequencies were used to describe demographic variables of the respondents. For examining the effect of independent variables, this study used Likert Scale and to reduce to group the independent variables; Principal Component Factor Analysis was performed.

Questionnaire Design

The questionnaire of this study covered of two main parts: the first part of the questionnaire covered demographic information of the respondents such as gender, age, occupation. In second part, sixteen variables were selected for this study in order to test their influence on consumers' attitude towards online shopping during pandemic time. The respondents were given a series of statements that measured their degree of agreement towards these variables. An online self-administrated questionnaire was developed, and the items were calculated on a 5-point Likert scale with 1 representing low score (Strongly disagree) and 5 representing a high score (Strongly agree). Questions were designed in such a way that respondents' inability or unwillingness to respond can be overcome. Therefore, most of them were chosen fixed response options. The questionnaire used for this research is given in Appendix 1

Research Questions

RQ 1: Whether perception of possibility of COVID risk in in-store purchase has influence on intention to prefer online shopping during pandemic time?

RQ 2: Whether perception of online shopping is much easier than in-store has influence purchase on intention to prefer online shopping during pandemic time?

RQ 3: Whether perception of no differences in quality of product sold in online shopping has influence on intention to prefer online shopping during pandemic time?

RQ 4: Whether Perception of quick delivery time in online shopping has influence on intention to prefer online shopping during pandemic time?

RQ 5: Whether perception of availability of lots of brands in online has influence on intention to prefer online shopping during pandemic time?

RQ 6: Whether perception of easy payment system in online shopping has influence on intention to prefer online shopping during pandemic time?

RQ 7: Whether perception of availability of mobile apps in online shopping has influence on intention to prefer online shopping during pandemic time?

RQ 8: Whether perception of satisfactory product return policy has influence on intention to prefer online shopping during pandemic time?

RQ 9: Whether perception of easy ordering features has influence on intention to prefer online shopping during pandemic time?

RQ 10: Whether perception of professional call center support staffs in online shopping has influence on intention to prefer online shopping during pandemic time?

RQ 11: Whether perception of online shopping made pandemic time easy going has influence on intention to prefer online shopping during pandemic time?

RQ 12: Whether perception of cash on delivery has influence on intention to prefer online shopping during pandemic time?

RQ 13: Whether perception of frequent discount and promotional offers has influence on intention to prefer online shopping during pandemic time?

RQ 14: Whether perception of online shopping is less hazardous compared to in-store purchase has influence on intention to prefer online shopping during pandemic time?

RQ 15: Whether perception of high product availability has influence on intention to prefer online shopping during pandemic time?

RQ 16: Whether perception of fair price policy has influence on intention to prefer online shopping during pandemic time?

DATA ANALYSIS AND INTERPRETATION

Respondents' Demographic Profile

Table-1					
GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent
valid	Female	53	34.4	34.4	34.4
	Male	101	65.6	65.6	100
	Total	154	100	100	

Table 1 shows that majority of the respondents are male which is almost 66% out of a total respondents whereas 34% respondents are female.

Table-2					
AGE					
		Frequency	Percent	Valid Percent	Cumulative Percent
valid	19 to 24	21	13.6	13.6	13.6
	25 to 30	19	12.3	12.3	26
	31 to 35	51	33.1	33.1	59.1
	36 to 40	53	34.4	34.4	93.5
	above 40	10	6.5	6.5	100
	Total	154	100	100	

In table 2, around 34.4% of the respondents are aged 36 to 40 years old; followed by aged 31 to 35 years old group 33.1%. Collectively this two groups comprises 67% of total samples which indicates maximum respondents are middle age consumers (31 to 40). In addition, the lowest age group is 'above 40' which represents 6.5% of total samples.

Table-3					
OCCUPATION					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	17	11	11	11
	Business	8	5.2	5.2	16.2
	Job	114	74	74	90.3
	Housewife	10	6.5	6.5	96.8
	Self-Employed	5	3.2	3.2	100
	Total	154	100	100	

In the occupation category it can be highlighted that 74% of the sample are doing jobs, 11% are in the student category, almost 3% are self-employed which is lowest percentage group among all occupation categories.

Table 4 ONLINE_SHOPPING_FREQ_BEFORE_PANDEMIC					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 2 times	30	19.5	19.5	19.5
	3 to 5 times	91	59.1	59.1	78.6
	More than 5 times	33	21.4	21.4	100
	Total	154	100	100	

Table 5 ONLINE SHOPPING_FREQ_DURING_PANDEMIC					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 2 times	21	13.6	13.6	13.6
	3 to 5 times	59	38.3	38.3	51.9
	More than 5 times	74	48.1	48.1	100
	Total	154	100	100	

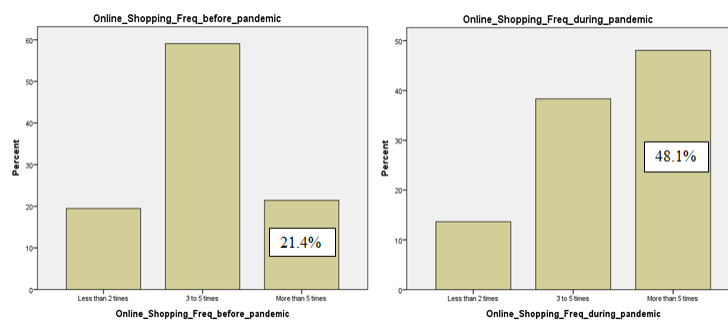
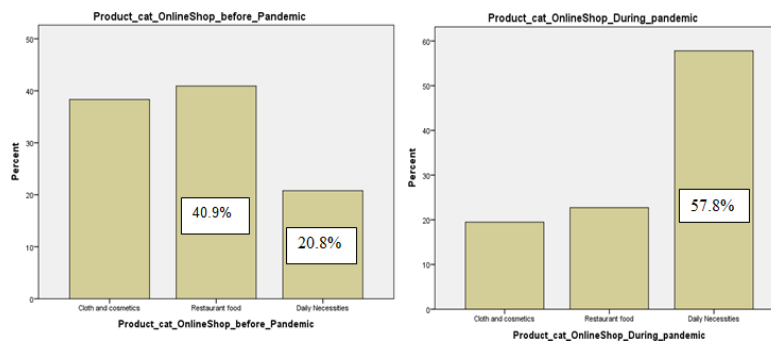


FIGURE 1
ONLINE SHOOPING_FREQ_BEFORE AND DURING PANDEMIC

The research found significant increase in online shopping during pandemic time compared to usual time before pandemic in Dhaka city. Here the table and graph shows that before pandemic only 21.4% of consumers used to purchase from online (more than 5 times in a month) whereas in second graph which shows that around 48% consumers started online shopping frequently (more than 5 times in a month) during pandemic time.

Table 6 PRODUCT CAT ONLINE SHOP BEFORE PANDEMIC					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cloth and cosmetics	59	38.3	38.3	38.3
	Restaurant food	63	40.9	40.9	79.2
	Daily Necessities	32	20.8	20.8	100
	Total	154	100	100	

Table 7 PRODUCT CAT ONLINE SHOP DURING PANDEMIC					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cloth and cosmetics	30	19.5	19.5	19.5
	Restaurant food	35	22.7	22.7	42.2
	Daily Necessities	89	57.8	57.8	100
	Total	154	100	100	



**FIGURE 2
PRODUCT CAT ONLINE SHOP BEFORE AND DURING PANDEMIC**

Again the research found interesting finding regarding the product category consumers of Dhaka city used to purchase from online and how the choice of product category changed during COVID-19 pandemic time. The tables and graph shows before pandemic 40.9% of consumers used to purchase restaurant food, 38.3% consumers used to purchase clothes from online shopping and only around 21% consumers purchased ‘daily necessities’ from online. But after pandemic the scenario changed significantly where ‘daily necessities’ became top priority product category accounted 57.8% of total

consumers. This means that, people started preferring essential products over non-essential products during pandemic time in Dhaka city, Bangladesh.

Factor Analysis

Kaiser-Meyer- Olkin Measure of Sampling Adequacy.		
		0.912
Bartlett's Test of Sphericity	Approx. Chi-Square	1218.058
	df	120
	Sig.	0

Factor analysis is used to explore the inter-relationships among independent variables and makes group those inter-correlated variables into few factors. Thus, researchers use factor analysis to find out whether several variables are correlated with each other or not. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is a statistical tool used to test the suitability of factor analysis. In result, high score indicates factor analysis is more appropriate and low value implies that factor analysis may not be appropriate. However, any value more than 0.60 is considered adequate (Pallant, 2001).

For KMO and Bartlett's Test, Kaisen (1974) recommended 0.5 as minimum (barely accepted), values between 0.7-0.8 as acceptable, and values above 0.9 are superb. In table 8, the KMO measure is 0.912 which is considered highly satisfactory for factor analysis to continue. In Bartlett's test, this research needs to reject the null hypothesis for uncorrelated variable or non-identity matrix. A significant level less than 0.05 specify that the variables in this analysis have considerable relationship between each other. From the above table, we can observe that the Bartlett's test of sphere-city is perfectly significant as it is 0.000 which means that correlation matrix is not an identity matrix. This result is good enough to reject the null hypothesis and suggest proceeding with a factor analysis.

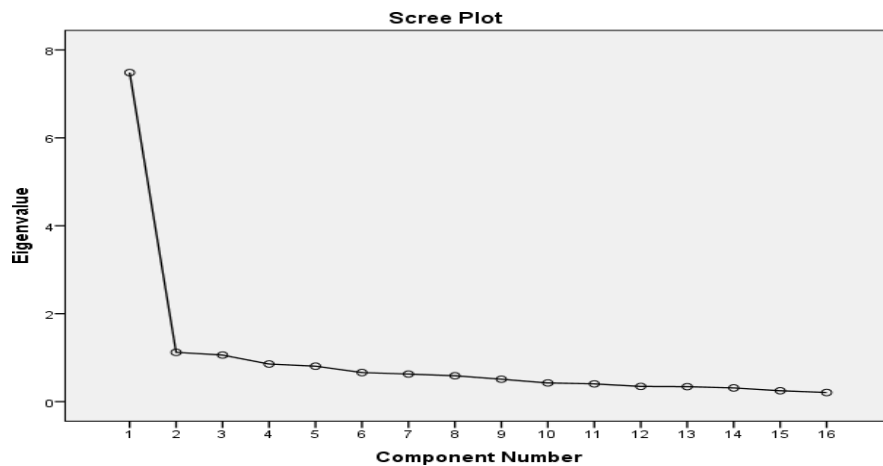
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.484	46.778	46.778	7.484	46.778	46.778	4.308	26.922	26.922
2	1.121	7.009	53.787	1.121	7.009	53.787	2.924	18.274	45.196
3	1.059	6.62	60.406	1.059	6.62	60.406	2.434	15.21	60.406
4	0.856	5.349	65.755						
5	0.806	5.039	70.794						
6	0.662	4.137	74.931						
7	0.628	3.925	78.857						
8	0.589	3.681	82.537						
9	0.51	3.187	85.725						

10	0.425	2.656	88.381						
11	0.404	2.525	90.906						
12	0.346	2.163	93.07						
13	0.341	2.131	95.201						
14	0.312	1.95	97.151						
15	0.248	1.551	98.701						
16	0.208	1.299	100						
Extraction Method: Principal Component Analysis.									

Table 9 shows all the factors extractable from the analysis in connection with their eigenvalues, the percentage of variance attributable to each factor, and the cumulative variance of the factors with the previous factors. It can be highlighted that the factor 1 accounts for 46.8% of the total variance while the factor 2 is explaining 7% of the total variance and the third one 6.6%.

Scree Plot

The scree plot is a graph of the eigenvalues against all the factors. The graph is helpful for assessing how many factors to retain. Here we can see that after the third point, all of the other points are showing a flatter slope. This shows that the first three factors contribute considerably in extracting variability caused by all the variables, whereas the remaining factors have very little marginal contribution to variable reduction.



**FIGURE 3
SCREEN PLOT**

Rotated Component (Factor) Matrix

The idea of rotation is to reduce the number of factors on which the variables under examination have high loadings. Rotation does not really change anything but make the interpretation of the analysis easier. A summary table is created on the basis of Rotated Component Matrix Table.

% Of variance	Factor	Variables
		1. Possibility of COVID risk in in-store purchase
		2. No differences in quality of product sold in online shopping
		3. Quick delivery time in online shopping
	Factor-1	4. Easy ordering features
46.80%	Benefits of Online Shopping	5. Professional call center support staffs
		6. Online shopping made pandemic time easy going
		7. Cash on delivery
		8. Discount and promotional offers
		9. Fair price policy
		10. Availability of lots of brands
7%	Factor-2	11. Easy payment system
	Technological Supports	12. Availability of mobile apps
		13. Product return policy
6.60%	Factor-3	14. Online shopping is much easier
	Convenience	15. Online shopping is less hazardous
		16. High product availability

	Component		
	1	2	3
In-store_shop_has_Covid_risk	0.451	0.398	0.271
Online_shopping_is_much_easier_than_instoreshop	0.041	0.312	0.671
Online_marketer_sell_same_quality_product	0.549	0.399	0.208
Quick_delivery_time	0.696	0.192	0.12
Lots_of_alternative_brands_in_online	0.278	0.698	0.134
Online_payment_is_easy	0.557	0.634	0.05
Availability_of_Mobile_apps	0.376	0.552	0.342
Product_return_policy_is_satisfactory	0.072	0.819	0.236

Online ordering features are easy	0.671	0.403	0.176
Call center staffs are professional	0.742	0.115	0.285
Online shop made pandemic time easier	0.664	-0.007	0.517
Brands offer Cash on delivery	0.507	0.475	0.436
Frequent discount&offer	0.683	0.289	0.034
Online shopping is less hazardous during pandemic	0.215	0.108	0.788
High product availability	0.435	0.225	0.603
Fair price policy	0.619	0.243	0.323
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 8 iterations.			

CONCLUSION

The findings will contribute to the literature on factors affecting the intention to use online during COVID-19 pandemic time. In addition, the data collected highlights that the number of individuals that have used online shopping sites frequently (more than 5 times in a month) before COVID-19 has increased by 27% during the period of the pandemic time. A possible explanation is the lockdown effect. As stated previously, the government established a quarantine and emergency state where malls, stores, restaurants, and others were closed. The results suggest that the proposed model of online shopping demonstrates a considerable explanatory data that can be used in future studies. This will enable retail marketers to prioritize their resources efficiently. For example, benefits of online shopping were found to have strongest impact on users' intention towards using online shopping. Therefore online shopping service providers should build systems that are user friendly and easily accessible. In this research the population investigated is representing the urban population only, not taking into perspective the prospect customers from rural regions. Indeed, since the questionnaire was distributed online, particularly, on social media platforms, we were able to reach the population with internet connection and social media account. This way, we can determine specific factors that understand and bring out more details about factors affecting one's intention to purchase online in a period of pandemic time. Moreover, other variables can be taking into consideration, especially if the rural population is included. Thus, the need to investigate the technical factors and their influence on the usage of online shopping. The exploratory nature of this study can provide significant directions for future research in the field of technology acceptance, particularly online shopping.

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